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12th Assembly

Committee on the Northern Territory's Energy Future

Private Hearing Transcript

8.30 am – 10.30 am, Friday, 27 March 2015

Litchfield Room, Level 3, Parliament House

Members:	Hon Gary Higgins, MLA, Chair, Member for Daly Mr Gerry Wood, MLA, Deputy Chair, Member for Nelson Mr Francis Kurrupuwu, MLA, Member for Arafura Mr Gerry McCarthy, MLA, Member for Barkly Ms Nicole Manison, MLA, Member for Wanguri
Apologies:	Mr Matthew Conlan, MLA, Member for Greatorex
Witnesses:	**Jacana Energy** Mr Stuart Pearce: Chief Executive Officer Mr Danny Moore: Executive Manager Sales & Strategy

The committee convened at 8.40 am.

Mr ACTING CHAIR: On behalf of the committee I welcome from Jacana Energy, Stuart Pearce, Chief Executive Officer, and Danny Moore, Executive Manager Sales & Strategy. Although not a formal public hearing, this is still a formal proceeding of the committee and the protection of parliamentary privilege and the obligation not to mislead the committee apply. A transcript will be made for use of the committee and may be put on the committee's website.

Mr Pearce, would you like to make an opening statement before you proceed with your presentation. I have just read the information. I will introduce Gerry McCarthy, member for Barkly, Nicole Manison, member for Wanguri, and myself member for Nelson. Thank you for appearing today.

Mr PEARCE: Thank you very much, Mr Chair, and thank you for having us at this discussion. We are very keen to be involved in these sorts of industry-leading discussions. We will go through a presentation today. We have printed copies to hand out at the end. We have a small demonstration on the mobile phone if the technology works.

Mr ACTING CHAIR: I will be interested in that.

Mr PEARCE: We are more than happy to take questions at any stage. If there are any questions about anything we are covering please feel free to raise them. Without any further intros we might get started Danny, if that is okay.

Mr MOORE: What we will cover off in the pack today - we have introductions - a bit of an overview of ourselves and also Jacana's role in the supply chain. Then we will take you through some insights into what we call a changing market, the need to evolve and the benefits of smart meters for consumers, and then touch on some of the questions we are asked around retailer-led roll outs of smart meters and plans for Time of Use (Tariffs). Obviously, we have allowed for some time at the end to discuss.

Mr PEARCE: I know most people but it is probably worth talking a little bit about our experience. Prior to joining Jacana Energy I was with Energy Australia for eight years in a variety of roles. One of those was General Manager, Retail Strategy, where I was responsible for the solar business for residential customers and business customers. That was physically installing solar systems on customer's roofs ...

Mr ACTING CHAIR: Energy Australia is a company?

Mr PEARCE: Yes, on the east coast. They are based in Melbourne, New South Wales, Queensland and South Australia. We had about 2.7 million natural gas and electricity customers and a large solar business. Generation, so gas, coal and renewable generation across those states.

During that time my other role was to look after the retail portion of the smart meter roll-out in Victoria. I was a member of the industry steering committee which was a group of distribution businesses, retail businesses and government departments that were charged with the roll-out of the smart meter program in Victoria. I was also on the federal government National Stakeholder Steering Committee that was responsible for coming up with the rules, processes and the frameworks for the national smart metering policy for the federal government at the time.

I was also responsible for Energy Australia's participation in the Smart Grid, Smart City project which was a $100m federal government-funded program to test out smart metering technologies, consumer applications and different communication technologies. Smart metering and time of use pricing and PV are all topics that are fairly close to my heart and my experience.

Mr MOORE: As you can see from there, I have worked at Energy Australia as well with Stuart in the past, but also AGL and Origin and was involved in business transformation programs, sales and marketing product development. More recently at EA I led the Smart Grid, Smart City program for business which we will touch on today as one of our case study elements. I was also implementing the national energy consumer framework which there is a desire to implement here as well. More recently I was managing Ombudsman relationships across the NEM for Energy Australia which includes 40 000 customer complaints to the Ombudsman a year - significant volumes, but a lot of insight and intel around what consumers need from that.

Mr ACTING CHAIR: You just need to bring your mikes a bit forward. Hansard cannot quite hear, sorry.

Mr PEARCE: Is that better? Do you want to talk to this?

Mr MOORE: Yes. I think you guys are fairly familiar with this. Our role in the chain is that we are the interface with customers. We provide product development and customer services, payment channels, and obviously timely and accurate billing. We take on that risk for the customer, so we purchase wholesale energy on their behalf, turn that into retail products that are easily understandable for customers, then manage, for the mass market, the interface with the network as well.

Mr ACTING CHAIR: Can I ask a silly question? As a retailer do you get two bills - one from Territory Generation and one from Power and Water?

Mr MOORE: Yes.

Mr ACTING CHAIR: So you do not get one bill that comes out at the distribution end?

Mr PEARCE: No, we do not. While we are still on the same financial system we actually do not get bills, we just do journal transfers. But once the businesses are financially separated we will receive separate invoices. So we will get an invoice from Territory Generation for the wholesale energy, and we will receive a separate invoice from PWC for distribution services.

Mr ACTING CHAIR: That means you can negotiate with both for …

Mr PEARCE: Well, distribution charges are regulated, so they are set by the Utilities Commission. It will be the AER going forward, and the wholesale generation prices have just been released. They have just been set by Territory Generation for the start of the new wholesale market. So they are two quite different processes in price setting.

Mr MOORE: If other generators come in then obviously there will be a third bill to pay, if you like.

We will run through some of the market or consumer profiles and the changing habits and consumer needs and what they are looking for and how that plays into the smart metering space. Expectations and needs are changing, not just with Jacana, but I would say nationally, energy businesses are quite behind the ball on consumer needs. Customers compare us against other service providers - telcos, banks, utilities - all the functionality you can do online, the flexibility you have with the payment arrangements. With mobile phones you can prepay, post pay, you can bill (inaudible) etcetera. That is an evolution the industry has to catch up to.

The good thing for us in the Territory is the young age. The average age in the Territory is 31 years, so picking up apps and embracing and engaging with technology will be a lot easier here than it would in other jurisdictions. There are some stats around penetration of smart phones: 75% of consumers in Australia will have or have smart phones now, and there is more Internet traffic for a handheld device now than there is for a PC. So needs are changing and that is an opportunity for us.

The traditional model of quarterly billing is you consume the energy, you get your bill after a quarter. It is too late to do anything about it. You have consumed it, you have to pay it. There is no forward view, there is no here and now. You cannot change your habits. Turning that on its head and giving customers control is what is wanted and what comes out strong in research. I have seen that in other organisations and also recently in a survey we have done of our customers.

The technology has evolved. Smart metering combined with Internet can give customers real time information and control of appliances through the Internet. We are quite guilty of leaving the air conditioner on when you go to work by mistake, so you can switch that off via your mobile phone now. But it all comes down to the infrastructure being in place enabling that.

Something to bear in mind is here we are very much focused on flat rate tariffs and the basic meters. Most metering providers have stopped making those meters now and are just producing smart meters, so the industry has changed as well.

