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**To:** [DPE Energy Consult Mailbox](#)  
**Subject:** Wimuru Pty Ltd - OEMF Consultation Submission  
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Dear Madam/Sir.

Wimuru Pty Ltd would like to provide feedback on the proposed OEM framework. Its directors have considerable senior level experience in project development across the range of infrastructure and in the design, construction and O&M of infrastructure projects. Its electricity industry lead has technical and commercial managerial level experience in the development, design, construction and O&M of thermal power stations in NSW, WA, Qld and internationally. He has led the formulation and implementation of asset management plans for coal fired power stations to economically achieve high availability, as well as developed transmission system and renewable energy projects. He has an expert's understanding of the impact increasing VRE penetration will have on the system strength and resilience of the NEM/grid and the WEM/SWIS.

This submission is in response to the "Consultation Paper" found at: <https://www.energy.gov.au/sites/default/files/2023-12/OEM%20Framework%20Consultation%20Paper.pdf>. The submission includes answers to "Key Questions" posed in that paper, and a few comments on other aspects of the proposed OEM framework.

**Key Question 1.** Is this mothballing precondition appropriate? Proposed text: "when an OEM Generator notifies AEMO that an OEM Generating Unit is not available under the NER clause 3.7.2 for a period covering 75% of the period from 12-36 months, with a recall time greater than 3 days or no recall time reported".

**Wimuru:** *The following modified wording is suggested: "when an OEM Generator notifies AEMO on or after 1 January 2021 that an OEM Generating Unit will not be available to continuously generate full name plate rating (or any other rating previously notified and accepted under the NER) for a period of at least 12 months (excluding previously notified and accepted planned outage periods), after receiving a direction at any time to commence generating power within 72 hours".*

*Our concerns here are:*

- a. *the meaning of "available" is vague. Use of the term "PASA availability" might be appropriate given it is defined in the NER. Alternatively we suggest relying on the ability to generate the nameplate rating for a defined period, instead of being "available", because the ability to generate can be objectively measured, and*
- b. *specifying only 75% "availability" in the 12 to 36 months, if the 75% is interpreted as equivalent availability factor (EAF) as defined by NERC GADS, it is arguably taking a Generator into uncharted territory because 75% is a materially lower EAF than usual, so unlikely to be achieved with any precision, inviting failure, or inefficient expenditure to insure it is achieved. We suggests this measure is unnecessary and the recall time and required performance standard are essential and sufficient measures.*

*For a coal fired generator to be ready [on 72 hours' notice] to operate for 12+ months, arguably*

prohibits the “mothballing” case. Mothballing is highly likely to include running down the coal stocks and terminating coal supply contracts (or amending them to require material notice periods to re-commence receiving coal). It is also likely to include running down stocks of all “non-fuel” consumables and standing down operating and maintenance staff or requiring less service from an O&M contractor unless the contractor is given a notice to recommence service where the notice period would have to be materially more than 72 hours. In short, if an SSG is to comply with the suggested wording the Unit cannot be mothballed in the industry’s accepted meaning of the word.

That said, we do not believe mothballing needs separate consideration. The condition of the Unit and the readiness to operate will surely surface in the Prescribed Information – with details of how to return it to, or maintain it in, an “available” [and highly reliable] state. A Unit with any material sign of being in a mothballed state is not fit for purpose due to a range of difficulties including technical, commercial, human resources, environmental, community, etc.

**Key Question 2.** Do you have a view on the timings in the mothballing precondition?

**Wimuru:** If it is desired to maintain an accommodation for “mothballing” the timings are satisfactory.

**Key Question 3.** Are there concerns with requiring the Prescribed Information to be provided when the OEM Generator notifies of a change to its closure date (or applies to the AER for an exemption from the notice of closure requirements)? If yes, please provide details.

**Wimuru:** the comments below apply to the following quoted passages from 6.2.2.2

“Estimated annual maintenance schedule and budget for the OEM Generator and specific OEM Generating Units, including demonstration of where these costs are committed.”

