

# WESTERN POWER AA5 DRAFT DECISION PUBLIC FORUM

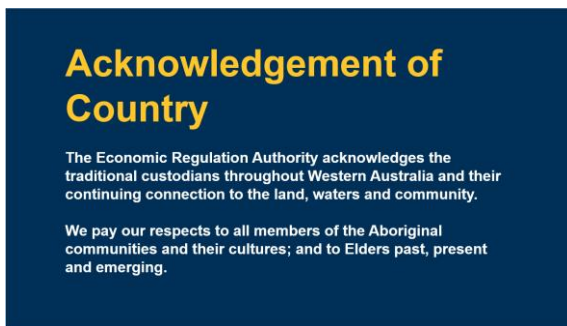
CONDUCTED ON 27<sup>th</sup> ON SEPTEMBER 2022

## TRANSCRIPT



### JENNESS GARDNER

So, hello and welcome. Ooh, it's still a little bit echoey but we'll just have to make do. My name is Jenness Gardner. I'm the CEO at the Economic Regulation Authority, and it's my absolute pleasure to welcome you all to the forum that we're having today.



I would like to start by acknowledging that we are meeting today on Whadjuk Noongar Boodja and more specifically we're meeting at Boorloo, or Perth. I would like to acknowledge the traditional custodians of the land, the Whadjuk people, and pay my respects to their elders past and present.

We're currently in the season of Djilba, which is a transitional time of year and as we move into the warmer months, and it's an apt time to be discussing Western Power's fifth access

arrangement, which itself marks a transition from our traditional way of managing the power network to a renewables-based system. The ERA released its draft decision on the access arrangement on 9 September and in a moment, I'll ask our chair, Steve Edwell, to provide you with an overview of the draft decision and how it was developed.

Sam Barbaro, welcome. The CEO of Western Power is also with us today to share Western Power's perspective, and there will be an opportunity to ask questions after each presentation. We're going to be using the Slido app to enable that and if you can log onto the link shown on the screen any minute now or scan the QR code on your name badge – in the corner there if you're looking for it.

<b>01</b>	Introduction Jenness Gardner, CEO ERA	2:00
<b>02</b>	Overview of the draft decision Steve Edwell, Chair ERA	2:10
	• Q&A	2:40
<b>03</b>	Western Power's update Sam Barbaro, CEO Western Power	3:10
	• Q&A	3:30
<b>04</b>	Closing remarks Jenness Gardner, ERA CEO	3:50

Just to let you know that the session is being recorded. The transcript and the slides will be able to be shared with you, but I'm afraid we won't be able to share the video with you mostly because the quality is not real flash. We're recording it for recordkeeping purposes. Some housekeeping, of course. If there is an emergency procedure, there will be all the usual noises. And no, I won't be making them for you; you'll just have to imagine. If that happens, please leave the building. The other thing to let you know is the bathrooms are – actually as you came in there was that winding corridor near the restaurant; the bathrooms are at the end and pretty much in front of your face as you leave.

At the end of the event, we will be having some refreshments and the opportunity provided to grill Steve or Sam more closely if you would like. So, thank you very much for that.

I would like to start now by introducing Steve Edwell to the stage. Steve is an economist specialising in the energy sector. Before joining the ERA, Steve completed a term as chair of the Energy Transformation Taskforce. He was also the inaugural chair of the Australian Energy Regulator and a member of the governing body from 2006 to 2017. Steve was appointed as chair of the ERA in August 2021, and he has overseen the development of the draft decision alongside fellow members of the ERA's governing body, Virginia Christie and Michelle Groves.

I ask you to welcome Steve.

[Applause.]

**STEVE EDWELL**

Thanks, Jenness. I've got some notes here ready. So, yes, ditto the welcome to everybody from me. And I'm going to run you through the draft decision on Western Power, which we released a little while ago. We've tried to do some things differently this time around. I'm hoping that people will find the draft decision a bit more of an easy read than might have been the case previously. Having been sort of out of the network regulation sector directly for a little while, you've got the time to sort of put your reader hat on and look at things a bit differently; and having looked at a few access determinations across the nation before I got this gig again, one of the views I formed was, you know, we've just got to make these things a bit more readable. So, we've tried to capture the main points of our decision and our thinking in a 30-page document, which was a challenge to the team, but I think the team delivered pretty well; and then people wanting more detail on particular aspects of the access arrangement can go to the respective parts.

So, I'm just going to run you through the main decisions as we see it – aspects of the decision, and then take some questions.



So, you know who we are.



And on AA5, the only comment I want to make at a very high level is there's a certain level of sameness – as long as the access rules don't change – to all access determinations.


This one is quite demonstrably different, I think, in terms of the environment to what happened previously for the AA1 to 4 because (a) we have a transformation happening, which obviously imposes different challenges to Western Power as the grid owner and operator, and to the regulator. And also, not insignificantly, subsequent to the lodging of Western Power's draft decision, we had a major change in financial capital market circumstances, which we'll talk a bit about, which has demonstrably sort of changed the numbers because of the increases in the WACC. So they're two major changes.

Other than that – and most of you people would be aware there've been some changes to the access code since AA4. They've been well traversed. I think people would understand those. But by and large, we adopted a building block approach. We tried to test the boundaries a bit where we needed to, to cater for the transformation challenges that are before us. But by and large, it's an efficiency sort of test, long-term interest of consumers, making sure Western Power has got sufficient revenue to do its job in the transformation world. So, the methodology broadly is much the same as in AA4.

**Issues identified in the issues paper**

The ERA published an issues paper in March 2022. It drew attention to:

- Whether the **proposed strategy** to reconfigure and modernise the network and associated investment for AA5 is reasonable, properly timed and based on sound cost estimates.
- Western Power's approach to **managing uncertainties** about the future and addressing climate change.
- **Safety and reliability** – particularly areas of the network experiencing relatively poor reliability.
- Whether the **connection processes** will support the new market?
- Whether **network tariffs**:
  - accommodate reasonable requirements of users and end-use customers?
  - facilitate the connection of storage and electric vehicle charging stations?
  - encourage demand patterns that will minimise the need for network augmentation?

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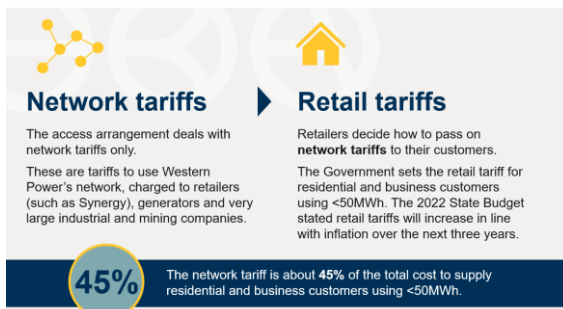
Okay, so fairly early on, we released an issues paper on Western Power's submission. Most people in the room would be familiar with that. We really wanted to sort of raise the bar and get people focusing on what we were really looking at, at a sort of higher level, more a strategic level, if you like, and the first thing we were interested in – we made this point in our issues paper – is what's Western Power's vision for the network in 2030 and how do they see that responding to the transformation challenge? And then under that, what's the sort of expenditure consequences of that vision? So it's not our job as a regulator to be second-guessing Western Power on what their strategic direction is, but we wanted to make sure they had a clear vision and we wanted to make sure that they had no disjoint between what they were proposing in terms of their capital – operating and capital spend and what the end goal was.

We're also interested in managing uncertainties. Now, there's always uncertainties in energy markets but, obviously, the transformation and on top of that climate change taking that to another dimension – and, of course, that's risk not only for Western Power, but it's risk for customers. So, the issue there is the risk demand – the risk balance. What's

appropriate risk for Western Power to handle? What's appropriate risk for customers to handle and have they got that right?

Safety and reliability – clearly always the case. We were interested there in particular in what dialogue Western Power has had with its customers in terms of the reliability issue in particular and how they then reflected the outcome of that engagement in their draft – in their proposal to us.

Connection: with a whole bunch of renewables, as we know, needing connection to the grid going forward. Connection's always going to be a challenge, so what has Western Power said about their connection processes in terms of the new market?




And, of course, tariffs. We all know that we want to move network tariffs along that journey of cost reflectivity, incentivising people to utilise electricity and at the same time sponsor investment.

And, of course, with new technologies, storage and electric vehicles, they're connected to the grid; what's Western Power proposing to do in terms of tariffs for those new resources?

So, we've made the point elsewhere that what we're on about here is network revenues. So, this doesn't relate directly to retail tariffs. As most of us would know, retail tariffs for small users are set by the Government and in the last budget were set to increase by no more than Treasury's forecast inflation rate for the next three years. So, even though 45% of the network tariff for small customers relates to – sorry, the retail tariff for small customers relates to the network cost, there's a cap on that. So, how our decision that we've made flows through to small customer network tariffs, indeed any retail tariff, small customer retail tariff or any retail tariff, is really up to the people who pay directly that network charge, which is big retailers and generators, largely, in the sector.

**Western Power proposal highlights**

- Increase in the average bill less than inflation
  - 3.7% increase in 2023/24 then flat
- Continued focus on safety
- Maintaining overall reliability levels
- Supporting the energy transformation
  - Step increases in transformation programs – SPS, AMI, undergrounding
- Balancing customer needs and affordability
  - Higher investment than in the AA4 period but the price impact on customers will be offset by market conditions that reduce the cost of financing the investment.



