IPART

Independent Pricing and Regulatory Tribunal
New South Wales

Review of Electricity Distribution Reliability Standards

Public Hearing – Transcript

MONDAY 16 NOVEMBER 2020, at 2.00pm

Tribunal Members

The Tribunal members for this review are:

Ms Deborah Cope, Acting Chair

Ms Sandra Gamble, Tribunal Member

Mr Mike Smart, Acting Tribunal Member

Members of the Secretariat

Ms Liz Livingstone, Ms Fiona Towers, Mr Brett Everett, Mr Justin Robinson and Ms Tatenda Masakadza, Ms Nadja Daellenbach.

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1.1 Zoom meeting housekeeping and agenda

The CEO: My name's Liz Livingstone and I'm the CEO of the Independent Pricing and Regulatory Tribunal and I'm going to manage the the public hearing today so I'm just going to start with a couple of housekeeping things, things that we're all very familiar with now as we do more of these online forums, but can you keep your microphone muted if possible when you're not speaking, so we can avoid the feedback and background noise, but we would like to see you, so if you keep your camera on, that really helps to engage with each other, so if your internet connection is up to it, we'd love you to keep your camera on. I'd also like to let you know that we are recording this session, so that we've got an accurate record of the feedback we receive today, and it's being recorded live to YouTube, however that won't be made public until after the event. So while we're being recorded now only the people in the room are watching at the moment. We'll provide a link to the recording on our website in a few days' time.

I also just wanted to pass on our Chair Paul Patterson's apologies he's unwell today so couldn't join us, but I am going to hand you over now to Sandra Gamble our Tribunal member leading this review, thanks Sandra.

1.2 Welcome and review timeline

MS GAMBLE: Thanks Liz, and as Liz said I'm Sandra Gamble and I'm a member of the Independent Pricing and Regulatory Tribunal. Liz and I are not here alone though, with us today are my fellow Tribunal Member Deborah Cope and Secretarial staff who've been at the centre of the review, including Fiona Towers, Brett Everett, Mike Smart, Justin Robinson and Tatenda Masakadza.

On behalf of IPART I'd like to acknowledge the traditional owners and original custodians on the lands in which we meet today, and their ongoing connection to the lands, water and wind. We pay our sincere respects to their elders, past, present and emerging, and to any Aboriginal or Torres Strait Islander people who are present today.

I'd like to give you a warm welcome to everybody at this hearing to discuss our review of electricity distribution reliability standards in New South Wales. We're asking you to share your feedback on our draft findings and recommendations and to pose any questions. We really encourage you to participate actively. Some of you have already helped us by making submissions, providing data, and sharing your ideas with secretarial staff. Many of you have been extremely generous with your time and expertise, and we really thank you and appreciate that. I can see we have representatives from the distributors Ausgrid, Essential and Endeavour, the Public Interest Advocacy Centre, the AEMC and we also have our consultants here today, Brian Nuttall from Nuttall Consulting and Ann Whitfield and Brendan Quach from Houston Kemp.

Now just a bit of background. The New South Wales Premier asked IPART to review the reliability standards in the operating licences of the state's three electricity distribution networks: Ausgrid, Endeavour and Essential, and apply an economic approach.

The primary objective of our review is to improve electricity affordability, while maintaining a reliable and safe network. So we're really looking hard at a few things and I'll just list four of them. Firstly, electricity distributors' costs and how they vary with different levels of reliability, how the costs are providing levels of reliability compare with the values customers place on reliability thirdly, we looked at how standards can encourage distributors to take advantage of new technologies like distributed energy resources and standalone power systems when they're cost effective, and how standards can be consistent with the national reliability incentives and obligations, which were introduced since the distributors operating licence commenced.

In terms of timeline, well along with your chance today you'll have an opportunity to make submissions by the new due date which is the 25th of January 2021. And we hope that will give all of our stakeholders plenty of time to provide detailed and considered responses. We'll provide our Final Report to the Minister for Energy and Environment and to the Premier in April 2021 instead of December this year as we indicated in our Draft Report. We're also seeking and waiting for information, 'modelling information' from Ausgrid on CBD feeders and following a receipt of that information, we will release a supplementary report on individual feeder standards to apply to the CBD in 2021.

So what are you in store for today, well we want to inspire the conversation with a short presentation in three parts and then we'll have a general q and a. The first part of the presentation would be on guaranteed service levels and payments, the second on new technologies distributed energy resources or DER and standalone power systems, the third is on removing duplication with national incentives and individual feeder standards. You can even ask questions during the presentation, to signal you have a question type your name, organisation and topic into the chat box and we will throw to you as soon as we can to actually ask the question.

As you all know this is public hearing, so everybody including the media is free to report on what is said today. That said, we really want to hear all your thoughts, and hope you'll all participate in the discussion. So at this stage, I'm really pleased to hand over to Justin Robinson from IPART's secretariat.

1.3 Guaranteed service levels and payments

MR ROBINSON: As Sandra noted, our first session is on the guaranteed service level, the renamed customer service standard. The guaranteed service level sets the minimum acceptable standards acceptable service level a customer should expect from a distributor. It constitutes very poor service. The slide shown on screen shows the existing customer service standard in our draft guaranteed service levels. The existing customer service standard set out two forms of unacceptable service. For very long individual outages 12 hours or more in metro areas and 18 hours or more in the rest of the state, and four long outages, four hours each in metro areas and five hours each in the rest of the state.

This meant that the customer service standard did not protect customers with frequent shorter outages, even though frequent outages is costly to customers. Additionally, the metropolitan definition is dated. It is based on former council boundaries and suburb definitions making it difficult for customers and distributors to identify the boundaries. We considered how best to define the guaranteed service level to reduce the shortcomings of the existing customer service standard.

Our draft recommendation shown on screen, is to set the standard based on total duration of outages and total number of outages. This is similar to the individual feeder standards as that is what SAIDI and SAIFI measure at an aggregate level. The approach applied by the Essential Services Commission in Victoria and the Australian Energy Regulator, and most importantly it reflects that both duration and frequency of outages have a cost to customers.

We have set two guaranteed service levels to reflect how poor service levels are. We estimate that distributors will typically fail to meet the first level for around one percent of customers and the second level for one in one thousand customers. We've also recommended removing the metropolitan and non-metropolitan definitions, as we we have simplified it to one standard predominantly metropolitan distributors, Ausgrid and Endeavour Energy, and a separate standard for Essential Energy. We consider that failure to meet the guaranteed service level should continue to create an obligation for distributors to make payments available to customers who did not receive the guaranteed service level.

The existing standard creates an obligation for an $80 payment. This $80 payment has remained unchanged in nominal terms since IPART first recommended it in 2003-2004. In the 16 years since IPART recommended the $80 payment, general price levels have increased by 47 percent and the regulated retail electricity prices have increased by well over 100 percent, with investment in distribution reliability driving a lot of that increase. Therefore, we considered we need to set a payment that would automatically adjust with changes in prices. Additionally, we need a principle to inform what payment would be appropriate for non-compliance.

We landed on setting guaranteed service level level payments on the basis of a refund of distribution charges for a typical customer. Our recommended payments are equal to a customer's annual service charge when the distributor fails to meet the first guaranteed service level and a typical customer's annual usage charge when the distributor fails to meet the second guaranteed service level. Where a distributor fails to meet both standards, a customer is eligible to receive a payment equal to what a customer a typical customer pays for distribution services in a year. Liz that's it for me, thank you.

MS LIVINGSTONE: Thanks very much Justin. As we go through we're going to pause after each little presentation and take some questions and answers. So please feel free, as Sandra mentioned to let us know by the chat box your name and the organisation you're from and the topic you might want to ask a question about and feed those questions through to us, but I would like now to invite people I know who have an interest in this topic to speak first and Craig Memery from PIAC, I wonder if you have any comments on the guaranteed service levels and payments.

MR MEMERY: Thanks Liz and thanks for the opportunity to speak today and share our thoughts on this. I'm joined by my colleague Miyuru and I'll just open up with a couple of general comments and then just throw it to Miyuru, if in the event that he has anything to add to fill in the gaps on on some matters of detail.

I wanted to make one overall introductory remark that's relevant to the overall reliability settings, all the elements of that, and then go specifically to GSL. We really welcome IPART's broad review on and broad focus on this. And we'd like to emphasize a point that we think is always important to remind people in the context of anything that involves customer reliability, and it's the 'c' in VCR.

Our view is that it's paramount that it's the value that customers place on reliability that is used in these reliability settings. It's not a social value, it's not even actually a broader economic value, it's not the value to the economy and it's certainly not the value of political interest in reliability outages. So it's really essential that we remind ourselves of that when looking at all of these settings.