Mr PEARCE: It is probably worth explaining what we mean by smart meters. Smart meters are electricity meters that record energy consumption in specific time periods. It could be every 15 minutes or every half hour so it is possible for customers to get a view of when and how much energy they are using. That is an interval meter; it records interval consumption.

What makes it a smart meter is that it normally has some type of communication capability. Not only are you recording consumption in a 15 minute or half hour block, you are able to see that in near real time and, in some cases, in a matter of seconds with some of the new technology that is coming onto the market. When we are talking about smart meters, we are talking about an interval meter with some type of communication capability.

Mr MOORE: I will demonstrate. I have an application on the phone and can show you that it will go live to a meter and show you current consumption.

In terms of consumer benefits from smart metering, the biggest one is obviously the ability to control, understand and receive information on usage and take steps up-front to avoid - or take charge and make decisions about how they use energy in their costs rather than receiving it after the event.

They enable, as we have talked about already, products and pricing structures that are different from the current day. We can offer more flexible tariffs, pre-payment tariffs - we will touch on this in a minute - a whole variety of different pricing options to suit customer needs because we are getting 15-minute data plus we have the live link into the meter to change signals.

Customers can understand how they are using electricity when they are consuming, what appliances are using it and what the drivers are. That is probably one of the biggest barriers we have with customers at the moment - understanding the drivers of electricity. Switching off a light will not make a major change to your bill; it is the air conditioner and probably the beer fridge in the garage that are really driving the costs ...

Mr PEARCE: Pool pumps, large appliances.

Mr MOORE: The Internet of things - many appliances are now smart-enabled and can all be connected up through the Internet for control, and can link in with the smart meter and communication in the home and then just the operational costs. The current model of going out and reading the meter every three months, particularly in the Northern Territory where distance can be quite great, can be removed and remote communication can send that data back in.

Mr ACTING CHAIR: There would be a lot of disappointed dogs. You have had experience down south and are introducing it into the Territory. I am not the average 31, more double that age - you put the technology in, but what is the uptake of the technology? Do people say they are too busy to do this and just want to pay bill? Is there an uptake of people wanting to spend time doing this?

Mr MOORE: It comes down to the segments again. In Smart Grid, Smart City we had different technology which worked better for some segments than others. A simple in-home display tended to work with an older demographic more so than the mobile phone app. Engagement levels on there – I have some stats a bit further on that show customer satisfaction and engagement that were pretty high and response as well - you will see in pricing signals combined with technology.

Mr PEARCE: It is worth reinforcing that a lot of these technologies are quite new and at this stage a lot of the evidence is based on trials that have been held. I would not say there is mass market adoption of these technologies at this stage. However, there are certainly a lot of trials in Australia and overseas that are being done specifically to look at how we make these applications, these products and these prices more attractive to different consumer segments. It is our understanding that PWC are talking about doing a smart metering trial in the Territory. The key part of that would be to look at what is the consumer uptake, the barriers, the different demographics and the benefits that some of these applications and prices deliver to different customer groups. It is early days in adoption of these technologies.

Mr ACTING CHAIR: Would they be looking at different socioeconomic groups, because there will be people whose education is not that great. They are lower income, they might have a mobile phone but that is about all they use it for, text messaging.

Mr PEARCE: Yes. I guess that is very much the retailers role. That was the role that Energy Australia played in the Smart Grid, Smart City trial. Our role was to look at how these different applications appeal to different socio-demographic groups. Our role was to come up with the sample plan and look at how many different people and different groups we needed to come up with a meaningful result from that trial. Also to look at what sorts of products and prices should we be testing with those different groups. That is very much the role of the retailer in these sorts of trials.

Mr McCARTHY: I first went to battle with computers when I was about 31 when the Education Department rolled out Commodore 64s. You had to be a computer programmer just to start them up. I remember saying then 'I am not going to have anything to do with these until they are voice activated', and 20 years later they were.

The smart meter seems to be the data collector and analyser. Then you have to do the input and management of it. Can smart meters move to where they are managing that for the consumer? Can they tell the pool pump to turn on in the off-peak period to clean the pool? That is what I am after.

Mr MOORE: Yes, the smart meter really is what you first said, the data collector. That is all we should be doing with it. Outside of that you manage from the back office.

Mr PEARCE: It is a hard disc. If it is a computer, the smart meter is the hard disc, it just stores the data basically.

Mr MOORE: There are some tools already available on the Internet that can link with your appliances on an if then (inaudible) statement. The mobile can track you. If I am leaving work at 5 pm and the temperature is over 32º it will switch my air conditioner on, so when I get home it is already switched on. That would all go through the smart meter to communicate to the appliance. So that technology is already there. Early days again for that but ...

Mr PEARCE: Yes, there is normally a chip in smart meters. That might be a ZigBee chip or a 3G chip that will talk to an appliance, like a gateway product that talks to your computer or to your mobile phone. Normally the application does not sit in the smart meter, but the smart meter can be used to provide signals to other devices and vice versa. You could be sitting here and you might want to turn your air conditioner on or off. You can press a button on your mobile phone that will send a message via the meter - sometimes not via the meter, you can bypass the meter. It will provide a message to turn the air con off or up or down, or whatever it might be.

Mr MOORE: We have touched on eliminating the need to estimate your bills, which is a major pain point of consumers as well. You are able to pull the data in and you do not have the savage dog issues and the locked gate and so forth. One of the big successes with it in Victoria is removing that pain point.

Mr ACTING CHAIR: I did not say savage dogs. Ours actually likes the man that comes, he just does not realise that.

Mr MOORE: Also you are improving network performance as well through a smart meter. You can identify where faults on the line are and lock down that particular element of the line and bring the rest of the grid back up pretty quickly. There are also those benefits.

Mr PEARCE: With a lot of the old technology when the network goes down, normally the network operator relies on customers ringing in to work out where the fault might be. Once they start getting phone calls then they work out there is a problem with that line or that substation, so it takes quite a while to get a response happening. But with real time information they can monitor the network and see where the problem areas are.

Mr MOORE: Even down to a particular house. If the problem was your house we could isolate your house and turn everyone else back on.

Mr KURRUPUWU: I am not familiar with this, but in remote communities would the smart meters be available?

Mr MOORE: PWC supplies remote communities as the retailer, but they have just completed a trial in Daly River of smart metering around prepayment meters. The shop takes the prepayment tokens, so they have started that already in the remote communities. I think that completed last month.

Mr PEARCE: I think Horizon Power in Western Australia is rolling out smart meters across quite a broad territory.

Mr MOORE: Obviously there are a lot of concerned customers In the Northern Territory around the size of bills, but the key driver is consumption not the price. The report shown there is figures from the Australian Energy Market Commission's electricity price streams report which shows us a standard tariff, which the

vast majority of our customers are on, is the third lowest in Australia. The problem is our consumption being the highest.

Mr ACTING CHAIR: How many of those are private energy providers?

Mr PEARCE: They are all with the exception of Tasmania.

Mr ACTING CHAIR: It is the lowest? No, the second lowest - Australian Capital Territory.