Okay, so then I won't talk about Western Power's proposal too much. It's more the issue today is how we responded to it. Western Power, I've got to say – and this is no disrespect to Western Power – when I saw this proposal, I thought it's the magic pudding, because Western Power are proposing very significant increases in expenditure, particularly capital expenditure, which we'll talk about in a minute. And of course, the continued focus on safety and reliability. And as well, incorporated in that capital spend was a bunch of initiatives regarding the transformation. But the overall outcome was a pretty sort of modest impact on network prices with an increase initially of 3.7% in 2022–23 and thereafter network charges remaining flat. And the ability of Western Power to do all that was because at the time they put their proposal to us, the rate of return that they were utilising in their numbers was lower than it was in AA4. So, I thought, look, if things stay stable, obviously we've got to look at Western Power's capital spend, but even if we allow all this stuff, that's not a bad outcome before – during a transformation. But things aren't always stable in the world and we had a number of significant issues to address nonetheless.

**Since the proposal....**

**Financial environment has changed:**

- Higher interest rates
  - +2.3% increase in risk free rate
- Higher inflation forecasts
  - +4.3% at June 2022 then +1% thereafter
- Subsequent WACC increase (WP proposed method)
  - 4.7% to 6.4%

And, of course, the big change here was the increase in or the change in the financial environment. We had subsequent – so we based our proposal as at 30 – numbers in the capital market – finance market numbers on 30 June just gone. And between Western Power's proposal when they framed their proposal and 30 June, we had a 230 basis point increase in the risk-free rate; inflation forecast above 4% for 2022 – as at 2022 and forecast increasing further beyond that period of time. And, of course, that all translates into the weighted average cost of capital number which even on Western Power's methodology, had they applied that methodology on 30 June, subsequent to – well on the basis of the

capital market as it was then, Western Power's WACC would be 6.4%, rather than the 4.7% that they proposed to us in their proposal.

**Capital project considerations**

- No issues with Western Power's strategic response to transformation and the programs included in the proposal
- Step changes in activity compared to AA4 actuals raises concerns about deliverability
- Mindful of Government priorities – AMI and SPS

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Okay, can I go to just drill down a bit more into the capital side of – expenditure side of the proposal? Capital expenditure first. So, Western Power – well, the first thing was we wanted to satisfy ourselves that Western Power's strategic response was consistent with the transformation, and as many of you would know, that response fundamentally is the development or the journey to a modular grid with, you know, a meshed overhead network in the inner-city area with – sorry, an underground network in the inner-city area, a meshed network in the outer areas and when you get to the sort of more low-usage, low-population areas, you're installing standalone power systems and microgrids where the potential is there for the grid to become autonomous. So that's the journey they're on. That's at the high level. I mean that makes sense to us, and it seemed to make sense to stakeholders. That was the broad message we got in the submissions to Western Power's issues paper. So, the issue really then is all about delivery, efficiency and delivery, rather than necessarily, "Well, hey, guys, your strategy is all wrong here."

And Western Power in terms of capex, it has proposed a significant increase in their expenditure, so we've been given a 33% increase on their actual capital expenditure incurred during AA4 and a 48% – sorry, a 33% increase in the allowance for AA4 and a 48% increase in the actual spend in AA4, so quite a significant increase there.

The other thing we were mindful of here is Government priorities. So, the Government has very clearly got a priority for Western Power to continue to roll out advanced metering infrastructure during AA5. And the Minister, Minister Johnston, had made it very clear that the Government sees a benefit to fringe-of-grid areas in rolling out standalone power systems, and the Government has indicated its commitment across Western Power and Horizon for the installation of, you know, 1,100-odd SPSs during the AA5 time zone. So, our view is that Government in making those decisions are acting in the best interests of the community, so we haven't agitated those agendas, but what we have done is look at the costs.

## SPS and undergrounding

- Significant step changes in activity compared to AA4:
  - 8-fold increase for SPS
  - 4-fold increase for undergrounding
- Concerns with deliverability and efficiency given:
  - Level of activity achieved in AA4
  - Supply chain constraints and tight labour market
  - 'Early stage' cost information – longer term costs/efficiencies not yet known
- Need to balance risk for customers and WP:
  - Reduced costs in draft decision – consultant recommendation
  - Both programs in IAM - flexibility such that customers are protected by only paying for what Western Power delivers, and also that Western Power is funded if it delivers the programs efficiently and more quickly.

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So, just on some of the components of the capital spend, just on SPS, we had a proposal here for significant increases from 187 units installed during the AA4 period to 1,861 installations during AA5, which I think by any measure with new technology today is a rather large jump. And in respect of undergrounding, we had a significant increase, a four-fold increase, in undergrounding undertaken in the previous five-year period as well. So, that sort of raises the issue about: well, can Western Power actually deliver this stuff, deliver this spend within the four and a half years we've got for AA5 in a market where resources are constrained, costs are rising, and where some of these technologies are new technologies? So, you know, what's the benefit of doing it now vis-a-vis sort of delaying it and getting a benefit of the technology cost reduction as things go down the cost curve?


So, they're all the things – they're some of the things we considered. And of course Western Power in its proposal made it clear that what they tried to do, quite reasonably, was to balance the risk of their expenditure for customers, so balance the risk between Western Power and between customers. That's something that the governing body had a particular focus on, so what we've done with both the standalone power systems and the undergrounding is we've locked in a number. So, we've locked in 1,080 SPSs and we've locked in a number for undergrounding, which is 365 million. That's a reduction on Western Power's proposal. But we've locked these projects into a mechanism called the investment adjustment mechanism, which means that if Western Power don't deliver on that expenditure, then they wear that risk. So, customers don't wear the risk of an underperformance.

Similarly, if Western Power can achieve what it's asking for, which is a four-fold increase in undergrounding and, you know, another 800-odd rollouts of SPSs or even higher, they'll get that in the next AA6 period. So, we've put that – what we think is a high-risk delivery suite of investment into the investment adjustment mechanism to get that balance of risk between Western Power and consumers.



### AMI

- Accumulation meters will be replaced with AMI – issue is the timing
- \$20 million difference in NPV of replacing by end AA5 or 2032
- Enabler for transformation program
- Proposed AMI funding approved, requested clarification on:
  - Inclusion of contingency
  - Quantification of expected benefits


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Advanced metering infrastructure, I mentioned this before. We were interested in hearing what Western Power’s argument was in terms of, you know, do we need to roll all of this out in AA5 vis-a-vis a more steady rollout to 2032? And the NPV difference between the two was about \$20 million. So, by rolling it out according to Western Power’s proposal, rolling out all of the AA5 – all of the advanced metering infrastructure in AA5, there was a cost of \$20 million over and above sort of waiting for the extra six years. Look, in the fullness of time, with the benefits we can get from AMI – given that AMI, as we know, has a suite of benefits, not the least of which is safety for customers, but also as a mechanism for facilitating the digitalisation of the network and the transformation, we’ve given that suite of money to Western Power for the rolling out of AA5 – rolling out of AMI during AA5, but we’ve asked them to come back with clarification of the benefits. And we’ve also taken out the contingency allowance for AA5 and indeed we’ve gone pretty hard on contingency across the full suite of capital spend where we thought that maybe it was a bit overdone and not in the best interests of consumers.

### Other capex

<p><b>Other asset replacement:</b></p> <ul style="list-style-type: none"> <li>• -\$165m to \$747m</li> <li>• Aligns with AA4 actual expenditure</li> <li>• Proposed replacement not supported by actual asset condition</li> </ul>	<p><b>SCADA/Comms IT and Cyber:</b></p> <ul style="list-style-type: none"> <li>• -\$256m to \$616m</li> <li>• Double AA4 actual expenditure</li> <li>• Significantly higher than comparable companies in NEM.</li> <li>• Not supported by increase in failure rate or strong supporting business cases</li> </ul>	<p><b>Corporate support:</b></p> <ul style="list-style-type: none"> <li>• -\$31m to \$115m</li> <li>• Significant element of the forecast depot program allocated to ‘unplanned activities’</li> </ul>
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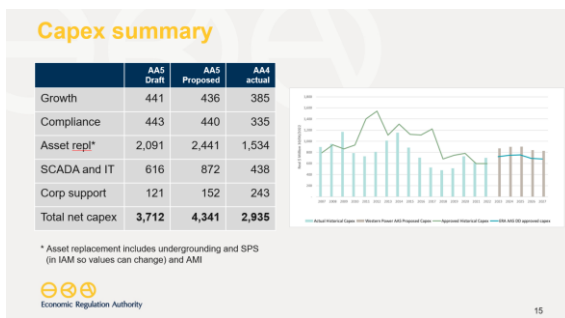
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The other main areas of capex – clearly a bunch of old or ageing assets in Western Power’s asset base need to be maintained, need to be replaced. We had some issues with the supporting argument for some of this expenditure, and in particular we had some issues around the methodology, the model, if you like, that Western Power was using to determine asset conditionality, which, of course, drives the capital spend, that replacement spend. We’ve mentioned that in some detail in our decision and also for those interested you can have a look at the consultants’ Engevity report – commentary on that. So, we’ve cut Western Power’s asset replacement back by \$165 million to \$747 million, which is still – which is sort of aligning with what the AA4 expenditure was – actual expenditure was.

But there has been significant allowance increase for SCADA, IT and cyber. Now, Western Power has proposed very significant increases in these areas. I think in terms of the SCADA, in aggregate it was greater than the number of the smaller eastern states network businesses if we add them all up. So, the issue here is – look, we don't have an issue with the need to digitise the network and most of this was all about poles and wires – the distribution network, but, you know, it's a timing issue, it's a cost issue, it's a delivery issue. So, we've cut Western Power back by \$250-odd million in this area of expenditure.