Our basic view in terms of what people are entitled to in terms of reliability is that everyone should be entitled to some sort of default level of reliability. They have the option to buy into and opt into a higher level of reliability if they pay for that. That might be through an agreement with the network, it might be through augmenting their own behind the meter installation. They should have the option where it's feasible and valuable to do so to opt in to lower reliability, and be rewarded for that through things like demand response or potentially having a lower reliability connection that they take on some of their own costs for augmenting the reliability on their side.

Obviously consumers who have a specific need for life support requirements should be entitled to a higher level of reliability by default, and of course anyone who doesn't have a level of reliability that fits what they are paying for and what they need, should be compensated to a point. And this is where I think the GSL payment arrangement that IPART has proposed really passes the pub test very well. I'll come to that in a moment.

And I'll just say that in closing on that introductory point, where this is an opportunity to reset the expectations that were placed artificially higher by the gold plating that we've had in the past, which is not a fault of consumers or of IPART, but of measures that were put in place to arguably spend more on networks than what what actually reflected what people are prepared to pay. What we've heard from people across New South Wales, including in regional areas, is consistently, actually costs are too high and we would be prepared to have a reduction in reliability, if that's what it takes to bring them down.

When it comes to GSL payments we think that the two-tiered approach passes the the pub test really well. It acknowledges the higher impact on those that are worst served and it provides the right incentive to help to target improving reliability. We think that the 'on application' versus 'by request' is a really difficult discussion to have, and we think that IPART's framed the issues around that quite well in the paper and look forward to engaging further on that.

And just finally, I'd say the idea of basing the GSL payment on network charges, is a really good fit with customer expectations, which is simply that if you don't get what you pay for you get a refund. And that's how how people think about that service. So I'll hand over to Miyuru, for any points that he might have on details, but just in a general sense you know, we think that IPART's proposal overall fits the bill well.

MR EDIRIWEERA: Yeah, thanks Craig. Miyuru Ediriweera, also at PIAC working with Craig on this. Just a question for IPART. Are you able to elaborate a bit more on your proposal for the GSL eligibility for customers on negotiated connection agreements? It's a little unclear from the the paper exactly what that might entail and there's some important detail of you know consumer expectation to be hashed out there, thank you.

MS LIVINGSTONE: Sandra I'll ask you to kick off there but please feel free also to pass to the secretariat, if you'd like.

MS GAMBLE: Yeah, yeah sorry, I was just going to say I would throw to Brett on that one.

MS LIVINGSTONE: Thank you.

MR EVERETT: Thank you and apologies, and I was just gonna throw to Justin on this one thank you, and hopefully Justin looks like he's off mute as well apologies.

MR ROBINSON: So that is a complicated question, so I guess our concern is that we are not at this stage entirely sure how common negotiated contracts are and the circumstances in which customers are put on negotiated contracts and that is something we've asked for more comment from the distributors for. I guess our view is that a GSL and a GSL payment should be negotiable if the, if the decision to go on a negotiated contract truly is negotiation where a customer has opted in.

So I think Craig mentioned things about being able to put behind the meter technology and I know in a submission, Endeavour Energy suggested that they might want to be able to do that, so in circumstances like that, we can see if the distributor is is negotiating a different service and providing a different standard of service, and it's behind the meter, there might be a good reason to allow that to be negotiated away.

However, our concern is that if negotiated agreements are almost forced upon the customers because they have not got standard ways that they can connect to the network, then we're much more reticent to say that this should be negotiable. So I understand we were a little unclear, but I guess it's because we don't know enough yet ourselves, we want to make sure that if there's a negotiation on the GSL, it should be because both parties are actually wanting to negotiate, and not just that the customer didn't have much of a choice else otherwise.

MR EDIRIWEERA: Yeah that's a really good point in that I think that's something that we will need to sort of discuss in a bit more detail of exactly how that would work, especially when you've got sort of embedded networks and standalone power systems and micro grids and as you say sort of other ways of providing that reliability that is it isn't just a traditional network supply.

MS GAMBLE: That was actually a really good question we anticipated that would come up. It actually took us some time to get our head around this issue, of the extent to which negotiated contracts were actually negotiated or they were just another form of the standard contract. So thanks for raising it.

MS LIVINGSTONE: Yeah I was going to now ask a couple of representatives from each of the distributors to speak and they might pick up on that in their comments, if they've got further information to share. Alex McPherson from Ausgrid would you be happy to go first?

MR MCPHERSON: Yeah absolutely so I'm just getting myself off mute, can you hear me?

MS LIVINGSTONE: Yes, thank you.

MR MCPHERSON: Fantastic, look yeah I might like Craig just make a few sort of brief opening comments and then touch on our very early perspectives on the GSL framework. So we do welcome the review, it's in the context of the market that is rapidly changing, we thank IPART for consultation to date, we think the time frame for providing submissions the to the Draft Report and the change to that is very much welcome, so we thank you for taking on board our feedback on that.

Look, customers have benefited from the change in reliability standards that took place in 2014. The move away from deterministic reliability standards has meant we're spending a lot less on augmenting our network than we did 10 years ago. Network charges have been and customers have been the beneficiary of that. Since 2014 network charges have fallen by about, well over two hundred dollars for the average residential customer in our area, we're very keen to work with IPART over the next couple of months on the detail of all of these draft findings.

As Craig mentioned, the value to customers is important here, some of these changes drive additional costs on networks we want to get to the bottom of that in the sort of line by line way to understand whether that's good value for money for customers, and really value today and over the next few months getting feedback from customer representatives on what is good value recognising there's a cost trade-off as well for some of these initiatives.

Looking at the GSL framework itself, look what I might just say is with based on our last year's financial year 2020 reliability results, obviously these arrangements, these proposals weren't in place, but if we say they were in place, and we're using those sort of one percent level one and one in one thousand for level two, we're talking you know three and a half million dollars' worth of cost arising from this scheme for us which goes is paid for by customers ultimately it's paid for by all customers as part of our cost base.

So again we're trying to look at, we'll be looking at the next few months whether those levels are right and and value the customer representative feedback and IPART's feedback on that to ensure we've got those trade-offs right. I think it's fair to say look if there is a logic and I guess in terms of pub tests as Craig mentioned, sort of the compensation or the acknowledgement payment based on the network charges, there's a logic to that, I think what we need to ensure, given the likely increase in the amount of GSL payments under this regime, they'll have to be considered on a case-by-case basis, that our staff are involved in this can explain the regime to customers, as well so we're sort of thinking about how that can be done in real time once this a scheme like this is in place, so it's simple, so the customers don't get confused, and disputes the natural results of the regime, so that's something we're working through when we think about our submission. Thanks Liz.

MS LIVINGSTONE: Thanks very much Alex. We might go now straight to Natalie Lindsay from Essential Energy. Natalie, if you'd like to take yourself off mute.

MS LINDSAY: Thank you for the reminder for the off-mute. Thank you to the Tribunal for the opportunity to present Essential Energy's initial views on IPART's draft report on reliability standards. Like Ausgrid I'll make some introductory comments. Essential Energy provides essential services to approximately 865,000 customers across most of New South Wales. Compared to other distribution networks operating in the market, we have the lowest number of customers connected to each kilometre of power line. Essential Energy has 38 percent of the total distribution power line length, but only 10 percent of the customers, and this obviously means it's a more costly service to provide our customers with access to the network.

As a business we are focused on reducing network charges, and in the last seven years we have achieved reductions of more than 40 percent, whilst also improving reliability. Through the customer engagement undertaken for our 2019-24 regulatory proposal our customers have told us that affordability and reliability are most important to them and that a safe network is an absolute overriding expectation. Our customers also told us they were satisfied with current levels of reliability, and that there was very little support to pay more for improved reliability. But customers were willing to support those customers served through the worst of the poor performing parts of the network.

We note IPART's proposed changes to GSL payments have shifted from providing incentives for networks to improve service quality in worst performing areas to protecting customers by setting minimum acceptable service levels. Further, on a per hourly rate the proposed payments in Essential Energy's network are the highest in New South Wales, higher than the AER's VCR and higher than the payments proposed in Victoria.

The proposed GSL payments and minimum feeder standards both target the bottom one percent of performance and this is in addition to STPIS incentives to invest in reliability. We are keen to better understand the relationship between the proposed approach to GSL payments, minimum feeder standards and STPIS and identify that if there is a more economically efficient approach to deliver the outcomes required under the terms of reference.

We fully support IPART's changes that facilitate a better alignment with the national framework, such as ensuring exclusions are the same across all reliability incentives. But it is worth acknowledging that the overall changes proposed as part of this review and GSL payments and minimum feeder standards in particular, is likely to increase Essential Energy's cost base and therefore prices for all customers.

