



Major Energy Users Inc.

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Ms Nicola Falcon
General Manager Forecasting
Australian Energy Market Operator
GPO Box 2008
Melbourne Vic 3001

Sent by email: forecasting.planning@aemo.com.au

AEMO Draft 2021 IASR

The Major Energy Users is pleased to respond to the AEMO request for input to its draft 2021 Inputs, Assumptions and Scenarios Report (IASR).

About the MEU

The MEU was established by very large energy using firms to represent their interests in the energy markets. With regard to all of the energy supplies they need to continue their operations and so supply to their customers, MEU members are vitally interested in four key aspects – the cost of the energy supplies, the reliability of delivery for those supplies, the quality of the delivered supplies and the long term security for the continuation of those supplies.

Many of the MEU members, being regionally based, are heavily dependent on local staff, suppliers of hardware and services, and have an obligation to represent the views of these local suppliers. With this in mind, the members of the MEU require their views to not only represent the views of large energy users, but also those interests of smaller power and gas users, and even at the residences used by their workforces that live in the regions where the members operate.

It is on this basis the MEU and its regional affiliates have been advocating in the interests of energy consumers for over 20 years and it has a high recognition as providing informed comment on energy issues from a consumer viewpoint with various regulators (ACCC, AEMO, AEMC, AER and regional regulators) and with governments.

As a general observation, the MEU recognises that AEMO has dedicated considerable effort into the preparation of the IASR and to a large extent the MEU accepts the work that is embedded in the report and its associated workbook.

8 Harker, Healesville, Victoria, 3777

ABN 71 278 859 567

www.meu.asn.au

While the MEU has expressed concern in other forums about the consultation process in the development of the IASR and the resultant changes to the scenarios used previously, it also recognises that AEMO has already had the benefit of much of the MEU input and to reiterate its views would be duplicative. The MEU has also provided significant input to the development of many of the inputs to the IASR through its active involvement in Forecasting Reference Group (FRG) deliberations.

Scenarios

The MEU is not satisfied that AEMO has developed the best scenarios, partly due to the consultation process it used in the development of these but the MEU also recognises that to make further changes to these scenarios would not reflect the considerable effort stakeholders have already put into the scenario development. In addition, the MEU has concerns that the scenarios developed do not reflect the intentions of most state governments (and implied in the recent announcement by the Prime Minister) to reach at least net zero carbon emissions by 2050. The MEU is concerned that the central scenario – which is the one considered most likely – is based more on actual legislated decisions rather than clearly stated intentions which have been driving legislated changes and which will continue to do so.

However, what is probably more critical is the weightings used for these scenarios when they are used to generate probable outcomes. The MEU considers that of the scenarios, the greatest weight should be applied to the central scenario, followed by the sustainable growth scenario which more readily reflects the intentions of the various state governments. The slow growth, diversified technology and export superpower are considered by the MEU to be less likely scenarios. On this basis, the MEU considers that the central scenario could be weighted (say) 40%, the sustainable growth scenario 30% and the other three 10% each.

The MEU notes the AEMO intention to moderate the central scenario with five sub-options. The MEU does not support this approach as it distorts the outcomes from the weighting of the base scenarios. The MEU considers a better option is to test the impact of these identified variants to the central scenario through sensitivity analyses on the outcomes by applying them to all scenarios rather than just the one central scenario.

IASR workbook

The IASR workbook provides values for the inputs to provide the outturn forecasts developed by AEMO. These inputs need to be as accurate as possible to maximise the possibility that the AEMO forecasts are closer to being correct.

Discount rate (Financial parameters worksheet)

As a headline issue, the MEU does not accept that the discount rates proposed (4.8% for all scenarios except “slow growth which has 3.8%) for future cash flows represents

the realities of the risk and uncertainty inherent in the assessment of cashflows from forecast benefits.

The MEU accepts that the risks and uncertainty involved in the cash flows from the revenues allowed for transmission investments are very low due to the structure of the revenue rules in the National Electricity Rules (NER) chapter 6A. To reflect this low risk environment for network investments, the AER has developed an approach to establish the weighted average cost of capital (WACC) to reflect the risk and uncertainty faced by TNSPs regarding their investments. The IASR workbook uses the AER calculated WACC as the discount rate for TNSP investments and the MEU agrees that this is the correct discount rate to use for assessing the net present value of future revenue streams from TNSP investments.

Where the MEU disagrees with the workbook is that the risk and uncertainty inherent in developing a net present value for the benefits that are forecast to accrue from TNSP investments are much higher than the low risk and certain cash flows resulting from application of the NER to network investments. Essentially the MEU does not consider that a 4.8% (or 3.8%) discount rate is appropriate for assessing the NPV of forecast benefits. With this in mind, the MEU has sought advice from its members¹ as to the discount rate they use for assessing a NPV of future benefits from investments they make. Their advice is quite consistent across all members – that they use a discount rate of 10-12% in the current climate and in the past, when interest rates were higher than now, the discount rate used approaches 15%.

