Government of Western Australia
Department of Mines, Industry Regulation and Safety
Energy Policy WA

Minutes

Meeting Title:	WEM Investment Certainty Review (WIC Review)
Date:	8 November 2023
Time:	9:30 AM to 11:30 AM
Location:	Microsoft TEAMS

Attendees	Company	Comment
Dora Guzeleva	Chair	
Mena Gilchrist	AEMO	
Sam Lei	Alinta Energy	Proxy for Oscar Carlberg
Rachael Smith	Australian Gas Infrastructure Group	
Adam Stephen	Bluewaters Power 1 Pty Ltd	Proxy for Daniel Kurz
Francis Ip	BLT Energy Pty Ltd	
Tom Frood	Bright Energy Investments	
Julius Susanto	EnerCloud Consulting Pty Ltd	
William Street	Entego Group Pty Ltd	
Dr Matt Shahnazari	ERA	
Noel Schubert	Expert Consumer Panel	
Luke Skinner	Expert Consumer Panel	Joined at 9:50am
Timothy Edwards	Metro Power	
Patrick Peake	Perth Energy	
Paul Arias	Shell Energy	
Shane Cremin	Summit Southern Cross Power Pty Ltd	
Fraser Maywood	Sustainable Energy Now	
Rhiannon Bedola	Synergy	
Ben Tan	Tesla Corporation	Observer
Peter Huxtable	Water Corporation	
Valentina Kogon	Western Power	
Tim Robinson	Robinson Bowmaker Paul (RBP)	
Shelley Worthington	EPWA	
Tonia Curby	EPWA	

Item	Subject	Action

1 Welcome, Attendance and Minutes

The Chair opened the meeting with an Acknowledgment of Country and welcomed members.

2-3 Attendance and Minutes

The Chair noted attendance as listed above and noted that the Minutes from the WICRWG meeting on 11 October 2023 have been published.

4 Emissions Thresholds

Mr Robinson noted that this is the final proposal for the emissions thresholds, but there will be a consultation paper for stakeholder submissions.

Mr Robinson explained that EPWA is proposing to measure a facility's emissions rate based on theoretical emissions at maximum generation and facility's emissions quantity based on the metered generation at the theoretical emissions rate. EPWA considers this approach to be more stable, predictable and less complex while still signalling when facilities would no longer receive capacity credits.

Mr Robinson presented the proposed formula for determining the emissions rate of a facility, noting that this considers issues raised previously by WICRWG members. He noted that this formula uses the emissions rate at maximum output which would increase investment certainty and reduce price volatility while still allowing for the emissions threshold to be adjusted. He noted that this method would not require AEMO to measure actual emissions for each facility, but heat rate data would need to be accurate.

- Mr Lei asked how the emissions rate formula works if a facility blended hydrogen.

Mr Robinson answered that the fuel emissions factor would decrease.

- Mr Peake suggested using maximum output rather than nameplate capacity and indicated that this is otherwise a good proposal.

The Chair noted the limitations with declared sent out capacity.

- Mr Tan asked how biofuels would be assessed.

Mr Robinson responded that he would expect biodiesel to have a low emissions factor given it is not reliant on fossil sources.

The Chair considered that there would need to be guidance regarding how the emissions factor for each fuel is calculated.

- Mrs Bedola asked whether gas would be calculated as a pipeline average.

Mr Robinson confirmed this and noted that this average could change yearly depending on where the gas comes from.

Mr Robinson summarised that there would need to be a different emissions factor for each fuel type, and these would change based on whether fuels were blended.

Item	Subject	Action

Mr Robinson provided an overview of the emissions threshold proposals.

The Chair noted a concern raised by the RCMRWG regarding the lack of incentive in providing Flex Capacity if the same price curve as that for Peak Capacity is used and noted that the ten-year exemption for Flex Capacity providers may provide strong incentive.

- Mrs Bedola asked whether this would be implemented in the 2029 Capacity Year in alignment with the government's coal retirement announcements.

The Chair responded that the position presented to the MAC was that this comes into effect for the 2028 Capacity Year, but that this is still subject to consultation.

- Ms Gilchrist noted that AEMO is not comfortable to support an annual emissions quantity threshold for new generators. She noted AEMO's concern relates to volatility in dispatch that may make it challenging for both generators and AEMO to predict when a generator will exceed its threshold. She noted this is more likely to occur in years where we have a shortfall of capacity, with the exit of the generator from the RCM likely to exacerbate this issue. She noted instead, AEMO prefers an intensity threshold that reduces over time (as proposed for existing generators – albeit at a lower level) which AEMO believes could achieve the desired outcome with greater predictability.