And just on the negotiated contracts, for Essential Energy customers on negotiated contracts are typically very, very large customers so we don't have any small customers on negotiated contracts at this stage…thank you.

MS LIVINGSTONE: Thanks very much Natalie. Now I missed seeing that the Tribunal and our staff had a couple of questions for you Alex, so we might just go to those now while your presentation's a little bit fresher in our minds, but Deb can I ask you to ask your question of Alex now, thank you.

MS COPE: Thanks for that Alex. I was wondering the 3.5 million that you're talking about, how was that calculated given that we know that at the moment a lot of customers who are potentially eligible for the payments don't claim them, and if there was more cost-effective ways of dealing with it, you may find that you you have less payments, so yeah my question was just how was that calculated, was that assuming that everybody that was eligible would get a payment?

MR MCPHERSON: No, so I think we adopted IPART's estimates of the claim rate which was one percent for level one and point one percent level two. It was just as simple as that, we looked at obviously our reliability performance data and did the sums.

MS LIVINGSTONE: Okay, thanks very much Alex and Endeavour Energy now has a chance to to share their initial thoughts as well, Peter Langdon would you like to share now thank you.

MR LANGDON: Good afternoon everyone, to be honest with the introductions that were done by both Alex and Essential, thank you very much for those. I don't know that we have at least, I don't know that there's anything we have specifically to add on the broad sort of topic. The specific question that was asked around GSL's in particular for negotiated contracts, we have a very small number of those at the moment to be honest it was a contemplative sort of observation that as the industry moves more and more to thin grid type connections, where the expectation from the grid becomes more something of a sort of insurance policy, rather than necessarily a direct connection, we do think there is a role for adjusting GSL's in that sort of regime. But to be honest it's future, rather than now unless there's anything else Col or Pat we should add. No that would be it.

MS LIVINGSTONE: Thanks very much Peter and just a reminder if anyone does have a question please just let us know in the chat box, or raise your hand, if you'd like to speak. I noticed Craig Memery got his hand up, so we'll go to you Craig.

MR MEMERY: Okay, thank you Liz. It's just a comment, it's following up from the point that was part of Deborah's question really about the rate at which it relates to the rate at which people might take up the offer to apply for a voluntary payment. We gave a lot of thought to this position balancing the entitlement that consumers should have to compensation, and not making it difficulty not making it difficult for them to access it, with the broader impacts and implications of making a change of moving to mandatory from applied application based. We landed on application baseD, I would flag that there are a couple of things that we would suggest which do actually impact the likelihood of those figures that go into that 3.5 million Ausgrid of calculated, potentially being higher or lower on that basis.

One is that we think it's important that consumers are given good information and made aware that there is the opportunity for them to seek that GSL payment, where it is available. And that could be through advising consumers who have been who are known to have been in an affected area and there could be an obligation on doing that.

Another anecdote or case that I think is worth looking at in this context is Mallacoota in Victoria, which has historically had an issue of there being mandatory payments made by distributor, the distributor to local customers on behalf of the customers, being made to retailers, but the retailers not being mandated to pass those through. And so what the local community there has had to do in the past, is they've had one very dedicated member of the community, who's kept a record of all of the outages that affected the area, and then every year has advised people that they need to go and hunt down these payments from their retailer. So in those cases, what we've seen is an uptake of an applied for payment in a way and it's actually been quite high. So there could be a volatility to that figure of the uptake, that depends on consumer awareness and I'd note that with the storms that we had recently that have affected Ausgrid's situation there could be quite high consumer awareness, so you might expect that the uptake of applied for GSL payments might not always sit at the historically low levels that they have been.

MS LIVINGSTONE: Thanks Craig. Now's the chance for anyone else who has any comments or questions on this topic to speak up. We will have an open session at the end, if you think of a question along the way, that you forgot to ask this time and of course you'll have the chance to make submissions through January, but one final call for questions on this topic… Okay, well we will move on now. Brett Everett from the IPART secretariat is going to take us through developing technologies, thanks Brett.

1.4 Distributed Energy Resources (DER) and Standalone Power Systems (SAPS)

MR EVERETT: Thanks very much Liz. I've now remembered to take myself off mute before I started speaking. So in this second session we're going to cover off on our draft recommendations on two forms of technology that aren't covered by the existing licences. That's distributed energy resources or DER for short and standalone power systems or SAPS. So DER refers to a broad range of technologies that operate behind a customer's meter and are capable of offsetting or shifting demand from the grid and in some cases exporting energy back to the grid. The most common example that we think of is rooftop solar PV, and as you can see from the slide that's currently on screen, there's been a rapid uptake of DER in New South Wales since 2001, and so in terms of reference specifically asked us to look at this issue.

These types of technologies can help maintain supply to customers in situations when there are supply issues originating from the network, and they can also lower customer's bills. However because the networks weren't originally designed for two-way flows of electricity, DER customers can create challenges for the distributors. We've found that while the extent of the challenges is currently modest in New South Wales compared to other states, we expect this to increase as the take-up of DER continues to grow.

As part of our review we considered how changes to the reliability standards could encourage the distributors to evolve and to enable customers to fully benefit from DER. In particular, we considered whether the current regulatory framework creates incentives for the distributors to accommodate two-way energy flows and manage customer exports. If not how the reliability standards in the licences could be used to create those incentives, and how any such reliability standards would interact with any national reliability incentives.

To assist us with this we engaged HoustonKemp to provide advice on an appropriate regulatory framework and associated measures to encourage the distributors to efficiently accommodate two-way energy flows and manage customer exports. I see that Ann Whitfield and Brendan Quach from Houston Kemp are online today in the forum, and a copy of their report is also available on our websites.

We're recommending a new DER reporting requirement that would require distributors to disclose information relevant to the quality of service for DER customers. As part of this we recognise that there's reform processes aimed at this currently underway at a national level and there's some rule change requests related to DER that are currently being considered by the AEMC. However these national processes are not yet complete and so in the interim our recommended reporting requirement will provide more data about the impact of export constraints on customers. This could then be used to inform future decisions on whether any supplementary regulatory changes are needed at either a national or a state level and we'll continue to monitor the progress at a national level as part of this review and then also once any licence changes will take effect as well.

We also recognise that our draft report sets out a range of different measures that could be reported on DER, and some of these are easier than others for the distributors to be able to report on this is an area that we're particularly interested in feedback from stakeholders and it'd be good to get some feedback on that in response to our draft report.

Now moving on to standalone power systems or SAPS. As I mentioned earlier SAPS are not currently covered by the distributors' operating licences or the national economic regulatory framework. However the AEMC has developed the regulatory framework that when implemented will mean that distributed SAPS are treated as an extension of the traditional distribution network. We understand that the New South Wales Department of Planning, Industry and Environment is currently considering amendments to the New South Wales New South Wales legislation to incorporate distributed led SAPS into the distributor licensing framework and we've made our draft recommendations with the expectation that this will happen by 2024 when our draft licence amendments would apply.

We consider that the customers of distributor led SAPS should receive the same customer protections afforded by the licence as other residential and business customers members of the distributors. And this is particularly important as distributors could move customers from the network to SAPS without their explicit consent. Therefore we're recommending three things. Firstly that the individual feeder standards apply to micro grids with high voltage distribution lines. Secondly that individual feeder standards with a default length of 200 kilometres apply for all other standalone power systems and thirdly that the guaranteed service levels and all GSL and GSL payments that we've just discussed would apply to all SAPS customers on a deemed standard connection contract. I'll now pass back to Liz to seek comments from further stakeholder's thanks.

MS LIVINGSTONE: Thanks very much Brett and we will go around the distributors again to see if they've got additional comments on this topic. Natalie do you want to kick us off this time.

MS LINDSAY: Yeah sure thank you okay. So Essential Energy's network is at the forefront of the energy transition and I note some of the statistics that were just shown on the screen but I have Essential Energy's to share also. So we have over 800 megawatts of large-scale renewable generation connected and over 2,300 megawatts in the pipeline between connection inquiry and construction. Plus we have almost 1,000 megawatts of small-scale renewable generation which is equivalent to 22 percent of Essential Energy's customers. To put these numbers into perspective Essential Energy's all-time maximum demand is around 2,600 megawatts and average demand at around 1,400 megawatts. The energy transition raises a number of challenges and opportunities for the network and the communities we serve. We welcome IPART's focus on this transition and implementing reporting obligations is a reasonable first step.

We encourage IPART to collaborate with other regulatory bodies such as AER who has recently signalled future work on DER reporting in its benchmarking report. This will ensure consistent reporting obligations implemented at both the jurisdictional and national level. There is much work to be done to improve information associated with DER particularly around accessible DER data, better processes are required to ensure compliant information is provided by installers, increased accuracy of data will allow networks to manage and plan the network more efficiently and over to SAPS they are an absolutely critical part of Essential Energy's strategy to deliver better and more affordable services to our customers.

