



## Minutes

<b>Meeting Title:</b>	WEM Investment Certainty Review (WIC Review)
<b>Date:</b>	31 August 2023
<b>Time:</b>	12:30pm –2:00pm
<b>Location:</b>	Microsoft Teams

<b>Attendees</b>	<b>Company</b>	<b>Comment</b>
Dora Guzeleva	Chair	
Mena Gilchrist	AEMO	
Oscar Carlberg	Alinta Energy	
Graham Pearson	Australian Energy Council	
Trent Leach	Australian Gas Infrastructure Group	
Daniel Kurz	Bluewaters Power 1 Pty Ltd	
Francis Ip	BLT Energy Pty Ltd	
Tom Frood	Bright Energy Investments	
Jake Flynn	Collgar Renewables	
Liz Aitken	Empire Carbon and Energy	
Julius Susanto	EnerCloud Consulting Pty Ltd	
William Street	Entego Group Pty Ltd	
Dr Matt Shahnazari	ERA	
Luke Skinner	Expert Consumer Panel	
Noel Schubert	Expert Consumer Panel	
Timothy Edwards	Metro Power	
Patrick Peake	Perth Energy	
Paul Arias	Shell Energy	
Shane Cremin	Summit Southern Cross Power Pty Ltd	
Rhiannon Bedola	Synergy	
Peter Huxtable	Water Corporation	
Valentina Kogon	Western Power	
Shelley Worthington	Energy Policy WA	
Tonia Curby	Energy Policy WA	

Tim Robinson	RBP (consultants to Energy Policy WA)	
Isaac Gumbrell	RBP (consultants to Energy Policy WA)	

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## 1 Welcome

- The Chair opened the meeting at 12:30pm with an Acknowledgement of Country.
- The Chair advised members that WIC Review Working Group (WICRWG) meetings are recorded for minute-keeping purposes.
- The WICRWG members noted the Meeting Protocols.
- The Chair noted the attendance as listed above and invited members to introduce themselves.

## 2 Scope of the WIC Review

The Chair presented the five initiatives that were announced by the Minister for Energy on 9 May 2023 and brought to the Market Advisory Committee (MAC) on 9 June 2023, noting that:

- The aim of the WIC Review was to address issues raised during the review of the Reserve Capacity Mechanism (RCM).
- The RCM Review discussed options for emissions thresholds, formerly known as penalties for high emissions technologies in the Wholesale Electricity Market (WEM).
  - Within those discussions concerns were raised by stakeholders about reliability of supply and the need to be very careful with how the emissions threshold requirements would be staged.
- Another component to the WIC Review is exemptions for plants which fulfil the requirements of the flexible capacity product for a period of time to ensure reliability issues are addressed during the introduction of the emissions thresholds.
- Financial analysis was conducted and published suggesting that:
  - storage can be profitable between now and 2050;
  - intermittent renewable generators (wind and solar) may not be profitable following the expiration of Large Generation Certificates under the Renewable Energy Target (Cth) in 2030.
- EPWA is therefore proposing a financial top-up in return for proponents demonstrating they have contracts with storage providers, when prices begin to decline following the exit of high emissions technologies.
- A review of the Reserve Capacity Price curve has been included following concerns flagged during the RCM Review.

The Chair noted that:

- The WICRWG discussion and focus should be kept to the five initiatives - if other issues are raised, they will be noted and tracked by EPWA but they will not be addressed within this review.

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- The first stage of work will address initiatives two, four and five in the Scope of Work for the review.
- the second stage will address initiatives one and three.
- modelling will be undertaken to examine outcomes.

The Chair noted that the WICRWG is a working group formed under the MAC. The working group does not make decisions, it will undertake analysis and develop options to address the issues. The Chair advised that the MAC will be briefed on everything that is discussed within the working group.

The Chair asked the WICRWG if there are any questions.