Now, we are very keen to ensure Western Power does not underspend on cybersecurity. I'm pleased we put that in there in light of more recent events. So, we've indicated in our draft that Western Power should look at their cybersecurity expenditure again. If they want to come back to us and agitate for a different number, you know, we'll engage in that discussion. But overall, this area – again, we had some level of discomfort which was driving the \$250 million reduction about the modelling that Western Power put forward in terms of justifying the benefit and also – and that was particularly in the case of SCADA. It's hard to justify what the SCADA – a spend of this ilk is on, you know, IT is to customers. I recognise that. But we were hoping for in some respects a bit more support there in the business case. So, that's behind the reduction there.



So overall, on the capex, we're looking at a – just in terms of history, just under \$3 billion actual expend by Western Power in AA4. Western Power proposed \$4.3 billion and we've allowed their capex at \$3.7 billion in AA5. That includes the capital expenditure that we've put into the investment adjustment mechanism for the standalone power and the underground projects. And you can see the – on the right-hand side there in the five bars at the end; we've got a significant step up in capex, certainly over AA4. Still dwarfing what happened back earlier in the decade, which was mainly driven by the need to replace [indistinct] poles. Okay, that's the highlight of the capital expenditure.

**WACC**

Component	Western Power proposed	Draft decision
Average period	30 June 2021	30 June 2020
<b>Return on debt (%)</b>		
5 year interest rate swap effective yield (%)	N/A	4.075
Debt risk premium (10-year average) (%)	N/A	1.883
Debt issuing cost (%)	0.100	0.100
Debt hedging cost (%)	N/A	0.123
Return on debt (10-year base) (%)	3.907	N/A
Nominal return on debt (%)	3.907	6.247
<b>Return on equity</b>		
Nominal risk free rate (%)	1.53	3.82
Market risk premium (%)	6.0	6.2
Equity beta	0.7	0.7
Nominal return on equity (%)	5.73	8.16
<b>Other parameters</b>		
Debt proportion (%)	55	55
Wholesale (%)	2.00	2.06
Corporate tax (%)	30	30
Franking credit (%)	50	50
Nominal after-tax WACC (%)	4.73	7.19
Real after-tax WACC (%)	2.64	4.03

ERA agrees with most parameters:

- credit rating, gearing ratio, term of debt, term for equity, equity beta, forecast inflation, updated for current data, value of imputation credits (gamma).

Has retained hybrid trailing average approach to cost of debt:

- Higher but more certain debt costs over AA5

Now, can I just turn to the return on the asset base? So, Western Power has an asset base of around \$10 billion. So, you know, you get a 100-basis point increase in the rate of return; on an asset base of that magnitude, you get a big revenue requirement impact, and that's what's happened here. So, Western Power – now, this WACC stuff is pretty techie, and I won't go into great detail, but we have it in our submission. We ended up agreeing with Western Power on most of the metrics into the return on equity and the return on debt, even though we sort of got to the same number roughly in some respects with a different methodology but we've sort of agreed – some variance in the methodology. But the two areas I really wanted to talk about that were really driving the numbers on WACC is the return on debt and the return on equity.

If I can talk about the return on equity first, now, Western Power proposed to us – I'll just get a top-up. So, Western Power has proposed that we depart from the traditional approach of the ERA in terms of deriving the cost of equity using a five-year term. And Western Power put an argument to us to utilise a 10-year term. Now we've agreed with that argument. Indeed, we already, prior to the Western Power decision, put out a draft decision for the gas pipelines, a special rate of return decision that we needed to put out under the national gas legislation in respect of the gas pipelines here, the regulated ones. And in that decision, which preceded Western Power's proposal, we made the point that we were supportive of a move to 10 years, and that's because, in our view, in this governing body's view, a 10-year term for looking at the cost of equity aligns pretty well with investor expectations.

It still meets the sort of benchmark of NPV equals zero, for those of you who are sort of into matching regulatory revenues with costs in a particular period, but we think it's much closer to practice and we've gone for it with some confidence that that is the right decision. Now, we also think it allows for an efficient investment, because what we're going to do is incentivise efficient investment into the network, even though Western Power is not treated any differently in this regard to private owned network business. That's standard regulatory practice. So, investors in a capital market will be looking at investing in these sorts of assets over a longer period of time. So, we see it as also being positive for efficient investment. Now, the result of that is that the return on equity is 8.16 in the draft decision

compared to Western Power's 5.73, and that's not just due to the methodological change by us. It's also due to the risk-free – the capital market impact I mentioned earlier.

The second area Western Power sought us to change is the way the methodology for deriving the cost of debt, and the ERA has used in the regulatory context quite an unusual approach historically called a hybrid trailing average approach whereby we lock in a five-year bank bill swap rate for the duration of the five-year period, which enables Western Power for some hedge over its interest rate risk, and then the difference between that bank bill swap rate and Western Power's overall cost of debt, which is driven by its credit rating, sort of floats over the period, and that's adjusted every year.

Now, the antithesis of that is what's called a 10-year trailing average approach where you have a business which just – you assume that the business is refinancing 10% of its portfolio every 10 years, and you just take – every year of the access arrangement you pull out the most distant 10-year period and you lock in with the current 10-year period, right? So, it's a simpler approach and for those of you who are interested, you can read and have a great time reading about all this stuff in our decision. And I think every consultant in the world has got a paper on this so, you know, rock your socks off. But having said that, it's very serious stuff, and the team here spent a lot of time on what we would do in this area, and we've disagreed with Western Power in terms of proposing – their proposal to change to a 10-year trailing average approach away from our traditional hybrid trailing average approach.

And the reason we've disagreed is that we think our approach – traditionally our hybrid approach – is more efficient and in particular it's implementable; it's working; it's certainly working for Western Power and other businesses. We don't believe Western Power made the case to change to a straight 10-year trailing average approach, and the five-year approach actually aligns better with Western Power's net portfolio where they've got about 30% of their debt which is subject to debt market influence and movements to the debt markets, so they haven't locked in the whole portfolio.

Now, the result of that is that we end up with a cost of debt of 6.2 compared to Western Power's proposal of 3.9. Now, it turns out, with the flux of time, the five-year trailing average approach actually gives Western Power revenue over and above what the 10-year trailing average would do. We made that point very clear in our decision. And we are interested in responses from stakeholders in terms of that approach. Mind you, the great majority of responses we got on this issue from stakeholders was for the ERA to stay with their trailing average approach. There weren't too many people that disagreed – that thought Western Power's approach should be adopted, including, I think, the consumer forum, which was supportive of the hybrid approach. We're pretty confident that the trailing average approach is where we should stay but we've opened the door up to agitation.

Just quickly, on – I should just go back and talk about the overall rate of return, shouldn't I, which is 4.03 in terms of real compared to 2.64, a real WACC, but the one we normally

talk about the nominal WACC, which is 7.10 in our draft decision, vis-a-vis 4.73, which was based on Western Power’s proposal adjusted for the metrics in June 2022, which we think is a better comparison.

### Operating costs

- 7% real reduction
- Accepted most step changes, recognising uncertainty from transformation
- Did not accept opex for silicon treatment – not required under ESO.
- Capitalised line decommissioning costs over 1 year

2% productivity factor (0.25% proposed)

- Expect efficiencies over the period
- Consistent with efficiency documented by other NSPs

Very quickly, on operating cost, not much in operating costs. We were broadly happy with Western Power’s operating cost proposal. The main issue here is we thought Western Power could do better than their proposed efficiency gain over the period, which was deemed by them to be 0.25%. We looked at efficiency productivity improvements across the sector and we think it’s much higher, so we’ve allowed for a 2% productivity factor over the – each year over the five-year period. We expect Western Power, particularly with the rolling out of new technologies, to deliver that for customers.

And there are some other areas where we’ve changed the way we’ve treated some of the expenditure in terms of depreciation and we end up with a 7% real reduction in Western Power’s capital operating costs compared to what they proposed to us. In this area, we have given some consideration to the transformation challenges ahead. So, if there was a marginal decision in some areas, we certainly – we decided to be conservative and we’ve allowed the number. And a fairly flat trajectory in operating expenditure across AA5 with a slight increase on the last year with the AA4 period, which is the period we’ve used as a step-up.

### Service Standards

- Some areas experience poor reliability
- Approach informed by regional visits and Michelle Shepherd report
- Single standard (targets become benchmarks)
- Raised rural long target to legislative standard in NQR code (290 minutes)
- More granular reporting
- Discuss policy options with EPWA

Variation in length of interruptions experienced by customers for each feeder

- Based on 2020/21 data provided by WP
- Ranges from 5,500 mins/customer to <100 mins/customer (not equivalent to SAIDI data)
- Y-axis = minutes
- X-axis = individual long rural feeders

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Service standards is one of my last points and we’ve been pretty keen in looking at service standards, and particularly in light of the issues that customers experienced across the grid earlier this year, which admittedly was about the time Western Power – and indeed a

bit after Western Power had provided their proposal to us in some cases. It's clear that some parts of the state – most parts of the state get very good reliability, but some parts of the state are not getting the reliability that we believe they – well, the regulations, the relevant regulations, indicate they should be. And, of course, we had to have regard to Michelle Shepherd's report, which was commissioned, as you know, in light of those outages. And Michelle raised a number of issues around transparency, customer understandability, and granularity of some of these reporting targets. So, we went back and had a look, "Well, what does the ERA do about this?" And it seemed to us we sort of add to the confusion, if you like, and I went out to quite a number of the fringe-of-grid areas and actually spoke to customers, mainly on the rural long – some rural short, but mainly on the rural long parts of the network and actually ran into Sam, who was in Kalgoorlie at the same time. So, Western Power were doing similar sorts of soundings.