Mr PEARCE: The ACT is a combination of AGL and ActewAGL, so private/public. Most of the others would be private energy companies.

Mr ACTING CHAIR: It is all right. It is the debate we have had.

Mr PEARCE: All right.

Mr McCARTHY: It links to consumption. There are not a lot of options when you live in northern Australia. You need air conditioning at night for your sanity. People say it is a luxury; I call it a necessity, an essential.

Mr PEARCE: With air conditioning it is more the temperature you run it at, and small changes in temperature can have quite a big impact on your bill. If I run an air conditioner at 21 degrees, which is what I was doing when I first came up here, there is a fair chance I will get a fairly high energy bill. If I have that running at 24 degrees and have my fans operating my power bill will be a whole lot lower. I guess the point is you would not know that in this environment because you will not find out until about three months later that running that air conditioner at 21 degrees has cost me however much it might be.

If I can provide you with the price signal to say if you want to use your air conditioner for an extended period at 21 degrees I can show you fairly quickly the impact of that versus putting the temperature up to 24, running your fans and not having the air conditioner running flat out. I can reinforce that behaviour, so I can provide you with a benefit for curtailing your consumption because I can send you a message fairly soon afterwards to say, 'You have done a great job, look how much you have saved on your bill'. I accept that 100%. People will use more energy in the Territory. They will use a lot more electricity, but smart metering and time-of-use tariffs are trying to find a way to put consumers in control of that usage so they can make informed choices about their energy use.

Mr ACTING CHAIR: If you are putting in a system which you hope will save people money because they will use less power, what happens at the generation end because the generator gives you a bill? They have to cover their costs of generating the power. Will they be able to see a reduction in their power output to match your savings at your end?

Mr PEARCE: That is a really good question. In putting these processes and frameworks in place, normally they are industry-wide programs so generators are involved, distribution companies are involved, and consumers and retail companies such as our own are involved in rolling out these types of programs. Normally there is benefit right across the industry. There is benefit to distribution businesses. If distribution businesses have to build infrastructure to meet maximum demand, if we can somehow reduce energy consumption in those peak periods then the network companies can avoid that peak consumption. Similarly with generating companies; electricity is one of those products where you have to build to maximum demand or you have blackouts and shortages. Unfortunately you do not use that peak demand the whole time but the costs of that still need to be covered. You can do that in two ways. You can either push prices up to cover the additional cost of that peak demand, or can try to reduce peak demand and reduce the need for all that expensive infrastructure. So there are benefits to distribution businesses in doing this. There are benefits to generation if you can avoid peak generating plant. There are certainly benefits to consumers if they can avoid costly peak energy.

Typically, you will see it referred to as demand side response. Rather than the industry having to build more and more infrastructure, let us get consumers involved in this process as well so if they can manage their demand we can manage our costs more effectively.

Mr MOORE: Some of the products in pricing plans or options that can be available to customers using these include flat-rate tariffs and time-of-use or what we are talking about today, seasonal pricing. You can try to target the highest months of demand. Critical peak pricing is addressing that exact issue Stuart spoke around when the market goes top level. Pre-payment, pre-purchase is demonstrated there for a company called Power Shop. You pre-buy your electricity and top up that way, and then you use your electricity up -

similar to a prepayment but just a different way of selling it to a customer and more aligned to other things they would be used to from other industries.

The last one there is interruptible load options. There is technology out there to reduce the capacity of air conditioners. They still run but they only run at 75% of what the capacity should be. That shaves off the demand and avoids the infrastructure expenditure, and we can give some of that saving back to the customer.

Feedback technologies and the real time information to provide customer control is the accumulation reads we spoke about between two periods. This turns that around, captures it every 15 minutes on live demand. Customers can use web portals, in-home displays, apps on their phone. Up there is a demonstration of an in-home display energy monitor that would show the customer right now their cost today was $3.61. Based on that we are estimating your bill is going to be $419. So the customer, right upfront, can take steps to reduce their bill and understand the costs that are going to come, rather than have that bill shock after three months.

Mr ACTING CHAIR: I enjoy the surprise.

Mr MOORE: The Internet: all appliances being WiFi enabled or via ZigBee in the home can be hooked up to portals and so forth, so you can control them remotely. The portal shown up there is from Smart Grid, Smart City. That is broken down there on the left: the consumption right now in the home by appliance, so you can see what is driving the usage there.

Then you have the status of each of those appliances. You can see most of them are on. The big users of energy there are the refrigerator and the washing machine. Then down the bottom is a graph over time so you can show consumers just how much those appliances are contributing to their bill.

Then the other pitch there is of Panasonic which has developed apps so you can now switch on remotely. If you hook up your air conditioner to WiFi you can switch it on remotely from your mobile phone.

Ms MANISON: These are all new appliances these days that you buy with the technology built into them?

Mr MOORE: Yes, or you can also use plugs as a bandaid solution until you get a new appliance that would allow you to control the appliance and switch it on and off remotely.

Mr PEARCE: Even things like remotely controlling your appliances - one of the other big drivers of costs is typically when people go home on a hot day they will put their air conditioner on full blast and turn their living room into a giant refrigerator. If you can cool the house or apartment down an hour or so before you get home - set it to 24 degrees so it is cool when you get home rather than going home, putting it on 18 - setting it to 18 drives a massive increase in consumption, drives the cost up and drives your bill up. Some of these applications are a little bit quirky and people look at them and think, 'Yes that is nice', but the point is it can help you manage your costs.

They are not widely used at the moment, but if you look at the modern new refrigerators most are WiFi enabled. It is for this particular reason - same with air conditioners - they are normally Wifi-enabled now.

Mr ACTING CHAIR: Some of us might say you could save all that money by sitting on the veranda under the fan, but some of the houses built today do not allow that.

Mr McCARTHY: Or from the lounge room I could control the 23-year-old son's air conditioner in his room.

Mr PEARCE: Exactly.

Mr McCARTHY: Now I am interested in this technology.

Mr MOORE: In fact, with Smart Grid, Smart City we had a customer say it could work because there was consumption during the day, and when they went home it was the child wagging school.

Remote communication from meters obviously enables the operational side of data collection for bill purposes, also move-in and move-out. If you move into a home and have to organise for a technician to switch the power on that can be a delay of a couple of days. In Victoria, this is all automated and retailers can do that on the phone. You can phone up after having moved into the home, to say, 'I want the power

on' and they can switch it on remotely and it will come straight on. You eliminate the time, which improves the process for the customers.

We have already mentioned the PWC's planned smart metering trial. We have offered to do some customer trials as part of that. They have a plan to roll out 1000 meters and test some of this technology.

We have touched on the fact the integrated smart grid can lead to faster identification and resolution of issues. If that whole feeder - if one part went down at the moment we would have to switch the whole thing off, physically find where the problem is and rectify it before you can bring the whole thing up. That would take out all the houses on that line, whereas with this sort of technology you can isolate your downs to that particular break and bring everyone else back up within a few minutes.

Mr PEARCE: That is an overview of where the technologies headed, what the benefits to consumers are and some of the other trials and case studies that are under way.

We now want to share a bit of our experience around the Smart Grid, Smart City project because we think that is quite pertinent to the discussion today.