- Mr Cremin noted that he had previously been a member of the MAC for over ten years. He noted the recent publication of the current Electricity Statement of Opportunities (ESOO) by AEMO and the expected forecast demand of 26 terawatt hours in 2030, which is significantly different to the ESOO in the year prior.
- Noting the announced retirement of coal, Mr Cremin considered that the increase amounted to a requirement to build capacity to meet the whole annual system load within the next six years.
- Mr Cremin noted that the changes that are proposed are not insignificant and sought to clarify whether any consideration has been given to the very significant changes to the market, the proposed coal retirement dates and actually determined whether this is the right time to implement the proposed changes.

The Chair responded that the WICRWG will not change the Government policy on the retirement of coal, nor was that within the scope of the WIC Review.

The Chair noted that members can independently choose to pursue the policy of coal retirement with the Minister for Energy as these policies are made by the Minister for Energy and Government.

The Chair also noted that:

- the forecast demand in 2030 has been public since the announcement of the South West Interconnected System Demand Assessment (SWISDA) on 9 May 2023;
- the ESOO is aligned with the SWISDA; and
- this information was available in the development of the scope for this review and the five initiatives.

The Chair noted the reasons for having these discussions with the WICRWG were to endeavour to get the investment environment right.

- Mr Frood noted the importance of getting the investment drivers right.
- Mr Cremin noted his disagreement with the policy on retirement of coal and noted that the ESOO estimates the requirement of \$20 billion worth of assets to be built in the next six years.

The Chair responded that the WICR is a tool to shift the investment environment to enable this increase in investment.

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- Mr Skinner noted the context driving the government decisions to retire coal is climate change and requested that members stick to the meeting agenda.

The Chair noted that meetings will occur approximately once a month, and that members are welcome to reach out to EPWA with comments outside these meetings.

### 3 Initiatives 4 and 5: Emission Thresholds for RCM Participation – Revisiting Work to Date

Mr Robinson noted that some of the participants in this working group were involved in the relevant RCMRWG discussions and provided an overview of:

- the background of the Penalties on High Emission Technologies and the five key policy constraints.
- the work to date:
  - the six options identified by the RCMRWG;
  - the two options shortlisted for further consideration - penalties on trading interval emissions and emissions threshold for RCM participation.
- what remains to deliver on the emissions threshold work.

Mr Robinson noted there were five WIC initiatives and that today's discussion would look at initiatives four and five, and two.

- Ms Aitken asked how these initiatives interact with the proposed exemptions for flexible gas.

The Chair responded that the proposal for exemptions for flexible gas for a period of time was not conceived separately. It evolved as a direct result of discussions on this policy, and the main concerns raised in submissions on EPWA's consultation paper, on the need to ensure reliability and security of supply are maintained during the transition net zero energy industry.

- Ms Aitken considered that this may become a challenge, and was concerned that the market, as a whole, may not be able to meet thresholds due to exempted facilities.

The Chair responded that EPWA and the WICRWG will be working on ways to address this challenge, noting that there will be discussions on making sure that participants who want to meet thresholds are able to meet their thresholds without losing their Capacity Credits due to an externality. The aim is to provide strong incentives for people to operate below the emissions thresholds. The Chair noted further design and modelling work will be required.

- Ms Aitken responded that option five should not be disregarded at this stage and should be used to give participants the flexibility to offset their emissions in the future and flagged. She noted the shortlist may have to be reopened to be able to assess some further solutions.

The Chair noted that the offsets option was ruled out by the RCMRWG very early in the process.