Now, the area where I think we've added to the confusion is we've got really three different types of targets. So, when people say to you in these areas, "Well, what's my SAIDI? What's my interruptibility duration index?" They don't express it using that terminology but, "What's the benchmark here?" Well, under what the ERA says, well, first of all, there's a network quality and reliability code which sets the legislative requirement across CBD, across urban and across rural areas, and in the case of rural areas, where there's a problem, that's a benchmark of 290 minutes per year. Now, that's on average. And the legislation basically says that's a target that Western Power should reasonably – should try to achieve. It wasn't a must-do but there needed to be a "as far as reasonably practical" test to that. So, that's one.

And then the ERA doesn't have too much regard to that historically. We've got a thing called the target where we've set a benchmark target which is based on a five-year rolling average of performance in the – the average of the performance in the previous five years. And then we've got another metric called a service standard benchmark, which is based on the 97.5% quartile, right? And the idea of that is, well, that's what customers seem satisfied – that's the minimum approach, 97.5% quartile, and the target, which is the average, is really what customers should be satisfied with. So, when you go out and talk to people and you try to explain all that, well, you need to get out of town real quick. I thought: look, come on, we've got to simplify this. So, what we've done is – we've done two things. We have dispensed with our target, and we've called our benchmark – we're still calling it a benchmark, but the benchmark is now going to be the average performance over the last five years.

Now, for areas which are currently meeting or above the network quality and reliability code requirement and there's many, many areas closer to the grid – if not all that are doing that – then we're just leaving that the five-year historic number. For rural long, however, we can see here on the right-hand side there's a whole bunch of – and this data isn't 100% accurate but we've asked Western Power to provide it to us, but it tells the picture; there's a whole bunch of feeders out there in rural long land which really aren't within cooee of

the statutory requirement of 290, which is the red line there. So, for rural long, we've aligned the new benchmark with 290.

So, the issue then is we've got a bunch of these areas which are not achieving the 290 metric, and we've asked Western Power to have regard to that. Now, we're not going to solve this problem overnight, but we've got to solve it. We've got to start the journey. So, we want to have a talk to Western Power, ongoing, about this and obviously with the policy people in EPWA. But we're also keen to get some granularity, more granularity, right across the network, rather than having Western Power report on averages. We would like them down to feeder level, if possible – certainly a lot more granular than we're getting now. So, we need to have that discussion. So, some interesting changes in our approach to service standards.

**Network Tariffs: What we need from Western Power**

To inform our final decision, Western Power now needs to:

- Update the cost allocation and forecast revenue for each reference tariff to reflect the most recent actual and forecast energy and customer numbers and revised target revenue.
- Take account of stakeholder concerns about the effect of rebalancing between fixed and variable charges to develop a more gradual transition.
- Include sufficient information for customers to understand the proposed prices for 2023/24 and how the components of each tariff are forecast to change over the AA5 period, including the likely effect on customers with a range of consumption profiles.
- Modify the proposed tariffs for storage and electric vehicle charging reference services to address the matters raised by stakeholders in submissions on the additional information published on 30 June.

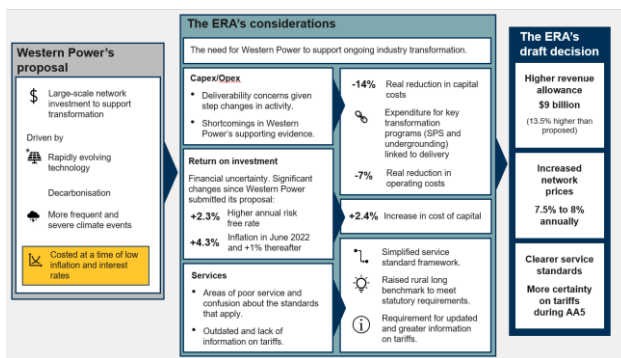
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And then, look, on tariffs, we all know how important tariffs are. We generally support what Western Power are proposing to do on tariffs, which is reshaping current tariffs between the variable charge and the fixed charge. Western Power is saying to us, "Look, when you look at our current variable charge going forward, it's way above our long-term marginal costs, so we need to have some change there." That point's reasonably accepted. It's really what that adjustment is. Western Power's proposed moving to five – a time-of-use tariff based on five 24-hour price bands, and the highlight there is a very, very low super peak – super off-peak tariff between 9.00 am and 3.00 pm. New tariffs for grid-connected batteries and for electric vehicle–charging stations, all initially based on sort of time of use rather than sort of demand-based tariffs, which some stakeholders had some issues with. And moving on that journey towards these new tariffs over time, so a general transition all makes sense. The devil really is in the detail in what the impacts on customers are.

So, subsequent to their proposal to us in February, Western Power came back in June and proposed some different constructs for some of these tariffs and, generally we think that that's an improvement, but the issues we've got with the tariffs really are around there's not sufficient detail for customers to work out the cost allocation between customers and between tariffs. We need more granularity in terms of: what does this actually mean for my bill? And Western Power has got to update these tariffs anyway based on the revised demand projections, which will change between now and the final.

Western Power will need to come to us on any changes they propose there, which will drive these tariffs one way or another.

And in respect of EVs and batteries, we really want to ensure that we're incentivising the establishment of EV-charging stations, and particularly an issue there is on very early on with low usage of EVs, what's the incentive for people who install battery-charging stations on a time-of-use tariff? So we want to move towards a charging structure for both batteries and EVs which take account of the changing usage patterns in the network but also provide incentives for EVs to be taken up throughout the state, and also for people who are in grid-connected batteries to discharge energy and to charge their batteries at times which support the power system, and we all know what the issues are there. So, basically, what we've asked Western Power to do is come back with more granularity and more detail on what they're proposing there.



So last slide, so basically, in the proposal Western Power came forward with some very large network expenditure increases, not overly surprising in a transformation world: rapidly evolving technology, decarbonisation of the network, electrification of the network being the drivers and, of course, climate change events becoming more extreme. And the proposal came to us at a time when we had some stability in the capital markets. What's happened since, of course, is we've just gone through the process I mentioned in terms of the capex and opex space – some deliverability concerns, some step changes, efficiency concerns, which resulted in a 14% real reduction in Western Power's proposal and a 7% real reduction in their opex proposal.

Return on investment, we're talking about a 240 basis point increase in the cost of the capital from what it would have otherwise been in Western Power's proposal in June. And a bunch of work around service standard, improving the incentives there for Western Power to improve in underperforming areas, but they need a lot more granularity and transparency and obviously transparency in more effective and efficient tariffs to facilitate the transformation. And the outcome there is a higher revenue allowance of \$9 billion.

Now, the media have made a point of the fact that we've actually given Western Power \$1 billion more than they asked for, and I made the point to the media, well, that's true, but



it's really not. And it won't be as it is driven primarily because of the changes in the capital market. The reality is a \$9 billion revenue allowance and the rubber hits the road, of course, on what does this mean for network tariffs? And as distinct from the Western Power proposal way back, which was based on a once-off increase of just below 4% in 2023–24 and thereafter flat, the outcome of this decision is a 7.5 to 8% increase, nominal increase, in tariffs for the duration of the period. And I mentioned the tariff – more certainty around how the tariffs would be constructed.

So, that's the outcome and we're very interested in obviously questions now but certainly interested in written submissions, and Jenness will talk about the process from now to the final decision a bit later on. I'll leave it there.

[Applause.]

**JENNESS GARDNER**



Thank you very much, Steve. So, you've had an overview of the draft decision. We're now going to take some questions. I'm just going to see – hopefully, any minute now we'll have the Slido slide up. Do you want to put that one up so we've got the number? There we are. Yep. Thank you. So, you can find that on the screen. We have a roving mic held by our friend Reyno at the back. You don't need to take it in turns with the groom and the bride's side. You can actually choose whatever happens. So, we've got one question on Slido. At the moment we have no hands up. Oh, come on; you know you want to. I'll go with the Slido question. Steve, Matt Rennie said over the weekend that he didn't think the ERA went far enough in its draft decision. Have you got a response to that?

**STEVE EDWELL**

Yes. Well, I think Matt's talking in the context of us allowing Western Power more than we have, rather than the usual commentary from consultants is that we should have gone harder and cut them back more, so I don't know whether that's good or bad. Ha! Look, we're very confident we've got a balanced outcome here. It's very clear to us that the transformation is going to be costly and one of the concerns I've got and I mentioned this – I've mentioned this publicly and I mentioned it at the energy conference just gone,

that the transformation – the cost on the community of a transformation is going to be higher than what people expect. And I think people’s expectation that this thing can all be done before breakfast and can be done at minimum cost is not good, and there needs to be people out there who I think can actually add a bit of sense to the argument.

The issue for this decision, of course, is that we haven’t yet incorporated any expenditure for transmission and that’s because Western Power hasn’t got enough information to put forward a robust case to us and that depends, of course, on the work that EPWA is doing at the moment which will incorporate the WOSP. And the way the transmission side of things works, as you know, with changes in the access code fairly recently is if the WOSP determines a certain level of transformation – not so much a dollar amount, but certainly an augmentation needs to occur – then the regulator has to allow that and it’s just a matter of what’s the efficiency of the delivery of that.