We are currently investigating where SAPS could be used to provide electricity to customers instead of through the traditional poles and wires networks. We have also recently trialled the use of SAPS as an emergency response tool during the 2019-20 bushfire season. Approximately half a percent of Essential Energy's customers require around 17 percent of our network length to service their needs. A larger scale deployment of SAPS has the potential to improve the reliability of supply to those customers in challenging environments or at the edge of the grid, reduce the cost to maintain Essential Energy's vast network and therefore reduce network charges for all of our customers and minimise bushfire risk and enhance resilience of the network in the face of climate change.

Regulatory and market framework should be reviewed so they better support alternative lower cost options such as SAPS, when we're making network investment decisions. We support IPART's recommendations that the New South Wales government continue to progress legislative changes to enable distributor led SAPS. And we also support the proposal to extend reliability standards to distributed led SAPS. However, we believe these recommendations should also include derogations for activities that are providing sub-optimal customer impacts. One example is fault in emergency responses. Under the national framework Essential Energy will be unable to undertake fault emergency responses on SAPS, unless an exemption waiver or derogation is implemented. If we are unable to respond to faults in a timely way meting reliability standards and or customer expectations may be challenging thank you.

MS LIVINGSTONE: I think Sandra might have a question for you Natalie. Did you want to ask that?

MS GAMBLE: Yeah sure hi Nat. Just wondering how optimally SAPS would work in your network. You know if for a new connection obviously a customer would have the choice between grid connection and a SAP and they probably make that decision themselves. That's right, what happens for an existing customer you know on a on a long line with some with problematic reliability or you know in a storm-prone area, how do they make that decision given that they're already connected. But you know, because the pricing doesn't necessarily give them the incentive to choose.

MS LINDSAY: No it doesn't and it probably never will but we're currently assessing the entire network so it's not just about long stringy feeders it's also about difficult terrain and heavily vegetated areas and particularly high bushfire risk areas. But what we hope to do is actually engage with customers one-on-one because coming in and forcing someone off the grid I don't think it's going to go very well so what we need to do is have a process of engagement with the customer explain to them the benefits of a SAP system.

I know in Dubbo a couple of years ago a customer said to me but this is going back to how it was 30 years ago and that's the sort of thing that we need to and it's true, they were on SAPS 30 years ago, they were just very different technology. But that's the sort of thing we need to overcome and um engagement is the way to go on this.

MS GAMBLE: And would that also allow you to offer them a SAP that is fit for purpose that Craig was talking about earlier.

MS LINDSAY: Absolutely so I don't think we'd tailor every SAP to every customer. What we're probably going to end up with is like four or five different units depending on the customer's usage profile, you just deploy whatever one fits them the best. Yeah so emergency response that's however it will probably just be a stock standard, here's a unit it'll get you over the line until a further decision is made.

Ms GAMBLE: Yeah, so if it was a housing development it would be one type if it was a shearing shed it'd be something else.

MS LINDSAY: Yeah, we've got a big journey ahead and it is an absolute game changer for our cost base in the future, so it's critical that this works for us going forward thank you.

MS LIVINGSTONE: Thanks Natalie. Peter from Endeavour, would you like to speak now?

MR LANGDON: Thank you very much and thank you again Natalie for your intros and covering remarks. To be honest in this area, Essential sorry Endeavour Energy, is rather fortunate that we aren't as exposed to either the issue of high penetration of DER at the moment or the issues of very uneconomic lines. We have some areas that are starting to become constrained in terms of DER, but not many. And similarly we have some areas that are potentially uneconomic and so to be honest, whilst we see and directionally we think that IPART are headed in the right direction. We do see some challenges in terms of providing the information and we note that it is a sort of best endeavours approach. We also note the direction in terms of standalone power systems and agree that that's directionally right. We do need to have some minimum standards in there to be honest, time will tell as to whether they are the appropriate ones but at this stage we're thinking it is broadly in the right direction.

MS LIVINGSTONE: Okay thank you Peter. And Alex from Ausgrid anything to add from Ausgrid's perspective?

MR MCPHERSON: I'll look gold just maybe mention something around the DER reporting requirements. The prevalence of SAPS is a lot less in our network area. The DER reporting requirements, I think there's a bit of devil in the detail here, naturally hampered by what we can see and what we know about what's going on in that space we have limited visibility of our LV network which may make some of the reporting requirements a little bit tricky to deliver, complaints data as well you know what's causing the issue at the connection point, whether it's lack of capacity or whether it's something to do with customers inverter, again it's very hard to initially tell.

I think there's some requirements around curtailment and the volume of electricity that can't be produced due to insufficient hosting capacity, again how would we know what volume electricity would have been produced. So look these things I think can be worked through but certainly it's probably something we'll talk more to IPART about over the next couple of months into our submission, so we can ensure that requirements are fit for purpose and reflect our ability to have visibility of those things going forward.

Ms LIVINGSTONE: Thanks Alex. Deborah Cope, do you want to ask a follow-up question of Alex?

MS COPE: Well I think it's probably to all three of the networks because they all mentioned the reporting requirements and Alex you sort of unpicked it a little bit. But my question is, what are the things what's things do you think are relatively easy for you to report, what things are likely to take time, and where are the things that you think is going to be the biggest challenges for you.

MS LINDSAY: I'm happy to go first. So the reporting that we will find relatively straightforward is the numbers of DER's per postcode for example those sorts of general statistics because we have a reasonable view of what's connected to the network, but we're not going to say it's 100 accurate because we know it's not. But we can start reporting that information pretty quickly. But where it gets hard is where we need to report against expenditure linked to DER, like that's incredibly difficult at the moment and we do have quite a bit of work to do to implement processes that will give us that information.

The other issues around curtailment how much load's curtailed and those sorts of measures are also problematic, not to say that it's impossible and by 2024 it probably will be. But I think I just go back to my earlier point that it's really important that we do end up with consistent reporting obligations both jurisdictionally and nationally because it gets messy if you've got different requirements reporting here and there. It's better to come up with something that works for both sets that we can move forward with, so the easy stuff is to do with connections and we have a reasonable view of that, anything further than that it becomes much, much harder.

MS COPE: And of the hard things which of them do you think you're going to have to get a handle on for business purposes going forward anyway?

MS LINDSAY: Probably a lot of them so I think the penetration is starting to become an issue in parts of our network right now. And we have pretty low visibility of the low voltage network which is also problematic so we we know this we've known it for quite some time we've got programs of work underway to try and improve that going forward, but like anything these things do take time. Nothing ever happens in a year anymore so and then alongside our broader transformation program, it's in the pipeline it's just gonna take time so we do welcome the Tribunal's notion around 2024 as being a reporting timeline and anything we can do before that we can certainly try our best, and the basic stuff is available now, but yes we do have our work cut out for us for the rest of it.

MR MCPHERSON: I'd echo what Natalie said particularly in relation to existing reporting requirements, particularly that we have to provide to AEMO at least as starting points. I mean with the intent of this review to be to to improve the affordability of electricity obviously what's on our mind is ensuring that even if it's just reporting requirements, don't drive additional costs into the system. So again we'll provide some thoughts in our submission, we'll talk to IPART more about some options that are cost effective, things that we can deliver already and things that might be a little bit more challenging with our existing capability.

MS GAMBLE: It would be worth Alex also addressing the point that Deb made in your submission which would be the extent to which this information wouldn't be generated by you know the required time scale as a business as usual, you know what what instead you would be producing if it's not that information.

MR MCPHERSON: No problem Sandra, will do it.

MS LIVINGSTONE: Brendan from Houston Kemp has a question on this as well. Brendan if you take yourself off mute the floor is yours.

MR QUACH: Look I really would like to understand a little bit more about the information that you do have regarding the location of DER. You mentioned that you had it by postcode, do you have that information down to the feeder level or is it really just you know, you know it in the general location rather than specifics, because I guess the key issue here for me is what information can you provide customers, if they're looking to know whether or not you know putting in a DER system is likely to be constrained given the current loads on particular feeders.

MS LINDSAY: Yeah so we know generally what is connected at a premise address so we have that record by street address and that can be rolled up to feeder or postcode so that's relatively straightforward. What we don't have a good handle on is the capacity of an area in terms of what's left. We have pretty simple exporting rules at the moment, it's not dynamic at all and we'd like to get to a point where we've got really great visibility of the network and really good information on the customer side, so we can work out what's fair and a whole range of things need to happen to enable that as I'm sure you're aware Brendan.

MR QUACH: Yeah, but I guess what it is I think it's always important to think not just what processes are helpful for you, but what will also be helpful for customers, in the way that you know these information reporting statistics are gathered.