Mr ACTING CHAIR: Before you go there, does Jacana own the meters?

Mr PEARCE: No, the meters are owned by the network business. One of the other things we wanted to talk about today also was developments around metering. In most jurisdictions in Australia metering has been a network responsibility, but part of the Power of Choice, which was the Australian Energy Market Commission review, of the energy industry in Australia - one of their key recommendations was that metering should become contestable. One reason for that is the technology in metering is moving quite rapidly, and smart metering certainly does not appeal to everyone and it is not suitable for everyone. Retailers are probably in the best place to look at who would and would not benefit from a smart meter. Metering, at the moment, is a network responsibility, but it is becoming a retail responsibility.

Mr ACTING CHAIR: Why is the discussion not about smart meters coming from the network?

Mr PEARCE: There will certainly be a discussion about smart meters coming from the network as well.

Mr ACTING CHAIR: We have had some too, but as they are the owner -how do you fit into it.

Mr PEARCE: I see what you mean. Yes, that is a good question. The concept going forward around contestable metering is that a party such as the retailer would be able to select who the metering provider should be. As the energy retailer, the theory is I should be able to say, 'You have the best and cheapest meter and you can do the best installation, so I would like you to do the meter installations for my 20 000 customers over the next two years'. That could be the network company. Some network companies do not want to do metering, some do, so it works out for both parties.

Mr ACTING CHAIR: Thank you.

Mr MOORE: Okay. I will run through some results and what the Smart Grid, Smart City trial looked at. It is a $100m federal government-funded program to test a range of applications with consumers over a number of segments to provide data, insight and business cases for national roll-out. Part of that was to fill 108 different customer cells - different demographics, income levels, climate zones - so the data can be replicated and used across Australia.

It was focused in New South Wales around Newcastle predominantly. Then we had some Sydney, Upper Hunter and other areas to give that variability in climate. The trials included customer trials, so metering was done in two streams. The network trial went out and put on meters unless the customer stopped them and said no - so almost a mandatory roll out. The retail trial was us going to customers and saying, 'We have these great products we would like to give you. We need to put a smart meter in if you would like it,' and the customer opted in.

The trial for the network just included technology. They just gave customers some feedback technology to see how that went. Then on the retail trial we gave some customers some basic pricing and then we bundled that with technology to test the level of engagement and behavioural change when you bundle the two together - the price and the technology. There was a range of other trials done as well in and around the grid: the impact of electric vehicles, distribute generation, grid monitoring and so forth.

There were four pricing options that were tested in the retail trial. Price smart is a critical peak pricing product. Where we have a problem on the network and we need to shave off demand, or we can see it is reaching the critical peak, we text message customers to reduce demand. During that period they will be subject to a significant price hike if they consume electricity. So the benefit on the customer is to not consume and avoid the cost. By doing that we reduce that high general average cost across the year and bring down bills overall. The outcome of that would be that if the customer does nothing their bill should be the same, but if they switch off during these periods they will see a significant cost saving.

Mr PEARCE: That is an important part about flexible and time-of-use pricing. There are two ways you can look at it. You can make it a punitive measure: if you use too much in peak periods you are going to get hit with higher prices. The other way you can design your prices and your programs is to reward customers for doing the right thing. Our approach is you should be rewarding the right behaviour rather than punishing people for using too much in the wrong times.

That was behind most of these pricing structures that we came up with: do not punish people if they use energy in peak periods, reward them if they can shave some of that energy in the peak period and move it into the off-peak period.

Mr MOORE: Then the budget smart product is a prepayment product which rewarded the customer for staying in credit. Rather than disconnecting a customer with the stick, it rewarded a customer for doing the right behaviour by giving them a discount off their rate for when they were in credit. If they fell into a negative balance then they would lose that discount and pay the full amount. It was giving the carrot rather than the stick essentially. That, again with text messaging and bringing in technology warning customers their balance is low, top up, helped put customers in control.

Season smart was a seasonally-based product, recognising winter and summer consumption is higher so charging more in those seasons and removing that average cost out of the shoulder periods.

Then the flow smart was the air conditioning interruptible load. If we had one critical peak and we needed to shave off demand, we would send a message to the customer, 'We are going to shut down the capacity of the air conditioner and give you a rebate.' The customer always had control in this in that they could opt out so we would not override the air conditioner so it would keep running, and they just would not get the rebate. They were the pricing products.

Combined with that we added a number of technology components and bundled them to see how the behaviour changed and what segments worked better with others. We had a basic in-home display that literally showed cost per hour right now or usage. A very simply display can sit on the work-top at home. Below that were the home area networks with the smart plug. This gets around the appliance not yet being smart. You put the plug in between the wall and the appliance and you can switch it on and off remotely using the app communicating through the smart meter.

The best one the portal and the smartphone version of that, which you can see has live usage right now. The triangular graph shows the customer how much they have consumed to date, and based on that profile how much their bill is forecast to be. It also gives them the ability to set targets for themselves. In this instance the customer has gone 30% over target. Down the bottom it compares your electricity use, so it shows the customer against all homes and then the lowest 10% of homes. That really works from a behavioural perspective - doing that comparison against others, and that is something we are always asked by consumers. 'How do I compare to others? Am I using more, am I using less?'

Some of the results of that trial are significant and especially high where we bundled the technology and the price together. You gave the customer the choice in the pricing to make decisions on what they cost and then the control using technology. The first graph shows the dynamic peak pricing, or the price smart product. When we called that event the dotted line is the previous day, which was almost an identical temperature, and that was the consumption when we text the customer and said, 'The event is coming, the price is going up', and we did four hours before and then two hours before. You can see their consumption has reduced during that event. In relation to how things are billed, base load generation, peak implant, network infrastructure, that is how we can shave that off.

The next graph is for prepayment products. That is the average balance of the accounts. You can see when customers first came on they were in a traditional in arrears environment, and as customers got more familiar in prepaying - getting used to it - their account balances were always in credit. That is turning around the affordability issue in that they prepay for their electricity and it is an essential service they are putting money aside for ahead of and avoiding that bill shock.

Mr PEARCE: That was one of the more popular products and was not overly complicated. It did not rely too much on technology. It was quite a simple concept. The customer saw immediate benefit and we could tell them if they were slipping into debit. It is probably one of the better ones involved in that trial.

Mr MOORE: Yes. From the customer satisfaction results down the side you can see up the top are the bundles of the technology, the products and the price together. The very satisfied columns there are much higher there on the top ones. As you get down the bottom you can see where it is just technology on its own and the engagement level is not as strong.

Mr PEARCE: That is similar - if you look at a lot of trials done overseas, whether it is Canada, America, Europe or other places, the results from these trials always show if there is a price, a smart meter and some sort of feedback technology you are likely to get a lot more engagement and a lot more satisfaction than just one of those elements. If we just roll out a time-of-use pricing program, we are not likely to get the level of response and satisfaction you do if you can provide feedback technology so people feel they are in control of their energy usage.

Mr ACTING CHAIR: Budget smart was more or less making sure you paid on time?

Mr MOORE: Yes.