So, I think the issue that I have with Matt’s proposal was, one, I’m not sure he read the decision in total. Secondly, he didn’t appear to be concerned about impacts on customers. And what we need to do in the transformation, really, is to incentivise businesses to spend what they need to spend now, do it in a way where they have the risks that they can best manage and customers have the risks that customers can best manage and not have that as asymmetric and defer expenditure that’s not mandatory in the next five years and can be postponed. We’ve looked at all of those things, and we think we’ve come up with a balanced decision.

#### JENNESS GARDNER

Thanks for that, Steve. Now, there’s one more question that’s – actually we’ve got two here. I might go to the second one first, actually. What is the ERA’s position on the recent change in the treatment of IT SaaS implementation cost in Accounting Standards – goodness, someone’s gone very technical here – moving from capex to opex?

#### STEVE EDWELL

Yeah, look, it’s more for the accountants in the room. I have encountered this, and Western Power might have a view. I’ve encountered this on another piece of work I’m doing in another jurisdiction where for a regulated entity they ended up getting an approval for a whole bunch of capex but because – capex for IT spend and because of the change in Accounting Standards, it’s now sort of cloud-based infrastructure, and the way the Accounting Standards now treat that is it’s treated as sort of opex, rather than sort of capex. The good thing is you don’t get it in the RAB, so you don’t get a rate of return on it, but it’s really just a swap between one and the other. At the end of the day, I don’t think it matters for the consumer, as long as the number is right, the spend is right. Leave it to the accounting boffins to work out which way they should treat it, but when you make the change, it can have impacts.

Now, I don't know whether we've had to concern ourselves with that issue in this decision, have we, team?

**ELIZABETH WALTERS (ERA)**

Western Power did not include a step change in its proposal.

**JENNESS GARDNER**

I might go back to a theme you were talking about before and this is the flip side, I suppose, of what you were discussing earlier: why put prices up now when the cost of living is so high?

**STEVE EDWELL**

Yeah, look, that's a reasonable question. At the end of the day, customers are best served with not deferring – i.e not requiring a network business to defer expenditure, which is absolutely needed in the final analysis to keep the lights on. And we all know that this transformation imposes very significant risks to the reliability and security of the network, and it's also broadly supported by customers as a means of electrification. So, it gets back to this sort of disjoint between what customers want and their ability to pay or their willingness to pay – in many cases their ability to pay. So, certainly the cost-of-living pressures is certainly first and foremost to us, which is behind some of the reductions we've made. But it is not incumbent on us as the regulator, given all the requirements we have to have regard to in the access code, which is the long-term interests of consumers, which is the safety and security of the electricity system and, of course, now we have an environmental objective to ensure that – however you interpret that, it's certainly a transformation objective and it's a climate change response objective.

When you put all that together, there's got to be a bunch of money spent here and it's not a zero-sum game where network business can simply just, you know, replace expenditure they would have made with new expenditure. We've still got to have assets that are serviceable that are in play. So, you've got most of that expenditure anyway. So, it's a bunch of new stuff and from a regulatory point of view, our issue is well – what's absolutely important for Western Power to spend in this AA5 period, what can be deferred and then who manages the risk? And that's why we put a bunch of the expenditure I mentioned into the investment adjustment mechanism to get a better outcome there for consumers if Western Power don't perform.

**JENNESS GARDNER**

I'm going to look out at the room. We don't have any more questions on Slido. A quick meeting is a good meeting, so we're allowed to move on. It is fine. But I just wanted to make sure that everyone has had the opportunity to ask questions. I might put Steve on the spot for a couple of moments. Steve, you were talking before about it being a balanced

decision. What were you wrestling with as a decision-maker in looking at the proposal from Western Power? What was the bit that you found tricky in there?

**STEVE EDWELL**

You should have given that out as a Dorothy Dixier. Even surprised by your own CEO! [Laughter.] No, good question. Look, it's all a matter of judgement. I mean, at the end of the day, when you look at the objectives in the access code, in many – they are mutually exclusive in some respects. So, do you let a business sort of go feral on expenditure for climate change and for transformation without having regard to the efficiency of the delivery? So, it's all a matter of, at the end of the day, what in the judgement of the regulator – and it's ultimately a whole bunch of numbers and analysis that we do, but at the end of the day the regulator has to make that call as to what's the best trade-off here. And we are confident that on the information available to us, we've made that trade-off in a pretty balanced way between what can be countervailing objectives, particularly during a transformation process.

The issue I think we're all in at the moment is we have a five-year period to 2027, looking very close at that time at 2030 with a Federal Government 43% carbon reduction objective. So, if we have got a network business that's not where it ought to be in 2027, then we're all in – you know, we've got big problems. So, what we've tried to do in terms of, you know, "What do we mean by balance?" is where does Western Power based on their strategic objective where they see the grid being in 2030, where should they be in 2027, and then forming a view around the balance of spend between now and then.

**JENNESS GARDNER**

I think this one picks up one of the challenges that's in the decision as well. If CPI or capital markets change rapidly again either way, could this be reviewed within the work within AA5?

**STEVE EDWELL**

Basically, no. What will happen is if they swing between now and the final decision, then – which is always the case; you know, there's always some basis point change – then obviously we would – if the methodology stays the way it is, and we're happy for people to agitate whether our methodology and approach is right, but even if we assume that methodology stays the same, the markets will change, which will then drive some of those metrics. So, there will be a different WACC, whether it's up, whether it's down in the final decision, who would know? I mean, I think the other issue with inflation is the swinger across – we make our decision based on a forecast inflation and then obviously actual inflation is an adjustment each year as we go through.

**JENNESS GARDNER**

I think – this is me free-forming again, so apologies. You talked as well about putting some of the elements into adjustment mechanisms, so using the flexibility to the extent that we're able to under the regulatory regime that we've got. I was wondering whether or not you could explain that a little bit more and elaborate a little bit more on that and how we pushed the boundaries on that one.

**STEVE EDWELL**

As it turns out it's quite a useful mechanism. I'm not sure it's been used a lot in the past. Has it? Yes. I'm familiar with – obviously it's been the code for a while. I think those of us who wrote the code – I can recall being part of that team – were looking at the contingent investment – contingent, whatever they call it over east, where a network business can argue that, "Look, you know, we need to do this – we need to undertake this expenditure. We haven't got granularity on the size of the number yet", so the regulator puts it into a contingent fund and that's a reopener. So, this mechanism I think is more useful than that because it actually gives Western Power a number, so it actually picked a number, so the number goes in there. Let's just pick the standalone power system for example. So, Western Power says, "We want to roll out 1,900 of these things." We've said, "Well, we'll give you the cost as we based on our costs of the standalone system now for 1,080", and that's the number in the capex numbers. But the whole program for standalone power systems has gone into, is classified, as being in this adjustment mechanism bin. Now, if Western Power roll out more than 1,080, provided it's efficient, it will get expenditure given to them at the next access AA6. If they don't achieve the 1,080, then that cost is clawed back, and the customers benefit from that in AA6. So, it's like an overs and unders.

**JENNESS GARDNER**

And best go at dealing with the volatility.

**STEVE EDWELL**

I think it's a pretty useful mechanism.

**JENNESS GARDNER**

I'm going to give everybody who's here one more go to be brave and actually use the microphone. Doesn't look like it. No. So thank you very much for that, Steve. Thank you for that.

[Applause.]

## STEVE EDWELL

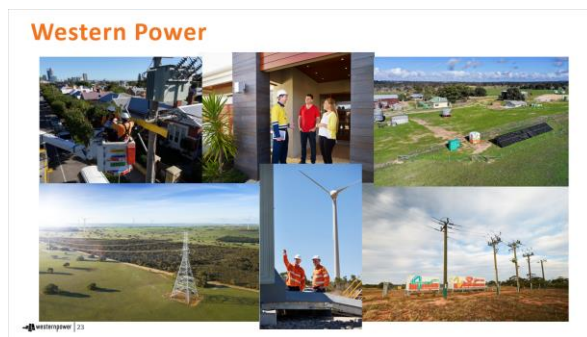
You can see what interesting discussions we have back at the ERA when I get peppered with all these unannounced questions!

[Laughter.]

## JENNESS GARDNER

It's good for him. Next I'm going to introduce Sam Barbaro. We're grateful to have Sam, the CEO of Western Power, and I would like to welcome you to the stage, Sam, and give you the opportunity to make your own presentation. Thank you.

## SAM BARBARO



Thanks, Jenness. Thank you very much. And if I can just join Jenness also and pay my respects to the elders, past and present emerging traditional owners of the land on which we meet here today.

Thanks, Steve and Jenness for inviting me to speak today. I really appreciate that opportunity. I understand that it is the opportunity for the audience to talk about the draft decision and what the draft decision means, so I don't want to go too much into that. I just want to make a couple of sort of observations in terms of how we came to our submission and sort of how that's going to inform how we respond to the draft decision, but I think sort of in the first comment I'll make is I'm really pleased – Steve's alluded to it. I'm really pleased the ERA understood our strategic direction that we're taking going forward to try to meet the demands both for industry and also other consumers and the network.

We are actually really pleased to hear that industry itself and Government and the greater community have really started to understand the challenges that Western Power will face over the next – between now and 2050, shall we say, in leading to a decarbonised world, and so there's a real critical role for the network to provide that solution and it's becoming more and more understood, which I think is really great for things like the conversation we're having today. We were pretty confident in the submission we put forward with the

ERA. We understand the challenges that have come back and we're working through those in understanding the draft decision; we will address those in due course.