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	<ul style="list-style-type: none"> <li>▪ Mr Skinner considered that offsets are not guaranteed emissions reductions.</li> <li>▪ Ms Aitken disagreed with this view.</li> </ul>	
	<p>Mr Robinson noted that Ms Aitken had raised the fundamental tension between the options that:</p>	
	<ul style="list-style-type: none"> <li>▪ the thresholds could be set loosely such that they never bind, and retirement and operations continue as planned without adding any additional concerns about reliability; or</li> <li>▪ the emissions thresholds could be set to actually change behaviour and possibly bring forward retirement of fossil fuel plants and incentivise proponents to install a different type of technology. This option potentially increases the risk to system reliability.</li> </ul>	
	<p>Mr Robinson noted that the ideal solution would make a difference to the emissions profile of the SWIS, while maintaining reliability.</p>	
	<p>Mr Robinson noted that option six was the preferred option. It is expected to provide more certainty of the timing of exit from the market for certain technologies than option one, it received the most support from the MAC and RCMRWG members and:</p>	
	<ul style="list-style-type: none"> <li>▪ assists in maintaining reliability of supply, as it provides certainty around plant exit;</li> <li>▪ is simpler to implement; and</li> <li>▪ allows use of existing National Greenhouse and Energy Reporting (NGER) data.</li> </ul>	
	<p>Mr Robinson noted that the RCMRWG considered that if this policy brings forward the retirement of existing plants, it may increase security and reliability issues, noting the large investment required for the energy transition.</p>	
	<p>Mr Robinson noted that as a response to the concern about reliability initiative five was developed, to allow for a ten-year exemption for facilities providing flexible capacity. Mr Robinson noted that this did not remove the tension but does go some way to mitigating the reliability issue.</p>	
	<p>In response to a comment from Mr Edwards, Mr Robinson noted that there was a mandate in Europe for emissions thresholds in the capacity mechanisms and provided an overview of emission participation thresholds in the UK Capacity Market.</p>	
	<p>Mr Robinson noted that there was information provided in the appendix that showed that the current performance of the SWIS fleet, if measured against the same limits that Europe was using, would show that the SWIS would be in big trouble in reliability terms. He added that the fleet in the SWIS had a long way to go in improving emissions to the point where the European regulations would not bite incredibly hard.</p>	
	<p>In response to comments from working group members, the Chair noted that, while she understood participants concerns with regard to coal capacity and baseload gas plant, the retirement of coal was not going to be dealt within the WICRWG. The Chair noted that the thresholds in the</p>	

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UK Capacity Market were only one part of a plethora of measures to reduce emissions in Europe and the UK.

- Mr Kurz considered this to be a 434MW rule implementation and questioned whether we want 434MW for peak demand, which is what this initiative considers.
- Ms Aitken noted her understanding of the concept of the emissions thresholds. However, she could see issues which will require detailed modelling. If a facility is emissions-limited in dispatch via an emissions budget, the facility will need to be able to price that into its offer. As facilities are not able to include opportunity cost in market bids, the facility may be forced to put itself on a forced outage. Ms Aitken has concerns as to what would happen once a facility's carbon 'budget' is reached in the hot season. Ms Aitken requested this to be considered.
- Ms Gilchrist noted that the AEMO will continue to require the ability to direct facilities to operate to maintain System Security and Reliability. This will be irrespective of where they are at in terms of their annual emissions. She noted that AEMO considers an exemption may be appropriate in these circumstances.

Mr Robinson noted that there were effectively two threshold limits and provided an overview of what was proposed for the WEM:

- Emission rate threshold - a limit based on the scope one emissions from the previous year, divided by the amount of electricity generated in the last year, which calculates an average carbon dioxide limit per MWh of electricity generation.
- Facility emissions quantity – a limit based on the scope one emissions from the previous year, divided by the facility's nameplate capacity.
- Mr Schubert suggested rather than using 'MWh generated'/'MW installed', to use 'MWh sent out'/'MW sent out capability' as this would align better with what capacity allocations are based on. Mr Schubert considered that this would place a more stringent obligation on the generator and will encourage efficiency of the plant.

Mr Robinson noted that further work will be required to be undertaken to unpack some of these issues and there was a need to be careful whether to use MW generated vs MW sent out data for generation and emissions.

- Ms Aitken considered, from a commercial perspective, that facilities, particularly gas plant, may limit their total generation this year in order to maintain their ability to preserve Capacity Credits in the following year due to the emissions thresholds being based on the previous year's emissions/generation.
- Ms Aitken noted that facilities cannot price themselves out of the market or to reflect the opportunity cost of their reserve capacity and could be left with no option but to put themselves on an outage.