The Chair noted that reducing the intensity threshold would exclude a large number of technologies from entering the market.

Ms Gilchrist noted that using an intensity threshold reduction could achieve the same outcome, and provide a greater level of certainty for generators and AEMO. She noted that she does not have a view as to what this level or trajectory should be and should be subject to modelling. She noted support for this approach, not a specified level.

The Chair confirmed that reducing the intensity threshold for new generators over time is already part of the proposal. She noted that this has already gone through several consultations and that the EPA already has a guideline regarding the reduction of emissions per MW. She added that EPWA is trying to provide more certainty consistently with these guidelines.

- Ms Gilchrist questioned what a generator would do when it reaches the emissions threshold.

The Chair noted that the risk is that generators can go on a forced outage to protect themselves from the EPA emissions limits.

- Ms Gilchrist considered that if a facility does not have capacity credits, it does not have an obligation to bid into the market and AEMO would have to replace this capacity. She considered that facilities going on a forced outage to avoid emissions thresholds would cause issues for AEMO.
- Mr Skinner noted that facilities directed to dispatch by AEMO would not be counted towards the threshold.

Item	Subject	Action

Mr Robinson noted that there are not many situations in which AEMO directions would be applicable as facilities holding capacity credits have to offer and would be dispatched.

The Chair noted that exemptions from the threshold when directed by AEMO should be included in the rules.

- Ms Gilchrist responded that facilities are required to bid into the market as a condition of their capacity credits. Even if the facilities bid at the cap, AEMO would dispatch them if needed. In this case, costs would increase and the facility would exceed its emissions threshold.
- Mr Lei asked whether capping a new facility's emissions would require multiple facilities to be built rather than just one. He considered that the total market emissions would remain the same in this situation.

The Chair reminded members that fundamentally, we want to know in advance when plants are exiting the market so that AEMO can procure capacity before it is required.

The Chair urged new members to look at previous papers to avoid discussing options already discussed in past meetings.

- Mrs Bedola questioned whether a facility which loses its capacity credits due to exceeding the annual emissions threshold, can reapply for capacity credits in subsequent years.

The Chair was happy for this to be discussed.

Mr Robinson considered that this would be dependent on how close to exceeding the annual thresholds the facility is in subsequent years.

- Mrs Bedola considered that this allows AEMO to have some flexibility in the certification process.

The Chair summarised that the proposal is not to have facilities lose capacity credits in the middle of the year. She noted that facilities would lose Capacity Credits in two years' time but would still have Capacity Credits for the intervening year in which the facility may be able to rectify its performance against the threshold. She also noted that this issue will be addressed in the consultation paper.

Mr Frood considered that facilities might be forced out in the second year and questioned whether facilities should lower their normal generation.

- The Chair clarified that she is keen to implement emissions exemptions for AEMO directions and does not see why investors would exit the market immediately.
- Ms Gilchrist considered that she still thinks reducing the intensity would be a better outcome, but acknowledged that the two-year lag acts as a buffer.
- Mr Skinner questioned what the likelihood is of a facility reaching the annual threshold and what the scale of this issue is.

The Chair responded that this has already happened in a particular case, and with the exit of coal, it is likely that peaking plants will be used to replace this loss of capacity in the short term.

Item	Subject	Action

Mr Robinson noted that the next step is to model the impacts of these proposals.

Mr Robinson noted that to make the emissions rates work, AEMO needs to ensure the accuracy of heat rate curves alongside capacity testing.

5 Ten-year RCP guarantee for new technologies

Mr Robinson presented the proposed definition of new technologies. He noted that a fixed capacity price would be available for facilities that have availability that exceeds the Duration Requirement and use a renewable fuel source.

Mr Tan asked whether a 4-hour lithium-ion battery would be considered a new technology for the purposes of this discussion.

The Chair confirmed that this would only be the case if its duration exceeds the Duration Requirement at the time.

- Mrs Bedola sought clarification that this is a set price for 10 years, rather than a floor.

The Chair responded that this set price aims to provide price certainty, however this price would not change during the 10 years.

- Mr Cremin asked why ten years and considered that pumped hydro energy storage would need over twenty years to recover its capex.
- Mr Skinner did not agree that this is needed.