So, Steve spoke briefly about the strategic direction Western Power took informing its draft decision. So, I just want to talk about how we got there, as I said, because how we got to the draft decision – how we got to the pillars that we used to develop our proposal are going to be the similar underlying pillars that we'll use to make decisions in forming a response to the draft decision. And as I go through the next couple of slides, I think you'll see why we made those decisions. So, really what we start with is: what do our customers want? What do the customers want, both mums and dads, large industry, generators. They're all the customer groups. We've got different customer segments that we go and consult with, and we actually consulted over 2,000 customers in the lead-up to the AA5 process and we spent over 800 hours engaging with them, asking them questions about what's important to them, how much are they willing to pay, what are the critical issues for each of them. And so, we get all that feedback, and we take that feedback and we start to formulate some positions.

### Network challenges are growing

Network challenges	AA3	Today (AA4)	AA5	Trend
Residential Solar PV	-	1,800 MW	3,000 MW	↑
Behind-the-meter Battery Storage	-	40 MW	700 MW	↑
Renewable generation <sup>1</sup>	9%	30%	~40%	↑
Maximum Demand	4,053 MW	4,223 MW	4,360 MW	↑
Minimum Demand <sup>2</sup>	1,593 MW	856 MW	<600 MW	↓
Customers connected	1.113M	1.162M	1.297M	↑
Average age of assets – poles (yrs)	28	28	28	-
Average age of assets – conductors (yrs)	38	42	39	-

<sup>1</sup> As a percentage of total generation  
<sup>2</sup> Trend continuing downwards rapidly and Western Power continues to work with AEMO and Energy Policy WA on associated implications

We then have to have a look at what we are we seeing in terms of trends in our own network and overlay the customer feedback with what we're seeing in our own network. And these are sort of some of the trends we were seeing today in terms of – and that was AA4 and then the AA5 trend you can see up there. So, what we are really seeing is solar

PV is going to continue to grow. It will almost double by the end of AA5, and that will continue to provide challenges for the network in terms of how we manage the network.

Behind-the-meter storage, that's going to go up exponentially during the AA5 period. Renewable generation – what we're talking about there is renewable generation in terms of percentage that meets the load. That will be around 40% by the time AA5 is over. The next two are interesting. Maximum demand continues to go up, but minimum demand continues to go down. So, the lucky band is getting stretched further and further apart and we've got to somehow try and bring it back together. Unfortunately, that comes with a – it can come with costs and it can come with complexity. So, we're sort of – in previous days Western Power was up here talking about maximum demand and beat the peak and all those sorts of things. We're still talking about that but now we're talking about minimum demand. How do we deal with minimum demand? How do we deal with days where 50% of your load is being dealt with by solar PV and then cloud comes over and then within 30 minutes you lose all of that? How do you deal with that?

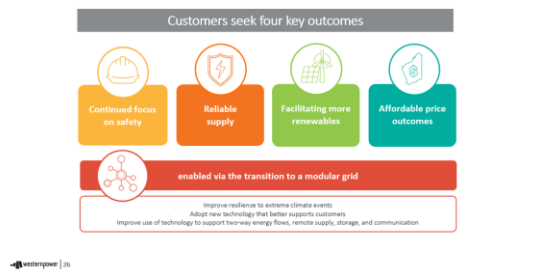
And then our customers will continue to grow in terms of connections, and we might be undercooking that given the influx of population we expect to see over the next few years given the growth of our economy. And then there's some stats there around the average age of our assets. The average age of our assets, we can't underestimate. So, while we're holding them steady there, we'd love to be able to bring the average age of our assets down. That's where we're coming up with that balanced outcome in terms of managing your assets to a reasonable degree but managing it with costs.

And, you know, the world's changed in cybersecurity, as Steve mentioned, too, so that's where we're looking at more costs in that space, but also in terms of when we talk about assets – and this was one of the questions that Steve picked up in his answers. You can't – when we talk about do you need to spend it now when cost of living is up? Has the ERA gone hard enough on the programs? You can't just kick the can down the road forever because at some point you've got to deal with the issue now. And some of my predecessors tried that and deferred over and over again dealing with wood poles, and we ended up in a public inquiry and significant public outcry in terms of the way in which those wood poles were being managed.

So, you really do need to take a long-term strategic approach to how you manage your assets because, as we know, when you've got almost a million wood poles, once you get behind, it's almost impossible to catch up, and it's almost impossible but catch up without a significant spike in costs. So, they're the sorts of things we're thinking about when we're trying to balance up both costs to customers and public safety risk and public reliability.



## Our AA5 proposal



So, then we got to what does that all mean? Really what we ended up with was sort of four main pillars that we looked at. So, continued focus on safety. I mean, that's something that as an organisation we'll never take our eye off, and the community confirms that. It's not just safety of the network, bushfires and the like, electric shocks; it's also safety of the personnel who are working on the network. So, what we see in the community consultation areas, there is significant care for those who are in the hi-vis out there working every day in really difficult conditions and they want safety to be maintained for those personnel as we do as an organisation.

Reliable supply – that's the obvious. We keep getting – we want more reliable supply and, in fact, when Steve was actually in Kalgoorlie, we bumped into each other. He was actually there doing a bit of consultation on what the community wants; I was actually there apologising to customers because we had some significant outages leading up to that weekend. So, I think Steve got the better end of the stick on that one. So, yeah, reliable supply, and I heard that pretty clearly during that week, but we hear that quite a bit and I'll come back to that in just a little bit.

Facilitating more renewables – we're seeing the uptake of solar PVs on people's roofs. That's showing the ideology our community has in terms of wanting to have a decarbonised or low carbonised low-carbon future but they're also looking at the large-scale now. People are sitting there going, "I've got solar on my roof that does a portion of my load, but really want what I want is my whole load to be dealt with by renewables." So, we're looking at how we facilitate that, and we can talk more about that later. And then the kicker, which we've always got, is affordable price outcomes. And that's where the balance I think some of these things are what you call – you might say sometimes when you look at the first three, it can be mutually exclusive with affordable pricing, but that's the balancing act as an organisation we have to play.

## The evolving landscape

 Provide reliable supply	 Decarbonising our community
<ul style="list-style-type: none"><li>• network supply reliability continues to be challenged</li><li>• disruptions to planned works program</li><li>• climate change-related weather events expected to continue (frequency and severity)</li></ul>	<ul style="list-style-type: none"><li>• Adaption, mitigation and electrification</li><li>• increased stakeholder support for climate action</li><li>• electrification efforts expected to increase</li><li>• interim emissions target expected with support required for network augmentation</li></ul>



Underpinned by safety as a fundamental value

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They were the main pillars that we took into our proposed submission and they're the main pillars that we'll continue to focus on. Since our submission has gone in, there's been a couple of changes that have occurred. Steve has covered pretty clearly the capital market changes, so I'm not going to touch on those. I think we're pretty well aware of those. We've also had two other things that have occurred. So, reliable supply. So, we had Christmas outages that occurred. We've had – I think everyone's aware of. We also had significant outages near Geraldton, so Northampton, those sorts of areas that we've been managing. Causing some real angst for the people who live out in those parts.

And so what they've actually done – the feedback that we've got both from the Shepherd report but those that fed into the Shepherd report and also the feedback we get when we go and meet with customers – as I mentioned earlier we'll go out and meet with customers when they're getting a less-than-ideal supply for an acute period of time – is that reliability is still something that is important. So, I think that pillar that we've got to underpin our draft submission – our draft submission, our submission – still stands. In fact, it's actually been solidified in our mind that's something that's really important to customers.

We know climate change still continues to occur. We've had significant events over the last couple of years. We've had cyclone Seroja, which is probably the biggest event we've had as Western Power, and probably something that as a network we've not experienced before, the cyclone coming that far south and that far east. And we've had quite a few storms back-to-back that we're getting over winter, and also summer storms. So, we've got to deal with those because whether you believe in climate change or not, the trend is showing that we are having more of these types of events, and we need to be ready for them.

And then decarbonisation of the community – that's something that's really accelerating. And it is really accelerated since the federal election. I think the policies that have come out with the new Federal Government and the policies that – the conversations that started to be driven in the lead-up to the election have really turbocharged that conversation, really turbocharged that issue. So, we've got to get ready for that. Some of that construction, transmission construction, Steve was talking about is probably going to happen in AA6, but transmission projects of the kind we're talking about don't get up overnight, so you need to plan for those and you need to be ready for those. If I just go back to the pillars,

the pillars we had in terms of facilitating more renewables on the network I think really stands for us.

#### Next steps

- Western Power's response to the Draft Decision due 15 November 2022.
- Western Power is working through the Draft Decision and will undertake further targeted engagement to complement our response.
- Western Power Public Forum – Following submission of response to the Draft Decision (~Mid November)
- Please contact the AA5 team if you have any questions. [aa5@westernpower.com.au](mailto:aa5@westernpower.com.au)

So, the next step for us is to continue to review the draft decision, see how that impacts us in terms of the things we're trying to achieve over the next five years to get ourselves ready for that basically to, well, to respond to the issues we're dealing with today, but also get ourselves ready for the big transition that's coming. We will have a public forum probably in mid-November to talk about our response, and if anyone's got any more questions, they can always contact Western Power; if they've got any things that they want to feed back to us, please do. We'll continue in the meantime to consult with various segments of our customers that may be impacted more than others with some of our draft decision – with some of the draft decision and our response to that. So, we'll sit down with our customers and say, "Look, this is what we're looking at", and get their feedback on that.