The Chair responded that linking the thresholds to the capacity cycle also allows AEMO to foresee the gaps in capacity, for the ESOO.

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- Ms Aitken considered that the WEM does not necessarily have all the right tools in the short-term dispatch market and there may be a need to rethink some things in order to accommodate the emissions limits.
- Dr Shahnazari noted, in response to Ms Aitken, that this has been discussed previously by the RCMRWG and this was considered by the RCMRWG to be the better mechanism. Emissions thresholds rather than emissions penalties were chosen, as a result of the Ministerial directive that there will be no net cost to the consumers. The emission threshold accounts for that opportunity costs whereas the emissions penalties would result in a cost pass through to consumers.
- Mr Edwards provided support for the existing emissions threshold quantity as explained by Mr Robinson.
- Mr Edwards noted that ideally, following the introduction of emissions thresholds, the only fossil fuels left on the network should be fast response gas generators which can deal with situations that long duration storage cannot fill. Calculating the threshold from nameplate capacity gives generators sufficient flexibility to move around.
- Mr Carlberg wanted to clarify that the Environmental Protection Agency's (EPA) guidelines are also taken into consideration along with the federal emissions policy and the State Electricity Objective, noting that these guidelines require new facilities to reduce their emissions in line with net zero.

The Chair added that emission thresholds currently exist as part of EPA WA's Ministerial Statements for new facilities.

- Ms Aitken, in response to Dr Shahnazari, noted that having a signal that indicates that emissions have a cost may attract new investment in the market and opportunity costs could represent a reasonable price signal for the changeover of different types of plant.
  - Dr Shahnazari noted agreement with this comment by Ms Aitken.

The Chair noted that the WIC initiatives four and five would no longer be required if the State or Commonwealth Government introduced another carbon reducing measure that achieves the same objective.

Mr Robinson continued the overview of the thresholds, noting that under the proposal new facilities who were not meeting either thresholds would not receive any Certified Reserve Capacity. Existing facilities would be exempt from the rate thresholds and the quantity threshold would decrease over time.

- Mr Skinner asked whether the CO<sub>2</sub>e figure was e20 years or e100 years.

Mr Robinson responded that he did not know the detail of how the NGER translates the other gases into CO<sub>2</sub> equivalent and that the intent was to use an existing regime rather than implement a new one.

- Mr Skinner responded that it is likely 100 years in that case.

Mr Robinson noted that the proposal in March 2023 was to set the emissions intensity threshold at 0.55tCO<sub>2</sub>/MWh, which could be met by a new gas peaker. The quantity threshold would then allow it to be used as