“Expected other annual capital expenditure and operating costs for the OEM Generator and specific OEM Generating Units, including demonstration of where costs are committed.”

“Any other substantial costs expected to be borne by the generating facility.”

“Additional maintenance costs, including incremental maintenance and other costs, that will be incurred for the OEM Generating Unit in order for it to operate for the period after the Proposed Closure Date to the Current Expected Closure Date.”

“Additional remediation or redundancy costs, or changes to the termination value of the asset.”

Considerable work and expense are required to compile the maintenance schedule and the cost estimates for the budget. The activities in the schedule arise from intensive plant surveys undertaken during minor and major overhauls in the previous several years. However, these plant surveys will only be undertaken if the Generator is intending to continue to operate the Unit for at least several more years. The surveys include radiographing boiler superheater tubes, headers and steam mains, as well as activities such as eddy-current testing of the turbine condenser with all such activities requiring lengthy outages and careful preparation of the plant items and installation of scaffolding to permit access. There is also the need for careful analysis of condition monitoring data for the boiler and turbine and all Unit auxiliaries, as well as assessing the necessity of the various manufacturers’ recommendations for periodic maintenance. A similar approach applies to the common plant required for the coal and water supplies, ash and wastewater disposal, etc. There may also be obsolescence issues where a manufacturer no longer supports or provides spares for some vital items of equipment, requiring significant investigation

to obtain the cost of replacement.

*The results of the surveys and analyses are assembled into an asset management plan (AMP), and the many work packages scoped and priced. This involves a large amount of work and considerable expense but gets to the essential nature of the business. It is onerous but unavoidable and requires expert staff. If it has not been undertaken due to an intended but possibly yet unannounced permanent closure, the AMP and the budget will be guesswork. Independent peer review of the AMP and the budget is certainly warranted. Attempting to recover from an assumed imminent permanent closure is both very expensive and time consuming. It requires plant outages of some weeks to months for the necessary surveys and lengthy periods for composing maintenance solutions and establishing the commercial arrangements to implement those solutions quickly and efficiently..*

*Another aspect possibly overlooked here is the critically time dependent nature of the maintenance schedule. If a possible SSGU is coming to the stage of its maintenance cycle where there is a major overhaul required in the coming or following year, particularly if it includes extensive replacement of major components, this may well have triggered the Generator's decision to permanently close the Unit. If then, despite the significant cost, the Minister decides to issue an NMO, the preparation for and execution of the essential maintenance work may need to commence immediately. This arguably requires an ongoing level of enthusiasm and diligence on the part of the Generator that is unlikely in the circumstances and impossible to compel, despite the incentive of avoiding Tier 1 penalties. (It is extremely difficult and time consuming to prove whether the cause of a "Unit destroying" incident was not bad luck or due to incompetence, wilful neglect or even sabotage.) In addition some of the current Generators have relatively little experience in the O&M of the complex generating assets they have acquired, possibly assuming the remaining life was relatively short and underestimating the rate of the decline of Unit reliability resulting from an unwisely parsimonious approach. Consequently, the Minister may need to contemplate the "Step-in" arrangements that were a common feature of Power Purchase Agreements, bearing in mind that "Step-in" would only be effective if the Minister/AER had ready access to an experienced, highly skilled and well-resourced O&M contractor who was virtually on standby to take over the SSGU O&M.*

*One important area not canvassed in the framework is the advantages to the grid of conversion of some of the generators of the soon to be closed Units to syncons. ARENA has published a report on these conversions and AEMO has also reported that some 5 GVA of syncons (similar to those installed in Sth Australia) are needed by the NEM in the very near future - to facilitate the transition to 100% RE, even for the only short periods of a few days each year that will be the initial pattern of such events. (Both coal and gas fired generators are generally suitable for this conversion.)*

*AEMO has also advised that new syncons have a 5+ year delivery time and both ARENA and AEMO believe conversion of existing generators is a materially cheaper and faster option. (There are also a growing number of international examples where such conversions have been successfully undertaken.) The capex costs and ongoing O&M for such conversions would appear to belong in this section of the paper, but the general topic might warrant separate consideration in the OEM framework. Note the term of an NMO for a syncon should be at least the period needed for a cheaper alternative to become available for operation, where "cheaper" is established by a long term MVA cost equivalent to LCoE (for MWh) which would accommodate a*

converted generator/syncon becoming simply too old to maintain cost effectively. Such syncons may well provide valuable service to the grid for more than a decade before being replaced by cheaper alternatives.