MS LINDSAY: Yep I would concur with that so I know there's a number of people within the network looking for opportunities to connect solar and having that information would be a great benefit to them and also benefit to us, it's a win-win.

MS LIVINGSTONE: Peter, I'm conscious you haven't had a chance to respond to this question on the reporting, did you have anything to add?

MR LANGDON: Sort of nothing well certainly not contradicting anything that's been discussed and but just really reinforcing the constraint issue is actually quite challenging, because we're also we're almost delving into the performance of the DER itself to understand whether that's leading to it being constrained or whether it's our network. And I think to be honest understanding and Natalie's spoken to this as well as Alex, understanding the performance of our network and and therefore whether basically the network is operating within tolerance bands is probably where we'll need to head rather than necessarily understanding specific constraining customers.

MS LIVINGSTONE: Thanks Peter.

MS LINDSAY: If I could just mention something else to one thing we've been talking about internally whether there's more value in producing forecasts, rather than what's happening today because the forecast really does give you a view, given that DER is increasing at a steady rate and has been for many years despite you know solar bonus scheme rolling-off. The installation hasn't slowed down, so in terms of planning for the future, maybe forecasts might be something worth considering.

MS LIVINGSTONE: Thanks Natalie. Brett I think you wanted to say something about national reporting, that Natalie mentioned earlier.

MR EVERETT: Yeah thanks Liz, Natalie just I just wanted to respond and sort of point out one thing in response to sort of the overlap with any progress that happens at a national level. We're definitely keeping an eye on what's happening at a national level and the changes that may take place there. As we've said in other parts of the review, we don't want to duplicate what's happening in the national framework. I suppose that gives me the opportunity to point out as well what we've done with the DER reporting requirement is include that in the reporting manual that accompanies the licence and the distributors are required to comply with the reporting manual. But what that gives us is more flexibility over time such that if there were changes and information was being collected at a national level, we obviously wouldn't need to duplicate that within the reporting manual at a state-based level as well.

MS LINDSAY: Sounds great, thanks.

MR EVERETT: I suppose in saying that gives me the chance to also give a quick plug to the reporting licence conditions themselves so we've published revised copies of the licences and the reporting manual on our website, along with our draft report and it'd be great to get any feedback on that licence drafting, as well as our overall recommendations as well.

MS LIVINGSTONE: Thanks Brett. I don't think we've got other questions coming through, but I might just check whether Craig from PIAC had anything he wanted to add on this topic.

Mr MEMERY: Yeah thanks very much Liz. So firstly I'd say thanks for IPART for looking into this, it's a really important issue or suite of issues to be looking at, so that we can prepare ourselves for the you know future system and not be rudely shocked by it when it comes along. So I think there's some really good thought in there. Firstly and relatively simply on the DER stuff, definitely support where IPART has landed on reporting requirements. I think it sounds like there are some details to be worked out but overall we think that that's definitely the right approach.

I'm just reading through a bit of the report, I feel I need to clarify PIAC's position on something because the way it was reported in the IPART draft indicated we might not have expressed it in a way that was clearly understood. And it's regarding an issue that is important in the context of the question of DER reliability standards if you like, the way it was reported was that I think along the lines of PIAC felt that of certain measures weren't appropriate, whatever they were, because networks can't recover the costs of DER. The PIAC issue here is not that networks can't recover the cost because they can, networks can recover the cost of all of the things that they do that the regulator deems efficient, the economic regulator in this case the AER and anything that they're required to by jurisdictional arrangement, that the AER has to have regard to.

The concern is that the networks can't recover those costs on a beneficiary-pays basis and this is the issue that we see manifesting in a lot of parts of the energy system and network that needs to be changed for the system of the future. There's work being done in addition to that was noted in the presentation by ARENA I think it is looking at what you would call the value of customer export, the value that people place on being able to export energy to the grid and that's an example of where what we need to do is eventually understand what value people put on exporting energy to the grid, and other ways of interacting with the grid and have cost recovery arrangements that reflect that appropriately. That's not to say it's appropriate to charge people for accessing the grid but it's certainly appropriate to establish a balance that means that we don't end up with people, particularly those who can't afford it, paying for things that other people would like to do, so we certainly support where IPART have landed on that with respect to reporting requirements.

With respect to SAPS, I think I'd just flag here that we saw the Essential the folk from Essential, Natalie and her team do so much hard work during the last revenue reset to find every little skerrick of somewhere that they could save some money to keep consumer bills down. And we see there's a great opportunity for Essential to be able to pursue using standalone power supplies where it's more cost effective than maintaining and building new networks, and we see that they're keen to do that. So it's really important that the way is paved to be able to do that, and endorse the approach that IPART's taken overall with that.

One thing we're cautioned and certainly the objective of having consistency with existing arrangements where possible is the right goal, but be careful not to overthink it at the same time. In our view when you're replacing an existing connection with a standalone power supply there's actually no reason you can't use exactly the same reliability arrangement irrespective of the feeder length, you'll be replacing a connection of a known feeder length, there will be a reliability level that already applies on the basis of that, it doesn't actually matter if it's above or below 200 kilometres, so we would just suggest maintaining and setting the reliability expectation for any individual who's moving from grid connected to SAPS in a distribution-led arrangement, just maintain what they've already got, based on the feeder length that they've got now. To put a customer who's on a sub 200 kilometre feeder length to give them a more than 200 kilometre feeder of length reliability level, would be a reduction in their reliability standard, but for no good reason, because that information can be retained.

Where a customer is not a micro grid that retains a feeder to connection, just using the existing system as it's as it applies now, is again the appropriate way to go. They'll have an existing feeder use the length of it to determine the reliability based on that and that way people will have a genuinely consistent transition through moving from reliability connection to SAPS.

It's worth noting that the reason that people will be going on SAPS that's distributor led is because it will be a more cost effective reliable way of making of meeting their supply than an existing grid where it is needed so the starting proposition is, that if there is a problem with the reliability, it's because something's gone wrong. And in this case, I'd really endorse the point that Natalie made about the issue of the network needing to be able to access the site, if they're going to have responsibility for reliability. This goes to a much broader issue than the remit of these reforms and that is that the AEMC in delivering what is a very well-intentioned suite of reforms here, has taken quite a purist approach to preventing networks getting into a space that appears to be contestable, and in doing so we think that they might have sacrificed some potentially really effective elements of these reforms, by making it just too hard for networks to deliver SAPS.

Although it's not the role of this particular review to fix all of that, it's worth being minded that it's we're starting from that position of it already being a bit harder than it needs to be for networks like Natalie's to do this. So we support Natalie's points on that and generally support the direction that IPART has gone to on that one. I'll just see if Miyuru has anything to add on those

MR EDIRIWEERA: No nothing more thank you

MR MEMERY: Cool thanks Miyuru, and thanks Liz for the opportunity for some comment there.

MS LIVINGSTONE: Thanks fine Craig. I think Sandra might have something she wants to follow up from what you've said Sandra.

MS GAMBLE: Thanks Craig, just your point about the existing reliability or the existing efficient reliability being the starting point for the design of a SAP system. Could there also be the opportunity for that to become the benchmark and then for a negotiation for reliability above or below that with compensational payment by the customer, given that some connections especially in country areas are way more reliable than they need to be and some are way less reliable than they need to be, and it really depends on the end use as to what the customer's needs actually are, so does that make sense

MR MEMERY: Yep it makes sense as a query. I guess unpacking it in the context of how it would work in practice. When is a network going to install a SAPS they'll do it when they need to augment a network, part of the network, or wear or replace something or where the long-term cost of maintaining it is predicted to be higher than the long-term cost of installing and operating a SAPS. So there is a cost saving to be taken there, which is an immediate benefit to the network business, and to all other customers. So it'll be a decision that's driven by an expenditure, an efficient expenditure of capex driver predominantly, rather than a just because a customer says that's great, so be it. They're going to have a more reliable system they'll be in a better position to fight fires, they'll be in a better position to not have to stress about food perishing in their fridge and no one else will be worse off for that.

If they've got an existing high reliability connection, well the SAP system is still going to be held to the account of the standard that that party is entitled to. So agree, if they've got a higher reliability connection then they're going to have to make an informed decision, but I think it's going to be a pretty low use case where a high reliability electricity feeder is going to need to be replaced because it's aged or needs maintenance. And so I can't see there being a lot of cases where a customer is going to have a reduction in reliability as a result of having a SAPS installed.