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	<p>a peaker for up to 20% of the time. This threshold would allow a new peaker, but not allow new coal or liquid fuels.</p>	
	<p>The Chair added that this threshold will need to be decreased for existing facilities and that what still required discussion was whether the threshold decreases over time for new incoming facilities while preserving the existing facilities for a period of time.</p>	
	<ul style="list-style-type: none"> <li>▪ Mr Skinner opposed the concept of setting an emissions threshold which enables new gas fired investment and that resources should instead be going into the production of new renewable facilities. Mr Skinner considered that the purpose of this policy should be to prevent the entry of new fossil fuels and reduce existing fossil fuel consumption.</li> <li>▪ Mr Frod agreed with Mr Skinner and considered that new fossil fuels should not be facilitated in the network and considered that if signals are there, alternatives will get built.</li> </ul>	
	<p>Mr Robinson noted that, just because something is allowed, does not mean it will be built and noted that in the discussions in the Benchmark Reserve Capacity Price (BRCP) Reference Technology Review there have been discussions whether new gas will actually be built.</p>	
	<ul style="list-style-type: none"> <li>▪ Mr Frod questioned if there are doubts of feasibility why is this being considered.</li> <li>▪ Mr Arias noted that this work will incentivise renewable capacity, however, there is also a need to balance system security and reliability. If the modelling suggests gas is required, then the policy should provide the opportunity for new gas to enter the market.</li> <li>▪ Ms Gilchrist agreed with Mr Arias.</li> <li>▪ Mr Edwards noted that this is a transition period in which reliable power was still required. Mr Edwards considered that there is a need to incentivise new gas generators and noted that new gas generators can use green hydrogen and, as supply lines mature, gas turbines can transition to green hydrogen.</li> <li>▪ Mr Street noted his agreement with Mr Edwards.</li> <li>▪ Mr Skinner responded that hydrogen storage and transport has a high leak rate and hydrogen gas has a global warming potential higher than carbon dioxide. He further noted that green hydrogen has a very inefficient round-trip use for electricity production.</li> <li>▪ Mr Schubert also considered that hydrogen for power generation is very inefficient and high cost compared to the same renewable electricity being used directly (instead of for producing hydrogen) or stored in long duration storage.</li> <li>▪ Ms Aitken noted that a green hydrogen fuelled peaker needs to be considered in order to meet system security, at least until a twelve-hour battery can be produced.</li> <li>▪ Mr Carlberg agreed with Mr Arias' and Mr Edwards' comments, and considered that it is too early to definitively say whether gas does or does not have a role in the future electricity system. Mr Carlberg noted that the ERA and the Grattan Institute have said that the last ten to twenty percent of energy will be hard to abate and gas generators may have a role in providing this backstop.</li> </ul>	



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	<ul style="list-style-type: none"> <li>Mr Carlberg noted that the topic of decreasing thresholds may be second order due to the EPA guideline and the existing pressures against new thermal generation to come online.</li> </ul> <p>The Chair noted the importance of the WIC Review being undertaken alongside the BRCP Reference Technology Review.</p> <ul style="list-style-type: none"> <li>Mr Cremin noted his concern with security of supply. Mr Cremin had concerns that if the review gets this wrong a decision or outcomes may not be able to be reversed, and that careful consideration needs to be given to the timeframes and sequencing of this work.</li> </ul> <p>The Chair agreed that detailed design and sequencing consideration was important, and work was still to be done.</p> <ul style="list-style-type: none"> <li>Mr Frood noted the importance of the timeframes to ensure confidence for investment and give investors the ability to plan.</li> <li>Mrs Bedola noted that, in terms of the exemptions, Essential System Services facilities need to be considered. These may or may not decide to be certified for flexible capacity.</li> </ul> <p>The Chair noted that she is not certain that she agreed with Mrs Bedola but is happy to discuss this further.</p> <p>Mr Robinson outlined next steps for the WICRWG including:</p> <ul style="list-style-type: none"> <li>finalising threshold levels for new facilities;</li> <li>transitional thresholds and exemption parameters;</li> <li>the timing of the commencement and transition; and</li> <li>the interaction between dispatch availability obligations and emissions limits.</li> </ul> <p>Mr Robinson highlighted the link between the BRCP Reference Technology Review and the WIC Review, and that the proposed emissions thresholds will be used to shortlist technology types which can be used.</p> <p>The Chair noted that EPWA will present to the WICRWG on the outcomes of future discussions on the BRCP Reference Technology Review by the RCMRWG.</p>	

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#### 4 Schedule of working group content

Mr Robinson highlighted proposed dates for future meetings and provided a draft agenda and dates for future meetings.

Mr Robinson noted EPWA will present a revised proposal for the emissions thresholds for discussion at the next WICRWG meeting on 11 October 2023.

The Chair noted that EPWA intends to complete the BRCP Reference Technology review by the end of the year, noting that this work is being completed in parallel with the new rules. This will be taken to the RCMRWG on the 21 September 2023 meeting as an initial proposal.

**ACTION: EPWA to re-publish the slides with amendments.**

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#### 5 General Business

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No general business was discussed.		

**The meeting closed at 2pm.**