We've also got a couple of great things that are happening in the Government space. The SWIS demand assessment the Government has kicked off, which is basically a forecasting exercise of: what's the electrification of the network look like, industrial load coming in the future? That will help us forecast some of our development going forward in terms of the network and then, as Steve mentioned, the WOSP 2.0. It was going to be called the WOSP, but it's gone back to WOSP, so WOSP, 2.0. I'm trying to get that off the ground. No-one's really going with it. I can see some people from EPWA shaking their heads. Anyway, WOSP 2.0 will come out and give us an idea of what the response to the SWIS demand assessment will be. And then it will be up to Western Power and to industry to work together how we deliver that in a meaningful way because, as Steve said, it's difficult and it's going to be potentially more complex than people think. It's going to probably take longer than people think and it's probably going to be more expensive than people think and that's a real challenge.

As an anecdote, I went to a Midnight Oil concert across the road on Sunday night, and for those of you were there or might have read about it, Peter Garrett stopped midway through to protest against Woodside and their Scarborough project and like that said, "We've got renewables. We can just stop gas, we can stop coal and we can start tomorrow", I think were his words, "live in the renewable future". Now, maybe when I was 16 and had all that

teenage angst I might have been with him, but now being one of the people who have to deliver that, I was sitting there going, “Hmm, it’s not so easy, Peter”, but I don’t think he heard me from the back! But so – but unfortunately I think that is the sentiment of part of our community that we’re ready to go and we should do it tomorrow and I don’t think you can get it done before breakfast. It is going to take some time. It is going to take some planning. It is going to take a concerted effort from the whole industry. When we do it, I will be sure to wear my Midnight Oil T-shirt and raise my fist!

[Applause.]

**JENNESS GARDNER**



Not so fast, Sam. You’re in the hot seat this time. I’m just going to log on and see if anonymous have been up to their tricks on the system here; otherwise, you’ll have to be grilled by me. Ooh luckily for you, you have anonymous helping you out here. Are you concerned about the substantial transmission investment needed and the cost flowthrough to generators and consumers? Is there another way to fund this?

**SAM BARBARO**

Great question, and I think that’s part of what the SWIS demand assessment is trying to look at. So, at the moment what we’ve got is a problem or a challenge or a question, whichever way you want to look at it, and we’re all trying to work out what is the right answer to that. I don’t think Western Power on its own have an answer to that, but we are certainly concerned as I said about a number of things. One is the time that it may take to get the transmission network built in order to facilitate the industry to decarbonise and also industry to electrify through the grid.

We are fully aware of two things: one, the connection process. How does that work? So, the connection process has probably been written for a steady state and incremental growth. How do we deal with a large number of customers all wanting to connect at the same time in different parts of the state? So there’s that process. And the third is the cost. What’s the cost allocation? I think the SWIS demand assessment – that’s why I said it’s a great bit of work being done by Government, because what they will do is it will start

to, hopefully – I keep saying this and the engineers keeping laughing but I say we've got to build the mother of all Gantt charts that basically drops – when is all this generation, when is all this load going to drop? Where is it going to drop and how do we bring it together and try to deliver chunks of it in a way that's really meaningful but also cost-effective?

Because the other part of it is building a transmission network for one customer is probably not going to work. I think whenever we're going forward, I think it's probably going to be at larger voltages and it's probably going to need to deal with multiple customers, and they may not all be ready at the same time. So, how do we manage it? So there's a lot of regulatory and financial issues there that need to be resolved, and I don't think any of us have the answers.

Long answer there, but I think all I can say is I'm really pleased for two things. One, that we've had the accelerated conversation since the federal election because it's actually bubbling a lot of the questions like this to the surface that we need to answer. And because of that, two, we've got Government taking a focus and including, you know, being run – being led by Treasury with Energy Policy WA involved, Western Power involved and industry giving feedback and AEMO also providing information in terms of forecasting, the relevant players are all in the room trying to come up with that answer, which I don't think we've had in the past. I think we've all been ships in the night, passing, and then saying, "Oh, we're doing this" or "We're doing that". Hopefully, we'll get a consolidated answer.

#### JENNESS GARDNER

Anonymous has got another one for you. Do you think encouraging large loads to self-generate behind the meter is a way to address network investment challenges?

#### SAM BARBARO

Probably really a question for industry to answer, but what I will say on that is we've – some of you as some of you would know we had a decarbonisation workshop, as we called it, at Western Power where we brought in large industry load and also new renewable generators together to start talking about the future. It's one of those things to answer the previous question that we're doing in getting the information that we need.

We've also been really proactive in meeting with industry, the large players, and understanding what their load looks like over the next few years so we can start to forecast for that. In most of our conversations with industry, they all started at that point which was, "We'll build our own and bugger the grid." Now they've gone full circle and they've realised actually we need the grid because – future industry might be able to do it because they may be able to build their processes around an intermittent supply, but all the industry we've got to date has been built around steady-state supply. So, you turn your conveyor on in the morning and it runs all day until you turn it off at night, if you ever turn it off. The processes in that industry isn't made for conveyor belts to be turned on and off, on and

off, which is what renewables will do for them even if they've got behind the meter - even if they've got a battery. It's going to be very, very difficult to meet the loads.

Some of them are talking about a gigawatt of energy. That's a lot of energy to have behind the meter. Particularly at Kwinana, where are you going to put it? And so I think they've all come around to saying we can probably do some behind the meter, so it's almost going to be at large-scale what we do in our homes; let's put solar PVs on our roofs and we can do some of our demand from the rooftops, but we'll need the grid to keep that steady state. And I think that's where most of the industry is going – and I say it at this point in time because, as we know, technologies change and as the industries changes I think there's a lot of smarter people out there than I that will come up with fantastic solutions, and I'm sure that will happen over the next 15, 20 years.

#### JENNESS GARDNER

And this one, I think, helps actually sharpen some of the responses that you were doing there. What's the future of Western Power by the time 90-95% of residential customers are self-sufficient with solar power combined with battery power for night?

#### SAM BARBARO

That's a long way away. Let me try to look into the future of when I'm probably no longer at Western Power. I think that when we are – what we're seeing in terms of the electrification of large industry – Western Power, I think, well, let's not say Western Power. Poles and wires, all network operators across the world, will still have a role to play in driving industry, still have a role to play in driving state and economic growth, because I think that the amount of loads we're talking about – as I said, we've put up some diagrams on some of the information we're seeing and we're seeing the grid grow to about 11 gigawatts. It's a 4.3-gigawatt system at the moment and it's growing potentially to 11 gig, and when I showed that at the decarbonisation workshop I had quite a few people in the room laugh and say "You're undercooking it by quite a margin there", so it depends on what forecast you take.

But if it's a 11-gigawatt system and eight customers are responsible for 70% of that growth. And that's all industrial customers. So, I think they're going to be around for a while and we'll still have a role to play for them. And still think getting to 100% renewable behind the meter in the residential space is further away than people think, but our role in the distribution network probably will change and be more of a distribution service operator role. So, we'll probably be there facilitating peer-to-peer trading and things like that using our poles and wires. Because that's what the – the interesting thing is – someone said that to me the other day, "When I'm off grid, it's going to be great." I said, "What are you going to do with your surplus electricity?"

**JENNESS GARDNER**

I might keep going with this bit of conversation. I'm a regulator so I think in five-year cycles!

**SAM BARBARO**

So, does Government!

**JENNESS GARDNER**

Yes. And I know, Sam, that you're one of the few people in the room that's actually been around since access arrangement 1 and the dark old days and as Steve was alluding, access arrangements 1 to 4 were one package of work and now access arrangement 5 is the break in the chain, if you like, and we've got access arrangement 6. So, we've got this five-year period that this is forecasting for, and then we've got the next five or 10 years. I wonder if you can sort of walk us forward. What are you thinking is going to be the position for Western Power in the next five years, because I think that fits in with the question you were being asked? There's nirvana, we're all on renewables and we're all self-sufficient, and there's the pathway there. So, what does the next five to 10 years look like for Western Power?

**SAM BARBARO**

I think the next access arrangement will be very transmission-heavy, if I had to forecast cast. I think that we'll be coming forward with a number of transmission funding project. I think there would be a number that would be in the WOSP as priority projects and as Steve said, so they will be banked in terms of projects that need to happen to facilitate state development and state growth, but the efficiency assessment in terms of how we construct those, the order in which we construct those, will be something that will continue to be tested. But that's where I said, look, the distribution network, it's hard to see – go that far ahead and see what that will look like because at that smaller scale, things can change a lot more quickly. PVs can get a lot more efficient as we're seeing; batteries can get a lot more cheaper; EVs will start to be a much higher penetration, so we will be trying to deal with that. Hopefully, there will be good Government policy that will be managing that – helping us manage that issue, but that's the sort of distribution space. I don't think that's going to be the area where if we're talking about, dare I say it, you know, price spikes or things like that, that's probably not the area we'll see it. I think it will be the transmission network where we might get some of the gasps.

**JENNESS GARDNER**

This person is bringing us back down to a little bit more of the now. What gives Western Power comfort that it can deliver on standalone power systems to the level that it's proposed?

## SAM BARBARO

I think our track record at the moment is really giving us a lot of confidence. We've been delivering really well in the communities. The uptake from the community has been really strong. We go out and consult well in advance of rolling these things out, and the community is very, very engaged. They've seen the benefit – reliability benefit that comes from having a standalone power system. Particularly when you think about Seroja, I think we had two or three out there. Weren't right in the path of the cyclone, but there were some people that had standalone power systems and their neighbours didn't; the neighbours lost power and those who had standalone power systems didn't. The neighbours lost power because 140 kilometres up the road, the powerline got knocked out. It was nowhere near their homes, whereas those who had standalone power systems continued to have power. So, there is an appetite for them.