The important thing to know there is that the SAPS that are installed by network businesses probably won't be well represented by the existing range of SAPS that are out there now. Because a lot of SAPS that are installed are cheap and cheerful installed on people's weekenders because people have chosen to opt for a ten thousand dollar system that doesn't meet all their needs, rather than a thirty or forty thousand dollar system that does. Networks won't have the same luxury of cutting corners so I think what we would expect to see is a very high reliability SAP system that's generally going to exceed the reliability in remote parts of networks. So I completely agree, it's something to look out for that people don't end up sacrificing reliability with the SAPS, I can't see there being a lot of cases where that will be the case unless as Nat says, you end up with a position where the network is restricted from accessing the property to fix the SAPS when there's a fault because of the restrictions that are in the you know.

MS GAMBLE: Yeah so you've got with SAPS you've got a much broader array of scenarios that you're dealing with aren't you so in a way you've got to if you're going to have a framework that applies albeit flexibly across we've got to really have data and an understanding of of what the likely scenarios are going to be don't we?

MR MEMERY: Yeah absolutely and that goes to the point that Nat made about the types of SAPS available. SAPS when done properly they are bespoke, they acknowledge the existing energy use and demand of the home, the power maximum power, because the that determines the combination of inverter and generation capacity that is required, the energy needs to determine the battery size and the solar array and the future energy needs of the home have an impact on how the system needs to be built as well if someone is planning if they're expecting to have a couple of kids or if a home is sold and replaced by someone and has a you know higher occupancy rate.

These are considerations you don't need to make with a grid connection they're all addressable in SAPS design, but there needs to be a conscious decision to do that. We don't currently have the process for doing that in the grid connection in the grid connection place. So yeah definitely, and the reliability settings and treatment of that and the relational the related matters of you know what is explicit informed consent for a SAP system and what about how to what does forward planning look like and how does that differ from how networks do these now, they all need to be taken into account.

MS GAMBLE: Yep okay, thank you Craig.

MS LINDSAY: Thanks also worth noting that the reliability standard is an important input into the sizing of the system too so you have to be careful that we don't make it too tight, if you have a system that's too big, and only used you know one minute of the year sort of thing so.

MS GAMBLE: Exactly yeah that's right, that as I said, it potentially becomes a benchmark from which you then customise it for the customer with a win or a loss, or you know a cost or a benefit, one way or the other but it's really interesting, it's fascinating stuff, but I think it then that point you make Nat is if you if you apply blanket standards you potentially miss the opportunity to do some customisation and over invest again.

MS LINDSAY: Yeah that's right I think there's some really good examples down the south coast in one system I was basically running on diesel most of the week because of their heating use inside a shipping container because I had a temporary home so those sorts of things where you've got to balance the size of the system and the potential diesel use because diesel is an ongoing opex cost that if that system's not sized correctly can bite you later.

MS GAMBLE: Yeah and I mean we've got a few questions from stakeholders since we put the report out about bushfire and I guess this might be a part of breaking down that cultural barrier that you talked about earlier Nat, that you know where it was considered to be a second-class option and I remember those from the days of the western electrification scheme, but the you know when you when you can restore power in a standalone system or it isn't affected in the first place, much more quickly and much more cheaply than a power you know 20 kilometre power line, you know those are the practicalities that the people in the country will cotton onto pretty quickly.

Ms LINDSAY: Yeah agreed.

MS GAMBLE: Okay sorry we might have just got on a bit of attention there but it's interesting to note. Okay I might pass it back to Liz.

MS LIVINGSTONE: Sure thanks, thanks Sandra. I think we've exhausted the questions on that topic, just a final plug before I get Brett to present on removing duplication with national incentives and setting individual feeder standards, we will have one more q and a session after that presentation, so if you do have a question or comment, don't hesitate to let us know in the chat box and we'll get to you after Brett's final presentation, over to you Brett.

1.5 Removing duplication with national incentives and setting individual feeder standards

MR EVERETT: Okay thanks Liz. There's several aspects to our draft recommendations on individual feeder standards, so I'll step you through these over the next few slides so these are the standards that require certain levels of SAIDI and SAIFI, or you know duration and frequency of outages to be delivered by the distributors.

So firstly as part of this review we looked at the interaction between the licence and the national reliability incentives so that we could consider which incentive best sit in the licences and which incentives best sit with the AER's reliability incentives. We think that state-based regulations such as the distributor's licences should complement and not duplicate national regulation as I've sort of touched on earlier today when we're talking about DER reporting requirements. With these incentives we found that the AER's incentives frameworks provide an adequate incentive for the businesses to maintain and improve overall network reliability and that the network overall reliability standards that are in the current licences duplicate this and don't provide any additional benefits to customers. So as a result we're recommending that the network overall reliability standards be removed from the licences.

However the AER's framework doesn't provide direct incentives related to the reliability performance of individual feeders or of the direct connections within the network or the reliability levels provided to individual customers, so we think that the licences should continue to include these reliability standards.

Now turning to the individual feeder standards themselves we're recommending that the use of SAIDI and SAIFI to manage to measure individual feeder reliability is appropriate and should be retained in the licences. However we're recommending some minor changes to the types of interruptions that are excluded from SAIDI and SAIFI to improve consistency with the national reliability guidelines. We also found that the requirements relating to monitoring, investigating and reporting on reliability performance of individual feeders - we found that these are appropriate and should be retained in the licences. These requirements ensure that the standards don't encourage the distributors to invest in improving feeder reliability where the benefits to customers don't exceed the costs.

However we're recommending some changes to the current approach for setting the minimum required levels of reliability for individual feeder standards. At this stage we're recommending that the minimum required levels of SAIDI for urban short rural and long rural feeders should be set to reflect the long-term efficient levels of reliability for each feeder. We're recommending that minimum required levels of SAIFI for urban short rural and long rural should be set to reflect the existing levels of reliability for each feeder. And then we're also asking Ausgrid to do some further modelling around the efficient levels of reliability for the CBD feeders and asking that they come forward and propose some minimum required levels of SAIDI and SAIFI that should apply in the CBD.

To inform our recommendations and meet our terms of reference for this part of the review, we've estimated some efficient levels of SAIDI for urban short run long rural feeders, using a model developed by Brian Nuttall, who's also attending today. So the model balances on one hand the costs of operating, owning and maintaining feeder assets to achieve a given level of reliability, it balances that on the other hand with the dollar value of the expected unserved energy that customers get at that level of reliability. And here we've used the AER's most recent estimates of VCRs that they have put out last year.

This modelling shows that in each of the non-CBD feeder categories there's a strong relationship between an individual feeder's length and its long-term efficient level of reliability. So generally the longer the feeder, the higher the efficient level of SAIDI and so the lower the efficient level of reliability. And so as a result of this, we're recommending that the required level of SAIDI for all non-CBD feeders should be determined based on the feeder length regardless of the category and the distributor. However we don't think that the standard itself for SAIDI should be set in line with the the estimates of long-term efficient reliability, rather we think that the feeder should only fail to meet the standard when it's reliability performance deviates substantially away from that long-term efficient level.

So we're recommending a formula for setting the SAIDI standard and the use of this we think means that about one percent of current feeders would fail to meet the standard. What this means is that the distributors will be required to investigate and report on a similar number of feeders is under the current standard. However there'll be a greater variety of feeders that are captured, this is because the current category based standards under these standards a longer feeder is much more likely to fail the standard than a shorter feeder, but the longer feeder may have a higher efficient level of reliability than the shorter one.

Under our draft report the same formula would apply to all three distributors, for the individual feeder standards. So this means that the same minimum level of reliability would apply to feeders with similar characteristics in different parts of the state served by different distributors. So for example a five kilometre feeder supplying residential customers would have the same level of reliability Newcastle, as it does in Wollongong.

So now moving on to SAIFI, we also think that the required levels of SAIFI for urban short rural and long rural feeders should reflect the long-term efficient levels of reliability. However data limitations for this review meant we weren't able to estimate these levels. So in the interim we've modelled the actual levels of SAIFI across different feeders and similar to SAIDI, we found that there's a strong relationship between an individual feeder's length and its existing level of SAIFI, and so we're also recommending a formula for SAIFI based on feeder length.

This formula means again similar to SAIDI, we'd be allowing for an appropriate margin away from the existing level of performance. And so that distributors will be required to investigate the economic feasibility of improving performance of the individual feeders when their SAIDI levels fall substantially below what we've modelled as the existing level. Thanks very much Liz. I'll now pass back to you.

MS LIVINGSTONE: Thank you Brett. And Peter this time your thunder won't be stolen you get the chance to go first on this topic, over to you.

