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Economic Regulation Authority

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Australian Energy Market Operator allowable revenue and forecast capital expenditure 2022/23 to 2024/25

The Wholesale Electricity Market (WEM) is currently undergoing its most extensive changes since it was first established. The moves to System Constrained Economic Dispatch (SCED) and co-optimisation of energy and Essential System Services (ESS) markets, along with the greater integration of Distributed Energy Resources (DER) will clearly require substantial changes to how AEMO operates. We therefore acknowledge that substantial increases in both AEMO's operating and capital expenditure are likely to be justified.

In the past, the cost of AEMO's operations has been relatively small. The changes proposed through AR6 are substantial with indications that these cost rises will continue into subsequent periods. The estimated AEMO contribution towards total costs is around $1.5 per MWh and is expected to be higher if five-minute settlement (5MS) is included. While this may be considered relatively small in comparison with the total wholesale energy prices, it is yet another incremental cost that must be met by end-use customers. It is therefore appropriate that AEMO's proposed expenditures be assessed in detail.

We appreciate that AEMO has put substantial effort into putting its reasoning into the public domain and especially note the substantial contribution in the two most recently published documents that consider labour requirements and the WA IT Roadmap. It is clear that AEMO is alert to the issues that we, and other market participants, are raising and is making strong efforts to address these. We commend AEMO for these initiatives.

The key driver for the current reform program is to ensure that the WEM can accommodate and securely operate in an environment of massive increase in intermittent renewable energy coming from solar PV systems and windfarms. This program is essential to maintain reliable supply, with the main concerns being to ensure that the market design changes are appropriate and that they are implemented in an economically efficient manner. The emphasis on further changes now needs to be on providing the most economical and secure supplies of energy to customers. For this reason, costs and benefits need to be identified more clearly and the appropriate balance developed between them for, as far as possible, each proposed change. This includes not only overall market changes, but initiatives proposed by AEMO and the WA Government for the AR6 period and beyond.

In responding to the AR6 proposal AGL and Perth Energy have sought to answer four key questions:

- Is AEMO planning to do the right tasks over the coming three-year period?
- Is it doing them efficiently?

- Will it be able to deliver on its commitments?
- Is it doing enough to prepare for the future?

Our comments and questions below stem from these four themes. We have also highlighted several policy matters that will need to be addressed.

Is AEMO planning to do the right tasks over the coming three-year period?

Clearly the main drivers of the proposed AEMO expenditure through the AR6 period are the two substantial projects, namely the new WEM and support for the WA Government DER Roadmap, which will profoundly affect its operations. The impact of 5MS is not directly included in AR6, although AEMO have modelled the likely impact, based on current timelines. We acknowledge that AEMO has no option other than to ensure that it has the staff and resources to implement these within the required timeframe .

Is AEMO doing this efficiently?

Perth Energy supports the approach that AEMO has adopted of managerial and Board challenges to all proposed costs. This senior management focus should encourage good cost control through the organisation. AEMO have not proposed any expenditure for programs where there is uncertainty and lack of detail. While this is an appropriate position, we feel that more work is needed to develop that clarity or defer the work for these future projects to AR7.

We have been seeking greater understanding of AEMO's proposals on substantial expenditure on new IT systems while at the same time seeking to increase its staff base. Approximately one third of the proposed capital expenditure, $15.4M, is nominated *"to deliver IT life cycle upgrades, cyber security enhancements and improved operational capabilities".* AEMO has advised that some of the proposed upgrades are end of life replacement, expansion for new services or capability for meeting new obligations. Noting that a portion of this work is replacement of Western Power systems which are at life end, its unclear if there is a similar reduction in Western Power expenditure, as they would have been responsible for system life extension prior to system control moving to AEMO.

We note the additional information provided by AEMO in its two recent publications which provide a more detailed justification for these staff increases including an explanation of the balance between IT automation and the use of staff. Given the high forecast cost of these staff such a review is critical.

AEMO's submission refers to *"a peak in activities and resourcing effort during go-live of the real-time energy and ESS market (2023-24), with a subsequent bedding down period of 12-18 months)".* It is important that any temporary resource needs do not get baked into longer term staffing levels. We see it as a positive approach that AEMO will *"seek opportunities to refine processes and find efficiencies in market and system operations and expects these to be realised after the post go-live bedding-down period and beyond".* This gives us confidence that AEMO is alert to potential over-staffing issues.

We acknowledge that sufficient operating staff will need to be on duty to efficiently manage the various markets that comprise the new-WEM and future developments such as 5MS. Initially it may be better to over-staff a little. However, we would expect that as AEMO develops experience with these new markets, and develops new tools based on learnings over the first year or so, that staff numbers can be optimised. This does appear to be part of the approach outlined in the most recent information papers.

AEMO has taken over some Western Power systems and is now running these in house. As a result, we would expect some decrease in Western Power's expenditure to match AEMO's increased expenditure. Can AEMO provide an indication of the benefit that this move has provided along with the benefit of moving more systems onto the cloud? This, and other upgrades such as plans to increase market visibility and DER access and management, need to provide some tangible economic benefit rather than just being nice-to-have. We appreciate that this benefit may not show up in AEMO's direct costs but AEMO should still be able to demonstrate where the customer benefits arise from these investments.