Mr ACTING CHAIR: Did that really affect consumption?

Mr MOORE: There was a reduction overall. It was not as significant as the prior one there, but because customers knew what they were spending as they went rather than after three months it did see a reduction in consumption.

Mr PEARCE: It probably comes back to the point you made right at the start, Mr Chair. The benefit might be different to different people. Some people want to be in control of their usage and they want a lower bill. They will use the technology to achieve that outcome. Some people just want to be in control of their household budget. Something as simple as this can be quite attractive to that segment. It is a matter of knowing or matching the benefit to the customer segment or socio-demographic group.

Mr ACTING CHAIR: Thanks.

Mr PEARCE: We are going to talk a little now about the benefits of a retail-led smart meter roll-out. Yes, traditionally in other jurisdictions they have tended to be driven more by the network. But as I was saying previously, part of the Power of Cchoice review looked at this whole question about who should be leading the smart meter roll-out. The conclusion was, based on experience of other jurisdictions, it should be contestable so you are actually getting the best party to be delivering those meters.

Mr ACTING CHAIR: I need a better of understanding. Power and Water at the present own the meters?

Mr PEARCE: They do.

Mr ACTING CHAIR: And they actually collect the data?

Mr PEARCE: Yes, that is correct.

Mr ACTING CHAIR: And you have to get the data from them?

Mr PEARCE: We do, yes.

Mr ACTING CHAIR: You would think it would make sense that if you are the people who need that data for billing, that you own the meter?

Mr PEARCE: Yes, that is one argument certainly. In some places you will find the retailer is responsible for metering, and in other places you will find it is the network. There are arguments on both sides. I guess the more important thing is that the meters fit the purpose. If the customer wants a meter with all sorts of additional functionality and they are prepared to pay for that, then there should be some opportunity for that to be taken into account.

If the customer just wants a fairly basic meter with a few features and they are not prepared to pay an excessive price for that, then they should have the ability to benefit from that. They are generally the sorts of arguments that are used to justify competition in meter provision.

Mr ACTING CHAIR: I suppose the other argument from a network point of view is if they use the information on a particular street, for instance, to know how much power is running down that network?

Mr PEARCE: Yes, they are probably the best placed people to talk about the role that metering provides for them. They need the meter to do network billing and for their functions. We need the meter for the functions we perform and provide.

Mr McCARTHY: Can I just press rewind for a bit. With management of prepaid bills, at the moment Jacana is managing all the power cards and tokens. Are you doing research in that area about what happens now in for people who pre-purchase their electricity, put it in the meter and manage their own affairs? Or is it just purely a retail function at the moment?

Mr MOORE: I believe in total there are about 6000 or 7000 prepaid meters in the Territory. We only have around 2000, mainly in Katherine. The rest are in the remote communities and partly IES/PWC function. There is a review needed there because those meters are no longer produced and the tokens are no longer made. The technology has moved on so we need to look at replacing them. What would suit customers is an active discussion I had yesterday with PWC around what is coming and what we need to start looking at. But no research has been done yet.

Mr McCARTHY: Right. My point is in the region remote where I live, it is a matter of the power runs out, the fridge goes off, the food security becomes an issue. For a lot of the constituents I represent that is their lifestyle now. The education and awareness side - yes, I was wondering when you were talking whether there is any research and technology going into that area?

Mr MOORE: We do not have any at the moment. I am not aware of any particular research on that. But different models - Victoria for example - do not allow a prepayment for that particular reason, because of the switching off and ruining contents of the fridge and so forth.

The products we showed there did not disconnect the customer, it just removed the discount and it was cheaper for you to stay in credit, so it avoided that issue altogether.

Mr McCARTHY: Both had the same concept?

Mr MOORE: Yes.

Mr KURRUPUWU: It is a similar problem everywhere in remote communities – power.

Mr MOORE: Access to the tokens too. If the shop is closed and you have run out, what do you do?

Mr KURRUPUWU: Yes.

Mr McCARTHY: Go to your local member.

Mr ACTING CHAIR: Plug into next door with a very long lead.

Mr PEARCE: the interesting thing is Horizon Power is rolling out smart meters in WA. One of the reasons that has always been used for mandated roll outs is you can secure economies of scale if you are rolling out smart meters en masse because you can buy a big bulk - lots of them. I guess we are quite interested in what is happening in Western Australia because Horizon Power only has 47 000 customers and has a business case that says there are benefits in rolling out smart meters to a small disparate customer base. We will be watching developments there quite closely from a retail perspective.

Mr ACTING CHAIR: How long have they been operating for?

Mr PEARCE: How long has the program been running or Horizon Power?

Mr ACTING CHAIR: The smart meters.

Mr PEARCE: I think it has only kicked off, has it not? To be fair, they have significant funding, have they not, to make it work?

Mr MOORE: $30m, I think.

Mr PEARCE: Yes.

Ms MANISON: With Horizon Power's 47 000 customer base, whereabouts in Western Australia are they?

Mr PEARCE: Well, my understanding is they are pretty much everywhere apart from the bottom left hand corner. WA is kind of – there is a southwest interconnected system I think they call it down around Perth, which is pretty much the urban and city area. Horizon Power's customers go right up to the borders of the Northern Territory and South Australia.

Ms MANISON: Yes.

Mr MOORE: It is quite similar to the Northern Territory in that aspect. Esperance is one little grid down the bottom and then up the top multiple small grids as well.

I think we have covered most of things around the retailer - only in that customer relationship, understanding customer behaviour, calls, payment history and all that type of thing can inform who is best placed to receive particular products that smart metering enables.

I think the key one here is a lot of trials have been done. There are roll outs now complete in Victoria and Energex has been running an air conditioning trial for a number of years that has been very successful. There is an opportunity for the NT to grab those learnings and benefits and move ahead very quickly. There is a lot of knowledge already out there.

Mr ACTING CHAIR: Is that Victoria total?

Mr MOORE: Pretty much, apart from some customers who may have locked down the meter box so well that they cannot get in.

Mr ACTING CHAIR: In Victoria power crosses states, does it not? Does it stop at the border or does the supply – I presume some power goes to South Australia and some to New South Wales.

Mr PEARCE: Yes, there are interconnectors, but as far as the Victorian grid is concerned about 99.9% of customers now have smart meters - interval meters with remote communication capability.

Mr ACTING CHAIR: Is someone looking at what reduction in energy consumption – is less coal being burnt in Victoria than before relative to the population? Are those things still ...

Mr PEARCE: I think one of the issues with the Victorian program was if you were doing a program like that again you would probably do it a little different. The infrastructure was rolled out, the meters were rolled out and I think they would probably want to spend a bit more time looking at the business case and how the benefits were communicated to the community. There probably has not been the level of development around products and consumer engagement they may otherwise have liked to have seen.

The point Danny would draw out of this is that the learnings are there. If the NT was considering some type of smart-enabled infrastructure, then you really need to start at the consumer end and think about what we are trying to achieve here and what is the best way of doing that.

Mr ACTING CHAIR: So we have a lot to learn from Victoria? We can see what mistakes they might have made …

Mr PEARCE: Yes.