MR LANGDON: Thanks Liz. As you're aware, we've spent some time through the development of the model and provided some feedback as the model has been developed. Broadly we agree that making reliability more related to feeder length is appropriate. The step change in that diagram that you put up there Brett was quite good, that step change function is obviously not particularly logical and so moving to a model that actually reflects feeder length is quite sound. In terms of the broad impact upon Endeavour, what we're going to see is a reasonably similar number of feeders that are deemed as non-compliant warranting investigation. However we're going to see that proportionally more to the longer length i.e. those poorer performing areas that are sort of in those sort of more rural communities, again that's probably reasonably representative. So to be honest we're reasonably comfortable right now in terms of the outcome. We think it's reasonably sound, there is some devil in the detail in terms of how it will be applied, but you know at this broad level we're reasonably comfortable.

MS LIVINGSTONE: Thanks, thanks Peter. Alex would you like to add anything on this one. You might be on mute or not there so Natalie we might throw to you in Alex's absence.

MS LINDSAY: Sure okay. Essential Energy recognises the very challenging task IPART has in setting consistent individual feeder standards across all businesses. The current individual feeder standards based on urban short rural and long rural segmentation doesn't really work and the reason for this is if you take a customer that's connected to a 190 kilometre feeder and sitting at the end and another connected to a 210 kilometre also sitting at the end, they're basically the same customer but their reliability standards are substantially materially different.

For this reason a different approach to setting minimum standards make sense but improvements for Essential Energy are necessary to the proposed approach outlined in the draft report. As I mentioned earlier Essential Energy's customers are generally satisfied with levels of reliability and customers were willing to support those customers served to the worst of the poor performing parts of the network. The proposed approach which sets standards based on feeder length will lead to significant increases in the number of poor performing feeders for Essential Energy. We do note this is not the case for Ausgrid or Endeavour. IPART's analysis shows the number of feeders deemed to be poor performing on a five-year average basis increases from four point two percent to seven point two percent of all feeders, this is highly inconsistent with expectations set out in the draft report that one percent of feeders would be classed as poor performing and those would be targeted to improve their reliability.

Without change this increase in poor performing feeders is likely to increase costs and therefore network charges for all of Essential Energy's customers. As you mentioned Brett the new approach does imply that feeder length is one of the key drivers of reliability performance. However in reality reliability is driven by a number of factors, more than half of unplanned outages are caused by adverse weather and environment and 30 percent driven by equipment failure.

This suggests that there may be other more suitable explanatory variables rather than just feeder lengths that account for geographic or network factors. We believe a better solution exists to ensure that the delivered outcomes are consistent with the terms of reference for this review, and we would be pleased to work with IPART to develop a solution that works for Essential Energy.

Also of concern is the optimisation model used in the review, these model outputs indicate the current network configuration is highly inefficient. However it is a stylised network model and based on inputs and assumptions that will need to be worked through. Networks cannot easily transition to the optimal network configuration. The cost to implement the optimal network configuration even over many years would be excessive and unaffordable for our customers and they ignore the sunk costs.

We urge IPART to provide additional caution on the use of this information by stakeholders. It is not reflective of efficiency gains available to existing networks now. It can be used to complement network planning and design. At a very simplistic level though while the optimisation model suggests Essential Energy's expenditure should reduce substantially, the review also indicates expenditures should be increased to meet the changes set out in the draft report, and it would be useful to work through those two elements, thank you.

MS LIVINGSTONE: Thanks Nat. I think Sandra may have a question for you.

MS GAMBLE: I do… Nat. You've done a survey that says the customers are generally happy with the level of reliability. How does that give you sufficient comfort to say then that the customers on the worst performing feeders are also generally happy?

MS LINDSAY: When we did our survey we asked lots of questions around reliability and it was around both planned and unplanned outages, and there was a wide variety of responses to that there was no doubt about it. But on average customers were satisfied with the average reliability of the network. What they were willing to support were customers that suffered from very, very, very poor performance and that goes further than poor performing feeders. Some segments of these feeders don't actually show up on reports, and they can suffer from terribly bad reliability and we asked our customers were they were willing to fund a program to address those worst performing segments of the network and there was almost unanimous support for that program. So the AER did approve that, it's not a huge program but it does target those customers at the extremities of you know really poor performance.

MS GAMBLE: But so how do you identify those feeders that do have that very bad performance, of feeders or segments of feeders?

MS LINDSAY: So we do reporting but complaints is another driver to go and investigate particularly if someone is suffering from outage after outage after outage, we'll always look into a complaint, assess the situation and that could be a trigger for investment. All the reporting that we've got in the place in place to identify these sorts of customers but again we're not talking about huge numbers, it's sort of that it's probably the 0.1 percent that you referred to in the draft report that's sort of what that program is targeted towards okay thank you.

MS LIVINGSTONE: I think Alex has been able to re-join us, Alex did you want to share Ausgrid's perspective on this issue?

MR MCPHERSON: Yeah sure sorry about that zoom crashed on me on my laptop so I've dialled in for my phone. Can you hear me okay?

MS LIVINGSTONE: Yeah we can hear you clearly

MR MCPHERSON: Thank you cool. Look I think it's just to echo what Endeavour said really. Our initial modelling says that we will increase the number of non-compliant feeders, so triggers work from us from our side. There is a lot of detail in the modelling as well you know, suffice to say you look at those formulas that were on the first slide and there's outcomes that results across the you know the number of feeders that we have that we have to look at to ensure that they make sense, based on the network configuration in place. So look I'd probably use the opportunity again to thank IPART the opportunity to work with you on the modelling over the next couple of months, we'll certainly take up those opportunities to identify any incremental tweaks we need to make to the model or suggest be made to the model, to ensure we minimise any of those unintended consequences that might arise.

MS GAMBLE: Yeah I guess the overall intent of this part of the recommendations is to move beyond average, so you know basically the end of average, and think about those customers that are the outliers and how they're dealt with in the regulatory framework. If the distributors think they're already dealt with, there that the investments are efficient investments are already being made to address those shortfalls and reliability, then tell us how you do it and explain to us that that you know those outliers are being addressed efficiently.

Mr MCPHERSON: Yeah we certainly will. I think the first step is to understand the modelling in a little bit more detail so we understand exactly what's being proposed, because there is a fair bit in it and then we can reflect on that question.

MS GAMBLE: And that might be a hybrid with our model and with your own information systems and your own processes.

MR MCPHERSON: Certainly that might be one of the results of this.

MS LIVINGSTONE: Thanks Alex, Craig any perspectives from PIAC on the individual feeder standards?

MR MEMERY: Yeah thanks Liz. So yeah look a bit of feedback on this one and thanks again to IPART for doing some really thoughtful analysis around this. Look overall I think the logic is very, very strong you know moving to an approach that better reflects a balance between what's efficient and what people expect is definitely a good outcome of the overall approach.

I'd really like to go back to a couple of points I raised earlier and raise another one as well so as I mentioned earlier we do have a need to actually reset the reliability levels that are built into the network, as we move away from the former bad old days of big bad gold-plated you know deterministic reliability standards. And there's a bit of history and recent history that's worth noting and I'm going to single out Essential here and particularly some great work that Nat's team has done on engagement, but also as an example of where there's a bit of a risk if we don't follow what people are telling us.

Even though we do have a less excessive reliability standard than we have had in the past, there is still a bit of an adjustment that needs to be made to bring it down from that level that it was. In the last few years there has been a very big focus on establishing consumer preferences revealed through consumer engagement in regulatory context, including with reliability and particularly the price reliability trade-off, as it should be.

Now again I come back to the point that VCR here is paramount, the value that customers place on reliability, it's an expression of their preferences. Now what we've seen in the pattern of VCR over time and the AER would be first to caution that their most recent VCR, used a substantially different enough methodology to what was used by AEMO, that you can't really compare them apples and apples, but nonetheless it's still pretty fair to say it looks like VCR has not gone up, in the course of the last few years.

This is reflected by what we've heard from people so essential did some really good deliberative forums all around New South Wales and spoke to communities there. You know the beauty of a deliberative forum is it allows you to reveal people's preferences in a way that overcomes the cognitive biases that they experience if they're just answering survey questions. The questions that were put to the participants in those forums were, given the choice would you like the same amount of reliability in the same bill, higher reliability for which you have to pay more, or a lower bill and accept lower reliability. And in that context the vast overwhelmingly I think about two-thirds of people said, you know what our reliability is pretty good our bills are too high, we'll take the lower bills and low reliability thanks, so that suggests there's still a bit of adjustment to make there now.

Essential for comparison sake did the same survey, only using phone surveys instead of a deliberative context. And in that my opinion is that the cognitive bias of the version of the version uh um uh sorry uh aversion to change and aversion to uncertainty came through and we saw people say we want the same, same as what we've got now.