We note that AEMO "*inherited a large number of bespoke and varied systems with limited interconnectivity", we assume from Western Power.* AEMO advises that it is working to address these issues but that *"it will take some time for the reduced technical debt to flow through to reductions in IT effort".* We presume that this means there is the potential for further targeted IT investment to reduce costs. It would be useful to see some outline program of how these legacy systems are to be replaced or integrated. We would also expect a similar reduction in Western Power IT development, as they are no longer responsible for these systems.

AEMO undertakes projects that apply across both the WEM and the NEM. It is important that the real value of these to the WEM be identified, that cost sharing be developed appropriately, and where possible the NEM systems be utilised to increase their efficiency.

Will it be able to deliver on its commitments?

Unfortunately, AEMO has struggled with delivery times and budgets with some recent projects. It is of considerable concern that there was significant delay in acknowledging that the new-WEM start needed to be pushed back to 2023. For many months users had been questioning the pace of development but had been assured that the project was running on-time. We have equal concerns with future program implementations, such as 5MS, and would like to know what steps AEMO has made to its project development and management processes such that we do not have further delays in this, or contributing projects, which will not be revealed at the last minute.

AEMO had significantly underestimated the budget required for the market reform process. This is despite AEMO applying "*historical precedent and market testing to determine costs"* as well as the experience of implementing generally similar systems in the NEM. We appreciate that all IT processes are different but what assurance is there that the resources now proposed are adequate? Also, is there any assurance that project timing and budget has not been substantially loaded up to provide a cushion against unforeseen events. We do understand the need for contingency but note the high level of capital expenditure contingency (30+%) and question whether this could be reduced by better specifications for new projects. Further, are we seeing under-bidding by suppliers with the expectation that AEMO will then accept cost over-runs?

One specific area of concern is what could happen if the Rate of Change of Frequency (RoCoF) becomes a significant factor over the AR6 period. Will AEMO have sufficient resources allowed to manage this and whatever ESS requirements it requires?

We note that AEMO plans to have more staff working from home and that this will materially reduce their future accommodation requirements. How will AEMO ensure that this will not create inefficiencies that will increase costs, especially given that Covid impacts are blamed for some cost increases.

Perhaps the most important question is whether the appropriate resources are being proposed to ensure smooth operation of the market. We are told that additional tools and staffing is to be introduced but, again, the questions remain as to whether this is an efficient and effective balance to ensure that the new-WEM runs smoothly from Day One.

Is it doing enough to prepare for the future?

There is a sense that AEMO is a "passive" organisation in that it simply accepts all the tasks that it is given. Is there a case for AEMO to push back more in areas such as proposed rule changes where it believes that the cost benefit is not there? Should it be proposing a hold on rule changes, apart from correction of manifest errors, for a period of, say, one year?

We are also concerned that the timing of projects is such that there may be insufficient information available at this point in the Allowable Revenue Proposal for the likely costs associated with programs such as 5MS. Perth Energy seeks to ensure that AEMO fees for program costs are collected over a suitable period and that fees do not undergo step changes through the periods, but rather maintain a glide path that participants can use when developing customer and market prices.

Broader policy matters

AEMO's proposals highlight a number of areas that warrant further discussion but are primarily driven by Government policies. Perth Energy and AGL will seek to discuss these matters directly with Government's representatives but have raised the issue here to open up the conversation.

- **The DER Roadmap**

AEMO has requested approval to commit substantial capital to "*Implementing DER aggregation participation".* It is a question for Government or Energy Policy WA but is there any significant value in pursuing this project if the vast majority of customers are to remain within Synergy's franchise? There is a strong case to be made that DER aggregation in the WEM, with its bilateral contracting arrangement between retailer and customer (and no commercial relationship between customer and the distribution network owner) will only work effectively if the aggregator is also the customer's retailer

If Government is seriously contemplating that residential customers with DER are to be made contestable then we agree that efficient expenditure for this project should be spread across the market. However, if the benefits are to accrue primarily to Synergy and its customers, then the project costs should be assigned to them rather than being spread across the wholesale market. Otherwise owners of rooftop solar PV would gain most of the benefit while the cost would largely be borne by generators and non-PV loads since these pay the bulk of kWh-based fees.

- **Five Minute Settlement**

Of particular concern is the steady move towards five-minute settlement (5MS). This is not solely a push from AEMO, but it would be good to see some analysis from AEMO, based on its experience within the NEM, that compares the likely cost of this change with the level of benefits that may flow through to customers. We raise this because of the very high investment cost that is already being mooted and the potentially short timeframe for action. If this cost can be justified then Perth Energy will fully support it but if the benefits are marginal, or depend on further deregulation that may not occur, we question whether the project should proceed.

AEMO has kindly provided estimates for the cost to develop systems to move to 5MS in the WEM based on its experience with the NEM. These costs would be substantial and it is of concern to Perth Energy and AGL that a significant increase in AEMO fees may be imposed during the AR6 period if this work proceeds. Because of this we consider that a clear policy statement, with an assessment of expected costs and benefits, be developed before AEMO, and other market participants, are required to commit to substantial expenditure. There is a real danger that the market will drift into this new project without clear objectives or direction.

With the commencement date for the new market having been put back to October 2023, we also strongly suggest that a detailed review of the 5MS implementation workload for AEMO and market participants be undertaken. Ideally, these projects should be dovetailed such that staff and consultancy resources should move progressively from market reform to 5MS rather than having an overlapping peak that will be hard for all participants to accommodate.

Should you have any questions in relation to this submission please contact me on 0437 209 972 or at p.peake@perthenergy.com.au.

Kind regards,

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