**Key Question 4:** Noting that generators may operate under complex corporate structures, what are the best means for addressing related entities that provide services that are required for the operation of the System Significant Generator?

**Wimuru:** It is suggested that if the related entity supplies:

- a. fuel or other critical supplies, the prices for such be subject to comparison with a market standard,
- b. O&M services, that the costs, conditions and performance standards should be benchmarked, or the mentioned back-up O&M contractor be permitted to bid for the work and be awarded the work if better value for money. (Note the NMO would then need to contemplate the O&M contractor's taking over any existing staff willing to change employer, without any negative impact on their entitlements.)

It would appear that if the NMO structure is to work at all effectively, the Minister/AER will need an "Off-taker's Representative" with full access to inspect the SSGU for the life of the NMO, and ongoing access to all technical and commercial information relating to the SSGU. This representative would be necessarily monitoring the SSG's performance and if warranted would recommend the mentioned "step-in" right be exercised, then manage the back-up O&M contractor after it took over the Unit.

**Key Question 5:** Are there other specific insurances that should be maintained?

**Wimuru:** Consideration should be given to the need for business interruption insurance. Even if an SSG is not a small enterprise it is conceivable it will divest the SSGU, particularly if it wishes to cease any operations producing GHG. The "child" may not have the financial resilience to withstand an incident that results in it having no income for even relatively short periods so the risk of such low income periods gives rise to a need for business interruption insurance protection.. (Note the possibility of divestment of the SSGU needs consideration in any agreement to continue operating.)

**Key Question 6:** What information should be published to the market regarding AER decisions?

**Wimuru:** The information proposed to be provided to the market is satisfactory. That said (in 10.2 5<sup>th</sup> bullet point), consideration should be given to the need for business "generation capacity (MW)" to be ".....(MW and/or MVA in the case of a syncon)" - and inertia in MWs perhaps also warrants consideration. In addition (in the 7<sup>th</sup> bullet point), the "all reasonable and best endeavours to maintain arrangements..." needs examination. "best" includes "all reasonable" so both need not be stated, but "best endeavours" is arguably too severe a requirement because in law it may be interpreted to include endeavours which are against the SSG's commercial interests. "all reasonable" should be adequate, particularly if the Minister has a step in right and means to effectively use it.

**Key Question 7:** What are your views on the appropriateness of the proposed commercial component outlined in section 10.10?

**Wimuru:** *The payment for capital expenditure and FOM is appropriate and should not extend to any allowance for the capital value of the SSGU as by definition that value may be negative due to site rehabilitation plus the waste disposal costs may exceed the market value of all the reusable equipment and scrap.*

*In the case of the swap component, there is perhaps a need for clarification. In the preamble for 10.10 the financial swap is said to be for a notional amount of electricity (which would generally be thought to be electrical energy in MWh) yet in 10.10.1 (3<sup>rd</sup> bullet point) and 10.10.1.3 it is said to be expressed in MW. Hence would just be a capacity payment. But in 10.10.2 the strike price is in \$/MWh so the amount of energy is required. There appears to be a need for clarification.*

*As an alternative, we suggest a simpler arrangement where 6 months before the start of a year the AER provides an annual forecast of the amount of energy (in MWh) it expects to require from the SSGU, then may refine this amount each month in advance within a reasonable margin. This would usually permit a feasible back-to-back arrangement with coal supplier(s) for timely deliveries of prudent quantities of coal. However, it is suggested there is a need for a coal stockpile sufficient for one to three months of maximum output - to act as a buffer. (Note the AER should consider reserving a right to source coal for the SSGU in extreme circumstances.) The holding cost for the coal stockpile also needs consideration and there would be a need for regular coal stockpile volume surveying.*