The Chair responded that this was addressed in previous discussions. She noted that she was not sure that being locked into a fixed price for twenty years would benefit investment.

- Ms Gilchrist asked how long the scheme will be open for.

The Chair responded that this will still need to be determined and welcomed member's views.

- Mr Edwards sought clarification that energy storage resources (ESR) would use energy from the grid.
- Ms Gilchrist asked whether a new storage facility could be charged with existing renewable energy sources.

The Chair responded that storage can be charged by existing renewable sources.

- Mr Schubert asked whether EPWA meant "fuel" or "energy" source to include wind and solar.

Mr Robinson responded that yes, the intention is to include wind and solar.

- Ms Bedola asked how duration of storage is defined and sought clarification about how batteries can be certified.

Mr Robinson responded that it could be an option that a facility could lower its certification below its nameplate capacity to be a longer-duration battery.

- Mr Tan asked which capacity year this proposal is intended to start.

Item	Subject	Action

The Chair responded that this is intended to start in 2025 when the duration gap calculations commence.

- Mrs Bedola considered that requiring a contract with renewables would potentially create issues for the system as ESR may not be able to provide other services to the system.
- Mrs Bedola queried whether requiring new renewable facilities to contract with storage would increase intermittency issues.

The Chair responded that ultimately, we want renewables to drive storage which in turn drives more renewables.

- Mr Skinner noted that there are several jurisdictions which require contracts with renewables for new storage.
- Mr Skinner suggested a review after a maximum of five years given the rapid change in technologies and the likelihood this system does not account for them.

The Chair agreed that there would be regular reviews.

- Mr Schubert considered that this should be called “longer duration firming technologies” rather than “new”.

The Chair agreed.

- Mr Edwards sought to clarify that fast-response gas-firming generation with flex capacity could not apply for a 10-year price guarantee.

The Chair clarified that it could not.

6-7 RCP Curve – history & international comparison

Mr Robinson noted that this review is under initiative one of the WIC Review and that it seeks to determine whether the price curve is fit for purpose.

Mr Robinson presented the analysis noting:

- the Reserve Capacity Price (RCP) curve drives the amount paid for capacity;
- the current price curve is set at 1.3 times the Benchmark Reserve Capacity Price (BRCP) at the reserve capacity target;
- absolute zero is set at 30% of excess capacity;
- economic zero is set at 10% of excess capacity; and
- the design principles of the current RCP which can be updated.

Mr Robinson outlined that the RCM and BRCP Reference Technology reviews identified the following issues with the existing RCM price curve:

- the absolute zero point is relatively high compared to other jurisdictions;
- it does not set an investment signal when there is a shortfall because the price is set at the cap; and

Item	Subject	Action

- if there is no difference between the reference technology for the peak and flexible capacity then a peak capacity shortfall will mean a zero-price differential for flexible capacity.

The Chair noted that the 10-year exemption for flexible capacity may provide an investment signal for flexible capacity.

- Dr Shahnazari asked what the design principle to promote the most appropriate capacity mix means, and whether we can solve this problem just by looking at the price curve.

The Chair responded that there is a second limb of the planning criteria which will, by definition, look at the mix and duration of various resources and their capability in the future.

Mr Robinson noted that getting the right capacity mix over time is a factor of various market structures, and this is just one signal. He noted that the flex product is an outcome of trying to incentivise a required technology.

- Mr Skinner considered that this could be promoted by having a variety of points on the curve that consider different forms of capacity.

The Chair responded that the intent is to maintain simplicity.

- Mr Tan asked whether this would be implemented at the same time as the BRCP methodology changes and when this would occur.

The Chair responded that implementation is still to be discussed and agreed this should be done in the context of changing the BRCP.

Mr Robinson presented a summary of the price curves of different jurisdictions and noted that the WEM is the only jurisdiction in which one does not pay the reference price at the target and one of the few which uses gross cost of new entry.

The Chair noted that all of these markets use capacity auctions, while the WEM uses administered pricing.

- Mr Street noted that there are differences in the relative market sizes of the other jurisdictions.

8 WEM RCP Curve – Options

Mr Robinson presented the scope of the review and noted that the main goal is to ensure that the price curve provides the desired incentives.

Mr Robinson presented seven options and asked members whether they thought any of these options address the design principles.