Mr ACTING CHAIR: … and should be able to bring it on better than that?

Mr PEARCE: Yes, I think so. There is the Smart Grid, Smart City in New South Wales where it was more an opt-in type of program where customers chose to participate. There is the Horizon Energy case study in Western Australia. The technology and processes are fairly well proven. The point we would probably

make is you do not want to go reinventing the wheel when there is a whole lot of learnings and experience out there.

Mr MOORE: One of the learnings from Smart Grid, Smart City around infrastructure is a metering business is not a communications business, so do not roll out your own 3G network when Telstra already has established networks that can be utilised, and so forth. That is something in the Territory, being a smaller market, is one we would not want to go down.

The time-of-use plan was one of the key things the committee wanted to know about. We have launched the tariff - it was already in the pricing orders. We actually put it into the billing system as of January. We have a few customers who have proactively opted in. We are going to move ahead now with more planning around the campaign and tweak some of the product, and sell the benefits to consumers where applicable.

The current flat-rate model we have across the Territory is a single price no matter what time of the day you use it. It gives the customers no opportunity to control their costs. If you have to use power, it is going to cost you the same whenever you use it, even though on the wholesale side that cost structure and the network side is different.

What this is about is trying to get consumers to think, make those choices and actively shift their consumption into other periods. It is what customers want. There is a quote from one of our customers in the recent survey we did which was they want to see implementation of pricing structures that match their needs. Making lifestyle choices and with the transient nature of the market, quite a lot of those comments as well were:

> *In other states, I have been able to get a tariff that is two rates. At night time I can do certain things and save money and I cannot do that here.*

Consumers want it.

Time of Use provides that control so customers can choose when they use. It is going to be available to all our residential customers. However, it is not going to suit everyone. Part of the education program we need to put up and make sure is that customers are considering when they take this up. Does it suit their needs? It would not suit the needs of a pensioner who is at home all day because that is when peak time and the pricing will be higher. But someone like myself, an office-based worker, it probably suits me quite well in that I will be home in the evening when it will be cheaper. It is about customer choice, it is not mandatory. We are not going to force tariffs onto customers. It is a pull rather than a push. Customers opt in - it is their choice, they sign up for the product.

One of the things with any product and energy efficiency advice is you get that short-term reduction and then longer term it goes away. So it needs constant reinforcement. Part of the product will be after we bill you, we will take that consumption data and compare it to the flat rate, and tell you whether you would have been better off staying on the flat rate. Do you need to do more? Here are some tips you can do and shift some consumption to make this better for you.

The current rate that is in the pricing order is unattractive …

Mr PEARCE: We are taking a look at that at the moment. There is a little too much. We were talking before about rewarding right behaviour versus punishing for the wrong behaviour. We would probably want to take a look at the split between the peak and off-peak rate here and make it a little more rewarding and a little less punitive.

Mr MOORE: As you can see, though, the flat rate is 26.88 so the off-peak does not give a significant benefit for a consumer to shift that load unless you have a high consumption value. We want to bring that down so we can make it more for the mass market.

In metering requirements customers will need an interval meter. There are a number of interval meters out there. However, the way they have been set up means they will need some reprogramming, which will incur some costs. We are trying to get a feel for what that is. For customers who do not have that meter they would need a replacement, which costs approximately $240. That is for a standard installation. Should they have asbestos boards, the price could be significantly higher.

Mr McCARTHY: Did you deal with the asbestos issue in the trial in the upper Hunter Valley?

Mr MOORE: There were a few instances there, but I think they were a lot more isolated than what the case will be here.

Mr McCARTHY: Was there any communication with government? Were they responsive to rolling that part of the program into some asbestos removal program, possibly a subsidy?

Mr MOORE: Not that I am aware of. It was managed by the metering provider. As part of the BAU processes they would come across asbestos boards anyway.

Ms MANISON: For a customer to participate they have to pay the cost to install the interval meter at a minimum or $240, and that includes installation? This is if it is a best case scenario of no asbestos and that type of thing?

Mr MOORE: It would depend. Power and Water need to replace meters that are aged and due for replacement. We are asking for access to that list so we can tell those customers they are due a new meter anyway so they can have it for free. Customers, such as new housing estates in Palmerston, already have these meters, but unfortunately they have been programmed a different way. We need to get someone to reprogram them, which will be a lower cost. We are thinking it will be around $100 or so.

Potentially one of the barriers is that up-front cost, so we also want to offer customers a solution to smooth that. That could be $30 a bill over two years to pay for that $240, so you do not have that big up-front hit of $240.

Ms MANISON: Do you have numbers on how many homes already have the interval meters? With the new housing developments interval meters are going in?

Mr MOORE: Yes. In Darwin and Katherine there are around 1800 already.

Ms MANISON: 1800? Thank you.

Mr MOORE: Yes.

Mr ACTING CHAIR: Have you considered having a flat rate and absorbing the cost of the asbestos boards? They obviously would be more expensive, and if it is too expensive that will put people off wanting to join up. Have you looked at having an average price so some people will subsidise other people, but if it is too high a cost they might say they do not want to be in it?

Mr PEARCE: That comes back to that whole point of us wanting choose who provides the meters.

Mr MOORE: We are looking at solutions around giving the customer details of other businesses that could do that removal potentially cheaper than having the technician do it, and that would reduce the cost as well. It is part of an active review at the moment. We need support from the industry to make this happen and drive the benefits to the customers. They are some of the issues we have.

The current pricing is fairly unattractive and tailored for the higher end of the market. We want to make that available for the mass market. As we said, it will not always suit every customer but that is where we play the role in educating customers.

The underline network tariff - the cost of network supply is a flat tariff. We want Power and Water to implement a time-of-use tariff as is present in other states. Again, they can shape and pass that pricing signal on to the customer. TGen has provided us with pricing for time-of-use reflective of their costs for peak and off-peak generation so that helps.

Having existing metering that is capable of this product being reprogrammed and changing that roll out program moving forward so we do not need to keep revisiting meters and we utilise what is there - also the time to install. Once we order a new meter it could take six to eight weeks. It is a long lead time for a customer to start seeing the benefits of that cost.

Mr ACTING CHAIR: What is the major reason for it taking that long? Is it just ordering it? Surely it would not take that long to install it?

Mr MOORE: It is installer's capacity from Power and Water. These are the same guys who are working on the lines.

Mr ACTING CHAIR: There could be an issue against it happening. The question for Power and Water is why so long a period to put them in? Another question in relation to as many people as possible being able to access these benefits. If you rent a house, the person who owns the house could not care two hoots about putting one of these on. Would there be anything going out into the real estate market to try to get in touch with landlords and say, 'This is something you should be looking at'? From their point of view they are not particularly worried about saving electricity. Many people rent in Darwin. Do you have any comments on whether it is possible to try to bring those people online?

Mr MOORE: The real estate market is one we have on the plan. First off, around new home developments we are making sure they are asking for this type of product or metering to be put in. Then we are working with Power and Water as well, so as they roll out new meters they make sure it is one that is enabled for this.

The second part around getting to existing homes and replacing meters will be more challenging. As you said, the landlord does not have anything to gain about what the proposition is for them to rent the house.