What's being put forward by IPART is a really good logic, but the bit that we're really concerned about in the context of reflecting consumer preferences is the SAIFI. So it looks and I might be incorrect in my understanding but it looks like it's actually aiming for overall what would be a higher level of reliability with respect to SAIFI, and we haven't seen anything, any analysis that suggests that that's what consumers want. We've seen the opposite, we've seen analysis that suggests that people are keen on not having higher bills and potentially having lower bills, and accepting trade-offs and reliability for that. So applaud the logic, not so sure if the set point is right if the SAIFI implies that anyone is going to have to upgrade materially upgrade existing feeders or approaches to deal with that.

And this is where we would go also to some previous work that IPART has done so in the reliability transmission, transmission reliability view that IPART did in 2016. At the time IPART flagged that we needed VCR work to be done and if AER or someone else didn't do a new VCR, IPART would do that. Happily the AER has done a very good new VCR. Overall they've done a pretty good job, myself along with Mike from IPART and others here were involved with that process. And my opinion is that it was quite rigorous, there was some a bit of shortcoming that IPART I understand identified in this report, in that it doesn't help to identify the value people place on frequency, because it's still a VCR figure based on energy.

So we can't extrapolate anything from AER's VCR analysis to suggest a higher level of reliability with respect to SAIFI. We certainly haven't heard anything from New South Wales consumers to reflect that it's what they want. So we're quite concerned about that set point and we think that if anything, it should be set at a lower level of reliability compared to existing SAIFI, rather than higher with this readjustment reinforces the point that we made earlier around this being an opportunity for you know fixing and moving away from the higher levels of reliability than people want to pay for.

In summary on that issue, there's obviously a really difficult tension for regulators IPART and the AER, on how do you treat the interplay of standards and requirements and expressed consumer preferences. Because when you've got on one hand a minimum requirement that's a jurisdictional requirement, and on the other hand a network business coming to you with a regulatory proposal saying here's what we think people have told us, and here's how our proposal like meets, they can go in in different directions.

I would say in dealing as a risk management way of dealing with that issue erring on having a lower level of reliability is safer than erring on having a higher level, because it's as we saw with Essential. It's much harder to make a case to a regulator or let's be honest a Minister and I'm not putting words in Natalie's mouth that's my opinion, it's much harder to put to make a case to a Minister for lower reliability than it is for higher. So we would certainly support the methodology, but strongly recommend relaxing the reliability standard around frequency compared to what's being proposed. Miyuru, did you have anything to add to that?

MR EDIRIWEERA: No, no nothing more.

MR MEMERY: Cool, thanks.

MS GAMBLE: Take your point Craig on the on the frequency issue you know, we mulled that over quite a bit ourselves. Just thought I'd be clear though that what we're actually suggesting in relation to these feeder standards is not actually a reliability standard in itself. It doesn't trigger an investment, it actually triggers an investigation into what would be the cost-effective solution and what could be justified from the point of view of the value of customer reliability.

So what we're really hoping to do is to remove that deterministic standard altogether that has in fact driven investment before, so what we're trying to do as I said, is trying to identify a potential gap in the national process, that customers can continue to have confidence that if they are suffering a terrible level of reliability, that they won't be left behind, they that some there's a process in place to address them. They may or may not have to make a complaint or they may or may not be the subject of a survey, that they picked up along the way, but they're not but then we're not trying to encourage any form of inefficient investment. I also take your point about the about the lower but instead of higher that perhaps one thing that might support that case even more is the, is the prevalence now of household UPS, so you know they that's they're very cheap these days, so I'll be interested in your views on that.

MR MEMERY: Thanks Sandra. Would you like me to respond to the household GPS thing yeah? Look this is an interesting one too for a couple of reasons. One and we grappled with this in the AER's VCR process, how do we treat embedded energy, how do we treat behind the meter resources, it has two effects. One is that it argue depending on the nature of the connection and most people's solar systems don't have batteries that are designed to work independently of the grid, so for most people when they lose the grid they lose their solar and their batteries. Some people have batteries as you say that work as UPS's and I think you're on the money there, we'll see an increase of that it'll be a standard relatively cheap option when people do get a battery, and it will be something that meets their whole household load for some time.

But the other way that comes into play is and this is actually the bigger impact, it reduces their demand. And that has an effect on the denominator in a VCR value that is based on energy. So and it that's a very significant impact, so when we're considering VCRs and that interplay, the behind the meter stuff, the bigger impact it has, I think is not on people's ability to improve their own reliability, it's actually on how we measure it. Because if you've got someone who is using only 10 percent of their energy from the grid, because they get most of it from their own battery and solar system. Their dollars per megawatt for a megawatt hour for reliability is arguably out by a factor of 10. So I think that's where that stuff is going to be challenging.

And applying VCR figures when it comes to the matter of frequency, getting back to your point, I agree that having the quote what's a terrible level of reliability as a trigger, is a good is the right trigger. I think we would just argue that even still, I wouldn't define that level that the frequent the SAIFI has been set at, as terrible level of reliability not compared to what not based on what we're hearing from people saying about their experience with their current with their current supply and what they're prepared to pay for.

MS GAMBLE: Okay, thank you, thanks.

MS LIVINGSTONE: Thank you both. We've now got a chance for questions from anybody on this topic, or anything we haven't covered, or a question that you might have thought of on one of the earlier topics that haven't had a chance to ask it, and of course our Tribunal members it's also a chance for you to ask questions of anybody here while we've got the chance, so speak up if you'd like to ask a question

MS LINDSAY: Natalie from Essential Energy, this one's probably for Brett and your previous comments around the reporting manual that would be linked in through the licence conditions. Have you considered doing that for every single reporting element rather than building requirements into the licence, put as much into guidelines as possible or complementary instruments, so they're easier to adapt and change, moving forward, might be on the wrong track here but I thought I read something around exclusions being written into the licence conditions rather than aligning to the STPIS guidelines or whatever the case may be.

MS GAMBLE: I think we can look into that Natalie, definitely especially given some of this is a fairly fast-moving question, and in fact, the time that all of this takes effect you know a few things could have changed.

MR MCPHERSON: I might just ask one question in terms of the interaction between the reliability standards if you can call them that, is sort of worse serve customers and then take your point Sandra, about what these are and what these are aren't how does that interrelate with the tribunals considerations around the GSL scheme, that's being proposed which would naturally be going towards those were served customers, and how do we find that that balance in a cost effective way.

MS GAMBLE: That's a good question. I'm going to flick that, who would like to answer that question instead of me.

MR EVERETT: I'm happy to take that.

MS GAMBLE: Honestly I'm just, I'm flagging a little so Brettoff you go.

MR EVERETT: Yeah that's fine, yeah there's an inter there is an interplay between I suppose the three levels of reliability I suppose each of them have different objectives that we've set out in the draft report, but there is a case to get a balance between where one kicks in and you know the levels that are between each of those. I suppose, with the individual feeder standards, what we're looking to do there is complement I suppose the overall reliability incentive that occurs at a national level, so there's a there's an incentive at a national level to pursue an overall level of reliability that's efficient under STPIS and CES and EBSS, however what we're then looking to do is that you could have individual feeders within the network, where you could still be say for example, even improving your overall reliability under STPIS.

However those individual feeders could be you know deteriorating over time so the individual feeder standards, to capture those types of feeders and complement that national incentive and then I suppose the next rung down from that is those very worst serve customers that will be captured by a GSL payment, where we say that those customers in particular, to acknowledge the poor, the very poor service, and we just sort of set those levels that are even sort of or more level of reliability, than the individual feeder standards themselves.

MS LIVINGSTONE: You're on mute Alex.

MS GAMBLE: Yeah Alex, did that make sense, did that answer your question?

MR MCPHERSON: I think so. I mean as, I mentioned at the outset and I think Craig's alluded to, we want to ensure that we don't invest the dollar more than necessary. And perhaps some further elaboration in the final report perhaps, just on ensuring that how those two things interact don't result in in that outcome to the degree you know possible, it's obviously extremely complicated, but it's something we would like to see a little bit more of and perhaps have a few more discussions with you about that.

MS GAMBLE: I think that's a good point and we'd like to do that yeah.

MS LIVINGSTONE: Thank you, any other questions before we wrap up the session for the day.

Doesn't sound like it, so let me thank Peter, Alex, Natalie and Craig for being so helpful in responding to each of those topics on the way through, but I'll hand over to Sandra now to close our session, thanks Sandra.

1.6 Closing Remarks

MS GAMBLE: Well thank you very much everybody for a great conversation. It's actually a really nice number of people to have a fairly fulsome conversation. And I know that some of you may not have participated personally, but hopefully you got something out of it. We certainly did. You've raised some really great points and something for us to really chew on and think about. And hopefully we'll make a better decision because of that. So well done, thank you for participating, we look forward to hearing more from you in your submissions due on the 25th of January. Yeah if you've got any feedback or you want any further information you can contact Brett, who I'm sure would be more than happy to take that on. So thank you very much, I think we can call it to a close now.