*We agree the “strike price” determination should be as suggested in 10.10.2, save that “managing outage risk” is a normal business risk for the SSG so does not warrant an additional margin.*

**Key Question 8:** Is an alternative commercial component approach preferred and, if so, why?

**Wimuru:** *See the modified commercial component approach described above. We have no comment on the gas cap approach.*

**Key Question 9:** Are there other key issues that need to be considered as part of the commercial component?

**Wimuru:** *No further comment.*

**Key Question 10:** Should the financial model include an additional incentive component, even if small, so that the generator has some incentive to contain costs?

**Wimuru:** *A genuine incentive scheme is always worth consideration, but it is probably too much to expect that SSGU staff would also directly benefit from the performance incentive payment, whereas coaxing good availability for aging Units requires great dedication from the O&M staff. Note an incentive might also be considered for the Generator’s HSE performance against typical industry results and for any exceedance of availability targets. The last might be a pro-rata increase in the capex and FOM payment as the SSGU is effectively providing proportionally greater capacity by achieving higher availability.*

**Key Question 11:** How should services provided by related entities be treated?

**Wimuru:** Please refer to our answer to Key Question 4

**Key Question 12:** Should the AER have the ability to “look through” the billing arrangements of services provided by related entities to see the actual costs without mark ups?

**Wimuru:** Please refer to our answer to Key Question 4. This ability would not then be needed.

**Key Question 13:** How should the return to the generator be calculated in the case of a swap?

**Wimuru:** It is suggested this be an ex-ante % of the financial swap payment with an ex-poste adjustment for any shortfall in equivalent availability.

**Key Question 14:** Should there be a ‘true-up’ settlement in the event that actual capital expenditure and FOM expenses (fixed costs in the case of gas fired generators) differ materially from the ex-ante determination on which payments to the OEM Generator were based?

**Wimuru:** A “true-up” settlement is not considered warranted. The nature of the formulation of the AMP and budget render the opportunity of windfalls by the SSG negligible. On the other hand the SSG is being paid a margin for its expertise so should manage the risk of cost overruns. The one concession might be where the SSG has demonstrably applied “Good Industry Practice” (as that term is generally defined in contractual law) but experiences what is then effectively a Force Majeure event. In such circumstance a “true up” may be warranted but if material, the Minister/AER may have good reason to decide to terminate the NMO agreement. Note: it is assumed that the Minister will obtain a total capacity of all SSGU which will include a prudent margin above the expected maximum need, to accommodate essential maintenance, inevitable plant failures and accidents. A “reserve plant margin” of 15% has been historically suggested by some experts as a minimum, even with the adherence to best industry practices.

**Key Question 15:** How should the strike price for a cap for a gas-fired generator be determined (e.g., set at a fixed price, linked to the price of gas, or an alternative method)?

**Wimuru:** Linking to the price of gas would appear appropriate.

**Key Question 16:** What do you think of using the proposed new transmission cost recovery mechanism compared to the existing distribution network cost recovery mechanism contained in the national electricity rules (“Jurisdictional Scheme”)?

**Wimuru:** The proposed new transmission cost recovery mechanism appears to better reflect the probably widely felt effect of the likely large capacity SSGU.

**Key Question 17:** Noting the aim of a cost recovery estimate is to even out impact to energy consumers, should the estimation be averaged out over the entire period or allocated as expected by year with a re-estimation every year to correct for any variations?

**Wimuru:** The first alternative raises the question of how the OEM fund would be funded. The latter appears superior due to the corrections for variations.

**Key Question 18:** Would the shielded loss and gain option be a more suitable commercial

component approach for the Notice for Mandatory Operation compared to the financial swap approach detailed in the body of the consultation paper?

**Wimuru:** Referring to the answer to Key Question 7, the swap arrangements modified as suggested is considered superior.

If you would like to discuss any of the answers and comments above please feel free to ring me on 0409120794

Best regards

Ken Muir  
for Wimuru Pty Ltd