Mr ACTING CHAIR: Does this work just for residential? I have a small office - not me personally. Could I ask, to try to reduce my consumption - I have four air conditioners in my office. Sometimes people do not turn them off. There will be someone working in the community room and they leave it and it stays on all night. Can these systems be installed for offices as well?

Mr MOORE: The vast majority of small businesses already have them. In small offices it depends on what class it is under. If you are classed as residential at-home office or as a business would determine that. But, yes, it is available.

Mr ACTING CHAIR: That might be a good reason for me having an app: make sure that everything is off when I wake up at night.

Mr McCARTHY: I am not aware of this, you might be. Are there any changes in the building code to mandate new meters in new homes?

Mr MOORE: No, it does not need to be in the Building Code, it is Power and Water's replacement policy.

Mr PEARCE: New and replacement policy normally covers that.

Mr McCARTHY: Let us say in Victoria if I was building a new home I could still install an old meter, the old technology?

Mr PEARCE: No, because the network is responsible for metering and the network would say you need a smart meter.

Mr McCARTHY: In the Territory we have not arrived there yet?

Mr PEARCE: The network company decides what meter goes in to the premises. At the moment the replacement policy is to replace …

Mr MOORE: To put the right meter in is programmed – the right way.

Mr ACTING CHAIR: I welcome our Chair. I now resign. Just to let you know that Gary Higgins, the member for Daly, is the Chair. I can keep going until the end of this session if you like.

Mr CHAIR: Yes, yes. That will be good.

Mr ACTING CHAIR: I forgot to welcome Francis Kurrupuwu, member for Arafura. We are all here now.

Mr McCARTHY: The member for Daly is the smart meter expert.

Mr CHAIR: I have one out there, I just cannot read it yet.

Ms MANISON: Touching on that point, you might be coming around to this, but it just strikes me that with this type of work there needs to be an educated customer to have the demand. You need to have a good communication strategy and the human resources to do that. Sometimes when people have very tight budgets, the communications/marketing element can fall by the wayside. Probably not in your business, but …

Mr MOORE: No, we have a very tight budget.

Ms MANISON: In marketing - my apologies.

Mr MOORE: Unless you want to have to speak to Stuart for me.

Mr PEARCE: You said the right thing.

Ms MANISON: There needs to be a considerable amount of work because we are hearing about these ideas which are extremely logical. You can see the benefit for government through tapering off those peak demands. You can see the benefit for the customer because they are going to have a lower bill. What sort of communication work is going in to educate the customer, to get buy-in for people to sign up to this, to make it a priority in their household and how they consume electricity? What sort of work are you doing? People understand you are looking at it, but they are not over the line to really understand how to use it and why they are going to benefit.

Mr PEARCE: A very good question, and the perfect segue to Danny's next slide.

Ms MANISON: Beautiful!

Mr MOORE: Yes, we are working on the campaign for this and are pencilling in late April but that relies on getting past some of these metering issues and so forth. The focus of the campaign will be around that time period so, as it suggests there, switch to six, connecting it directly with the plugs and electricity ...

Mr ACTING CHAIR: My plug goes not look like that.

Mr MOORE: It is not happy … making that shift to six. After six it is cheaper. The plan is for an integrated campaign across multiple channels. We want to aim for some snippets on the TV if we can around 6 pm to say, 'Now, it is 6 pm, you could be saving if you switched to this program'. Then we would back it up with education so when a customer looks on the website we have the content to support it. When they sign up they get the packs with appliances you can switch easily like pool pumps - big chunks can be put in off-peak and will not affect your lifestyle. It does come down to engagement and education with the customer that will be key to the success of this.

Mr ACTING CHAIR: I need to get an idea of how you make money - I know you charge people for using electricity. If Territory Energy gives you a bill for argument's sake of $2m - that is your bill plus the network which might be another $1m - from their point of view you have a $2m bill. You have to pay all your costs so the bill might then be $3m to cover wages and all the other stuff, then you have to make a profit. That is a fixed price, I presume, I do not know how often you get the bill from Territory Gen. You say you want people to use less electricity which, theoretically, means less income. Do you offset that use of less electricity in off-peak times with a higher busy time so you can still come up – say you need to earn $500 000 profit, are you eating away at your own profit?

Mr PEARCE: A large proportion of our costs are variable. I think generation is around 60% odd, network is probably around 30% odd and our own costs are quite low - probably about 4%. Most of those costs are variable. If our customers are using less energy we are collecting less revenue, but our costs will be lower as well so our margins should be pretty much the same.

Mr ACTING CHAIR: Where are those costs lower? Where do you see that reduction? Does the network charge less? How do they know to charge you less or is network a fixed price?

Mr PEARCE: There are two components to the network costs. There is a fixed charge and there is a variable component as well. If our customers are using less the network bill we receive should be less. Similarly, generation invoices are based on energy consumed. If people are using less the rate might be the same but the units will be lower so overall our cost of goods sold should be lower as well.

Mr ACTING CHAIR: There is a presumption that Territory Gen uses less fuel. They have a capital cost, of course, but is that always the case?

Mr PEARCE: That is correct. There will always be a capital cost component but the usage charges should be lower so we should be burning less fuel.

Mr McCARTHY: If a generator is spinning less there is significant room to move in cost structure. With network in the Territory there must be a limited margin to move at the moment, so is it about planning for the future?

Mr PEARCE: Often the benefit of these programs - the business case is often based on, from a network perspective, the benefit of avoided capital cost. The benefit is I do not have to augment the network, I do not have to put an extra substation in, and I do not have to spend money on capital expenditure. That is often, from a network perspective, how these programs are justified.

Mr McCARTHY: If the consumer moves the way we hope they will?

Mr PEARCE: If the consumer moves the way we hope they will. I guess, as we started out, a lot of these things are based on trials, tests and things which have been done in other jurisdictions. What we are starting to learn is if you can make it a compelling value proposition for the customer and educate the customer on the benefits of taking part in these sorts of products and processes, as we saw earlier, you can get quite impressive responses and results.

People will change their behaviour if there is a benefit to them of changing their behaviour and if you can reward them fairly soon after they have done that behavioural change. It is not much good them changing their behaviour and in three months' time we send you a bill and you have forgotten what you have done. So the feedback part of these sorts of programs is extremely important. That is very much, I guess, where we see retailers involved in those sorts of programs. We come up with a value proposition and feedback technology and we provide that education and that constant communication with the customer.

Mr McCARTHY: Without talking about the reduction in carbon footprints and all those great outcomes for our society, this is the hypothetical. With a low population, age demographic in the Territory and improving consumer behaviours, then a new city like Weddell could be planned with a lot more efficient network infrastructure, all relating to what we are doing? Right?

Mr PEARCE: Yes, that is correct.

Mr McCARTHY: Right. That makes me think.

Mr PEARCE: Yes. The other huge benefit is it puts customers in control of their usage, which they are not at the moment. One of the examples people often use is if you paid your petrol bill every quarter - if we all did that - we would get an shock at the end of three months when we find out how much the price was and how much we have used. We do not do that, we pay as we go, so we understand what the implications of our behaviour are.