- Option 1 is the status quo which may no longer be suitable;
- Option 2 increases the price cap to provide a stronger signal for investment in times of capacity shortfall;
- Option 3 is similar to option 2 but has a higher price cap for flex capacity which ensures differential price in the case of peak capacity shortfall;
- Option 4 has five separate segments with a deadband within 5% of the target where the price stays the same;

Item	Subject	Action

- Option 5 is a three-segment curve with a straight line from the cap to the floor. This would remove the 130% absolute zero point;
- Option 6 is a smooth curve, but this option is not suitable as it introduces complex modelling and analysis;
- Option 7 replicates the pre-2019 reserve capacity price curve if there is capacity surplus, but increases the cap and adjusts the maximum price point in a shortfall situation.

Mr Robinson noted that EPWA considers that options 2, 3, 4 and 7 could be workable in the WEM and asked members for discussion.

- Mr Peake favoured option 4, noting that the government has historically provided more capacity when the capacity falls under the target. He considered that the deadband would provide more certainty to investors.
- Dr Shahnazari raised concerns with using the same curve for flexible and peak capacity products. He noted that the curves should differ given the value these different types of capacity bring to the market.
- Mr Skinner also favoured option 4 and indicated that there should be more discussion around what the actual points of the price change are.
- Mrs Bedola considered that the curve for the Flex product should provide more incentive and stability than the Peak product.
- Regarding the design principles, Mr Schubert noted that it should be considered whether existing capacity should get the same price as new capacity.
- Mr Ip considered that option 4 provides more stability around the target and easier investment commitment. He suggested that option 3 may also be considered.
- Mr Lei considered that the slope should be from 90% to target in option 4, so it sends a stronger investment signal when there is a shortfall.
- Mrs Bedola asked for the reason why the midpoint not between 100% and 30%, noting that there should be a steeper investment signal when there is no surplus.

Mr Robinson noted that one of the main goals was to lower the price at levels of oversupply and this is one of the trade-offs against having an actual absolute zero point.

Mr Robinson noted that the rationale behind the current price at the capacity target is that if the price is set above the target, the investment signal is given before the target is reached.

- Mr Skinner considered that the number at 130% seemed very strange and 115% may be more appropriate.
- Mr Huxtable considered that there probably needs to be a deadband because when wind dominates supply there may be larger swings in ‘available’ capacity.

Item	Subject	Action

9 General Business

Mr Tan presented a discussion paper on transitional capacity pricing and noted that the Reserve Bank of Australia (RBA) forecasts three years in advance and has recently under-forecast inflation. He noted that this has caused a difference between the forecast and the actual values. He added that he is proposing to look at a true-up to correct these with the actuals available for the transitional capacity escalations.

- Mr Lei, Mr Edwards, Mr Street and Mr Arias agreed with Mr Tan.
- Mrs Bedola noted that it needs to be considered how this works with customer contracts.
- Mr Tan considered that this does not impact customer contracts as this would be for prices which have not been set yet.
- Mr Skinner agreed as long as the impacts of cost on consumers are being put above the rate of return to investors.

The Chair noted there was general agreement from the WICRWG.

The Chair noted that EPWA will circulate this discussion paper to members.

Mr Schubert presented a figure of the historical reserve capacity prices and noted that they have been volatile.

Mr Schubert presented a summary of the BRCP and RCP in future years and considered the reserve margin to be too high (based on the three largest generators being unavailable). He voiced his concern as the consumer representative that prices are increasing so much.

- Mr Skinner considered that this is a big problem as coal facilities close and the amount of MW outside of the transitional price facilities increases.

The Chair voiced concern that something needs to be done to attract new capacity to avoid the need for NCESS and other ad hoc procurement mechanisms.

- Mr Street noted this is a marginal signal and retailers could offer lower capacity rates to their customers.
- Dr Shahnazari noted concern regarding the way the current reserve margin is estimated. He noted the importance to revisit the purpose of the reserve margin and ensure it is fit for purpose. He noted concern that in its current form it may be creating costs for consumers without respective benefits for customers.
- Six members supported Dr Shahnazari's comments.

Mr Skinner considered that there would be a price and an emissions threshold where we would rather have the lights go off, noting the requirement to decrease carbon emissions has implications outside of the energy market for society as a whole.

The Chair noted the new State Electricity Objective has passed through the lower house of Parliament and that we will now need to balance the trilemma.

Item	Subject	Action
	The Chair noted that EPWA will circulate Mr Schubert's paper to members.	

The meeting closed at 11:30 am