And the other thing that gives us some real comfort is that we've literally grown an industry that didn't exist in WA when we started rolling out standalone power systems. It didn't exist. In fact, it didn't exist anywhere. In fact, Western Australia and Western Power, I know Horizon is doing some as well, but we've been really leading the charge and really leading the way, and we've been over east and one of my east coast peers said, "We're doing standalone power systems", and I said, "Oh, really what's that? I said, "Oh, six-kilowatt power system and two Tesla power walls." I said, "Oh, that's not really what we do as a standalone power system."

So, we've built this industry and we've been working through and delivering at the same time building an industry of six now – six contractors or six suppliers that make standalone power systems, predominantly – 90% of that is done in WA, so the manufacturing is done overseas, but the majority of it is done in WA. So, as they mature, we'll get better. And so that gives us comfort as well. We've been able to deliver in a context of new innovative industry. As they get better, we'll get better.

## JENNESS GARDNER

And this one sounds like it's from your team actually, so here we go. Given the time it takes to build a transmission network, is AA6 too late to get this funding approved? Are we on track to meet new load coming on in the next five years?

## SAM BARBARO

I think funding – there will certainly need to be funding – I'll answer in two parts. There will need to be funding for the planning. So, the plans will need to be up and running and we'll need to have certainly the, as I like to call it, sort of the structure plan of what it all looks like; that overarching plan what needs to be there and we'll need to have designs for if we're going to have renewable zones, if we're going to have transmission lines out to renewable zones, those sorts of things. If we're going to have line routes through national parks, through environmentally sensitive areas, those sorts of things, we really need to



plan that early, the community consultation and we've got to be ready to go. Then we can get the funding and start constructing. So, I think that large-scale expansion probably the construction will start to happen in AA6, but a lot of the planning will need to happen. So, yes, and that's why we'll have to work with Government to understand how we do that.

The other side is there are customers who are ready to go now, and so we'll continue to work through our current access processes to facilitate that, and continue to work with Government on how best we deliver those projects. So, it's really sort of a question in two halves. Some won't be able to wait, and there's some big batteries. Obviously, Synergy's got a big battery that they're putting in at the moment and we're working 100 miles an hour to get that done. There's some other European players that are also trying to get a big battery in. So, we're working on those things. They won't stop and wait. So, we will need to continue to move with them, and that's the hard part. It's building the plane while you're flying it.

#### JENNESS GARDNER

I mean, in terms of building a plane while it's flying, I think that's a good way to describe some of the challenges. So, Steve has taken us through the changes that have occurred in the considerations that we've had to make since you proposed, and we've actually now made some comments about it and made a response. Are there some things that you can flag, I mean, noting that you have got until 15 November to actually make a submission, so I don't want to put you too much on the spot but are there things that you want to flag here and now that you'd be looking at including in your response or is it too early?

#### SAM BARBARO

Look, it is probably too early. All I'd say is there's a lot in the draft decision that we're relatively comfortable with. We think that there's been a pragmatic approach been taken. There's a couple of areas where we will be pushing back because we're a little bit concerned around, you know, particularly if you talk about in the SCADA space. We've just got to make sure – we haven't reached a final position. We've got make sure we are getting enough spend because some of that equipment is moved into obsolescence. So, you don't want to be running IT/OT system that has no support and no spare parts. We've got to make sure that we can support that in the time frame that's been recommended by the ERA, the consultants. But no, there's probably nothing at the moment that I can really target just to say that it won't just be a big tick-off. There's some things we really need to get under the bonnet and really understand.

#### JENNESS GARDNER

Brave person from the audience. Well done!

## IAN DUNCAN

Ian Duncan from WALGA. My phone has gone flat so, I can't – thank you, Ian Duncan from WALGA. One of the parts of Western Power's business, as you're aware, is you run about 270,000 street lights across the south west system, and in your submission you put forward a proposal that I guess broadly aligns with your five-year decarbonisation strategy to convert those to LEDs, but you don't provide any kind of, I guess, basis on which that evaluation was put together as to how that is the lowest cost solution, and I don't think the ERA comments on that either. So, I was just interested if you have some comments on what alternatives you examined in putting forward that proposal for decarbonising the street lighting and how that meets the lighting standards.

## SAM BARBARO

Without going into all the detail about all the alternatives, I can talk about the process or the challenge that comes with street lights. So, any time we change an asset out, we've got to look at its depreciated life, so it's very easy if you're changing out an asset that's fully depreciated and you can put a new asset out there and you don't make a loss. So, there's still a lot of our street lights that were replaced recently that are mercury vapour heads – not necessarily all of them have mercury vapour globes in them – that are still very new, and so to remove them – and my CFO will throw something at me if I get this wrong, but to remove them, there is a cost. All right? So we're trying to find that right balance in terms of bringing forward costs right down and speed of replacing.

That's part of the challenge we have with Local Governments. Local Governments have come and said, "Can we just replace all the street lights in our local area?" and we've said yes but when you apply the new facilities investment test in the code, there's a massive contribution required by the Local Government because most of the assets aren't at end of life. So, that's always the tricky balance. And that's part of the balance, I think, that both Steve and myself have been speaking about in our conversations is: we could just say to hell with it, let's just replace them all because it's the future and we want to be in a low-carbon world, but the cost of that, do people really want to pay for the cost of that? I think people like the idea of all LED lights and so do I, but they don't like the cost that comes with that. Whether it's paid by the Local Government or whether it's paid for by Western Power or whether it's paid for by the State, at the end we're all paying for it.

So, that's how we've looked at in terms of – so at the moment we've got a very much proactive, anything that's broken, any street light that fails, gets replaced with an LED so we're not exacerbating the problem. We're doing some proactive programs with Local Government and also when we're doing underground power projects, they all get replaced with LEDs. So, as we work through the individual projects that are going, we're incrementally replacing so, hopefully, by the end of I think it's 2029, 2027, 2029, somewhere around there – sorry if I get that wrong by a couple of years – our forecast are we should have a full LED fleet and that also gives us the opportunity – it has the

opportunity to connect smarts to it. So, whatever technology is here at the time, we should be able to utilise the street light technology to facilitate that.

**JENNESS GARDNER**

I'm going to give Steve an opportunity if he wanted to comment on that one.

**STEVE EDWELL**

Thanks. Look, I think we – I recall the ERA did have something to say about the street lighting issue and we picked up on the concern, I think, that WALGA raised that – and it was a question about whether Western Power in the replacement process was actually maintaining the standard, so, you know, you weren't getting an asset which was below the standard of either the asset that was being replaced or the standard that's mandated. So we agreed with that. So, I think we were just requiring a bit more transparency on that issue, but otherwise I agree with what Sam has said.

**JENNESS GARDNER**

Thanks for that, Steve, and thank you very much for that nice in-person question. That was awesome. Now that the ice has been broken, did anybody else want to have a go? Not broken enough. Do you want to have another one! We've run to the end of Slido and I don't want to push Sam too much. With the proposed respond model, basically what's happened is that we've now handed the baton back to Western Power. So, we're all going to have a little pause and maybe take the weekend off, but this team now has all of the work to do in responding to the draft decision that we've made. So, what I might do is just I will thank Sam for being on the hot seat and for his presentation as well. Thank you very much.

**SAM BARBARO**


Thanks for your questions. Thanks.

**JENNESS GARDNER**

**What's next**

- Western Power will submit a revised proposal by 15 November 2022.
- Public submissions on the draft decision and Western Power's revised proposal will close on 16 December 2022.
- The ERA expects to release its final decision in March 2023.

The draft decision and all related documents are published on the ERA's website: [www.erawa.com.au/AA5](http://www.erawa.com.au/AA5)

 Our team is always available to talk further. Please contact [Electricity.Access@ERAWA.com.au](mailto:Electricity.Access@ERAWA.com.au).

And I'll just move to a couple of quick closing remarks. So, look, thanks very much for turning up and letting us have this discussion with you today. We will be taking – one of the reasons why we're doing the taping of the session is so that we can take on board all of the information and the discussion that's happened and we can consider that as part of arriving at our final decision. We have a lot of information about the access 5 review process available on our website and Western Power, as you know, is now in the – has got the challenge of submitting its revised proposal back to the ERA by 15 November and we will be welcoming public submissions on the draft decision and on Western Power's revised proposal until 16 December 2022. And then it ruins our Christmas because at that point it's back to us and we will be doing all of the consideration of Western Power's revised proposal, any submissions from the public and pulling all of that together to enable us to actually arrive at a final decision.

If you are feeling like you want to make a comment on a small aspect and not on the whole thing – I know that access arrangements are enormous; we're not necessarily needing submissions that cover the full gamut, but if you would like to make a submission that covers an aspect of Western Power's proposal or on the draft decision from ourselves, that's welcome too. You can just put in something that's specific to your area of interest or expertise. As I said, there's a broad range of issues that we need to consider and we have a very diverse group of customers and stakeholders and all of those issues that we need to be taking into account. So, please feel free to give us something specific if that suits better, and also you can keep it shorter, rather than needing to write a magnum opus.

If you have any questions, please feel free to contact us. Similar to Western Power we have a special access arrangement 5 – [electricity.access@erawa.com.au](mailto:electricity.access@erawa.com.au) if you wish to contact the access arrangement team. We're expecting to release our final decision by 31 March 2023.

And with that, I would like to close the forum and invite you all to participate in refreshments. Thank you very much.

[Applause.]