With the current metering and pricing set-up, that is exactly what happens. Consumers do not understand the consequences of their behaviours and actions as power consumers. We are trying to provide them with the tools so they can be in control of their usage. Even if it is something as simple as the time-of-use tariff, it puts the customer in more control with their power bill. As you mentioned previously, you are going to use a lot of energy up here, and anything we can do to help manage that is of benefit to our customers.

Mr CHAIR: Sorry I was late, fellows. I have picked up the time-of-use tariff charging. What is the impact with the solar going back into the network? What are the plans with that?

Mr PEARCE: Yes, the solar Feed in Tariff is quite onerous on us as a business - the one-for-one Feed in Tariff. The cost of solar has come down enormously over the last five, 10 years. Most of the research in other states and jurisdictions pretty much shows the cost of solar pays for itself at the consumer level. We have seen in other jurisdictions that those Feed in Tariffs have been wound back to the avoided cost of generation. Whereas up here, those Feed in Tariffs are quite a bit higher than the avoided cost of generation.

The issue that creates is a lot of cross-subsidy within the customer base: a smaller number of customers getting the benefit of those Feed in Tariffs and a large number of customers paying the additional cost. That is something that needs to be considered moving forward.

Mr CHAIR: If you are going to have a different rate during the day for power you are paying, then a different rate at night, to me it would be obvious that is the time you would have to alter the rates for solar for those people who go to a time-of-day usage charge? Would that be right?

Mr PEARCE: Yes, I did not answer your question. I think I interpreted it wrong. I see where you are going now. It is quite a difficult question, quite complex, is it not? I am not sure. I probably need to think about that and get back to you, Gary. I do not have a …

Mr CHAIR: The reason I ask is because I have a smart meter and I have solar.

Mr PEARCE: Yes, that is right. The positive thing there is the cost of – I think the other thing we will see over the next few years is a lot more storage because the cost of storage – battery storage is coming down enormously and the technology is improving quite substantially. We are starting to see a bit more of that in other jurisdictions where people with solar systems are increasingly putting battery storage with those as well. Longer term there is solution, short-term it is a bit tricky when the sun goes down?

Mr ACTING CHAIR: Do you think we are charging the right price for solar? I do not have solar but I pay for network. Solar people do not pay for network. Should they, to keep the equation equal?

Mr HIGGINS: No.

Mr ACTING CHAIR: I heard your comments on pensions last night so do not get me started.

Mr PEARCE: I think it is like the infant industry argument. With a lot of Feed in Tariffs in the early stages of a new market, a new technology or a new industry there is an argument for trying to get broader uptake, but people recognise there are cross-subsidies and people are not paying the full cost of their activity. I think solar feed-in schemes are a little bit like that. They have a role to play to kick the market off and get broader adoption of the technology, but once the technology is up and running those cross-subsidy issues become a little bit more important and when you start to look at – well, are those consumers paying the full cost of the activity to support them, and the answer is probably not. They are probably not and they probably should be more cost reflective.

Mr ACTING CHAIR: Yes. There, Gary.

Mr PEARCE: I have solar as well.

Mr HIGGINS: I agree.

Mr PEARCE: I have solar on the old home in Victoria and a generous Feed in Tariff scheme and it is hard to justify.

Mr ACTING CHAIR: Do we have any other questions? I am not the Chair anymore. Sorry, Chair.

Mr CHAIR: Power and Water's proposal is that the 2019-24 time frame for a full roll out of these interval meters - is there an argument for government to mandate a roll out as occurred in Victoria? The year 2019 is a fair time away to start?

Mr PEARCE: Yes. We were talking a little earlier about the emerging view from the Power of Choice review, the Australian energy market, which is – one of the strong recommendations there is more for an opt-in retailer-led roll out. Broad based network roll outs - I do not think we will see any more of those in Australia. I think we are more likely to see retailer-led roll outs. You will see, hopefully, interval or smart meters on a new and replacement basis, and then retailers looking at it where it makes sense or where a business case is for that customer to have a you beaut smart meter sooner rather than later.

The issue with broad based mass roll outs is you get cross-subsidy issues. Some customers do not need all the whiz bang effects you get with a smart meter and the cost needs to be recovered somewhere. Personally, giving customers some element of choice is probably the right way to go.

Ms MANISON: Have you done much modelling around it? At the moment the customer, if they do not have an existing interval meter and want to go on to the time tariff they have to wear the cost themselves. Has there been much modelling done around how long it would take for an average customer to pay off that installation or reprogramming cost?

Mr PEARCE: Yes, that is exactly the sort of work we are doing at the moment. They are all important considerations.

We have this price in the market now and there are all sorts of assumptions we have made about what else is out there to support it. One of the things we are doing is looking at that split between peak and off-peak. One of the other things we are doing is taking a look at the cost of that metering and how we can make that more accessible for customers. Can we smooth it over a longer time period? How can we make it more attractive to a broader base of customers? If we cannot how do we make it more targeted?

They are all issues which we are looking at. One of those is how we treat the cost of that meter. Obviously we would like to smooth it if we can somehow through the customer billing process.

Ms MANISON: Effectively, with the small household customer, the ones who stand to get the greatest gain at the moment are the 1800 households with them already installed, which should be the first targets?

Mr PEARCE: Probably, yes, that is correct. We are a mass market retailer so we want to make our products attractive to all customer segments.

Mr ACTING CHAIR: Just a technical question. The Top End especially has a fairly volatile weather zone, especially when it comes to humidity and lightning. How tough are these? You are going to a digital-type meter compared to one that just goes round and round, which I do not think is so susceptible to lightning strikes and all sorts of things. Are they reliable?

Mr PEARCE: Yes, I think so. There are probably technical questions for the meter provider, rather than us. There are utilities in tropical environments like Florida Light and Power which have smart meters in their customer base. They are reasonably robust, I think.

Mr MOORE: As we said, there are already 2100 out there with commercials as well so …

Mr ACTING CHAIR: Operating now.

Mr MOORE: There are a fair number out now at the moment.

Mr CHAIR: I have noticed with mine I have a circuit breaker in there that is a surge protector. Is that part of it? No? I just presumed it was.

Mr PEARCE: I am not sure.

Mr MOORE: That is a technical one for PWC, the network specialists.

Mr CHAIR: It has a couple of big black burn marks next to it.

Mr PEARCE: Right. Okay.

Mr CHAIR: So I think it has worked in the past.

Mr ACTING CHAIR: Have I now been reappointed Chair?

Mr CHAIR: Yes, for …

Mr ACTING CHAIR: Okay. I do not think we have any other questions. Thank you very much for coming today. We appreciate you giving us the time. We have learned a lot more. Hopefully we will become semi-expert on this by the time we finish our committee. We appreciate you coming today. Thank you very much.

Mr PEARCE: Thank you very much. It is fantastic to have the opportunity to be involved in these sorts of discussions. If we can provide any more information or help, please feel free to contact us.

Mr ACTING CHAIR: Thank you.

Mr MOORE: I have an app if someone would like to see it live to a meter?

The private committee hearing concluded at 10.30 am.