The MEU notes that the AER guideline on Cost Benefit Analysis for ISP projects states that the discount rate cannot be lower than the current assessment of the WACC used for network investment, but the implication is that a higher discount rate can be used and that the discount rate should reflect (page 10)

“...the systematic risk associated with the ... market benefit cash flow stream...”

The guideline goes on to expect that AEMO will seek expert guidance on the setting of the discount rate. AEMO has not sought expert guidance on setting the discount rate for future benefits but does refer to the 2020 ISP where the Energy Networks Association (not an independent expert) provided some input to developing the discount rate used in the 2020 ISP.

The AER guideline provides a view that uncertainty about future cost inputs will be assessed through sensitivity analyses. The MEU does not agree this is appropriate. Based on advice from its members, they see future benefit revenues will have considerable uncertainty and risk and as a result use the higher discount rate to reflect this. In addition, they also carry out sensitivity analyses but still use the higher discount rate in their final assessment when making a decision on an investment.

¹ MEU members all have capital intensive operations but do not have the guaranteed revenue streams that TNSP enjoy, so their assessments have to reflect that their future net benefit revenue streams from investments will have considerable uncertainty and risk

The MEU is concerned that the discount rate of 4.8% (3.8% for slow growth) proposed for future generation revenue is unrealistically low when it is considered that generation is a competitive element and subject to significant change in the future mix and cost structures. On this basis, the MEU considers that the discount rate for future generation revenues should be much higher than the certainty on revenue streams that TNSPs experience.

In summary, the MEU considers that:

- A discount rate of 4.8% (3.8% for slow growth) might be acceptable for assessing the NPV of future revenues from network investments
- A discount rate for future consumer benefits arising from the network investment needs to be 12% at least
- A discount rate for assessing the future revenue from generation investment probably lies between 4.8% and 12% and closer to the higher discount rate for future consumer benefits

Gas prices

There is a disconnect between the forecast gas prices provided by Lewis Grey Advisory (LGA) for industrial gas users, the forecast for gas fired generation (fuel price summary worksheet), gas and liquid fuel price worksheet, and the combination of data from worksheets on gas transmission tariffs and gas production costs.

The gas prices generated by production costs and transmission tariffs are not dissimilar to those calculated by LGA for industrial gas users. On this basis the MEU considers that the forecast gas prices assessed by LGA for industrial gas users should be used as the delivered gas price inputs for generation in the IASR.

DSP

The MEU is concerned at the low amount of DSP (DSP worksheet) that AEMO expects will be provided, especially in the higher price ranges. As the MEU and others have pointed out to AEMO in FRG meetings, the AEMO DSP assessments are likely to be understated. AEMO comments that DSP must not be double counted (ie within the demand forecast as well as a separate aspect) and the MEU agrees this is a concern.

AEMO has assessed DSP as 2-5% of peak demand (demand input summary) yet there is no supporting work for this input and how this relates to the DSP worksheet data.

Further, there is no clarity on how AEMO has included in their demand forecasts much of the DSP that already does occur, so the risk of the AEMO approach is that the DSP is actually under-estimated overall in that it might not be in either the demand forecast or included in the separate DSP assessment. To correct this, AEMO has to either show how much DSP is embedded in the demand forecast so that the overall

DSP can be assessed and verify the reductions in demand that end users do deliver when driven by high prices, agreements with retailers and aggregators and with networks (which also have agreements to reduce demand when networks approach capacity limits).

Overall, the calculation of DSP needs to be made more transparent with all sources of DSP being clearly identified.

Transmission aspects

There is no explanation of how the transmission investment costs have been developed and these need to be updated based on the hard data that Project EnergyConnect (PEC) and the West Vic augmentation projects can provide.

The MEU notes the decision to develop a new cost data base for transmission projects in concert with GHD Advisory. This project is welcome but will take time to provide the more accurate data that it should bring to future IASRs. In the intervening period, the MEU considers that recent data needs to be incorporated, and be seen to be incorporated, into the capital cost estimates from projects that have reached firm pricing stage.

The MEU points out that AEMO did increase its capital cost inputs from draft to final for the 2020 ISP, but the actual costs embedded in PEC resulted in a firm capital cost which was another 25% premium to the final 2020 ISP cost assessment for PEC. Implicit in the PEC actual costs, it would appear that future transmission capital costs need to be increased from 2020 ISP levels by another 25%, but there is no clarity that this increase has been built into the 2021-22 IASR.

While the Connection cost worksheet provides values for connection costs for different renewable energy zones for different generation types, there is no clarity on how these values were calculated and whether they are supported by actual costs that have been incurred.

The outage time for the Heywood interconnector (transmission reliability worksheet) is much greater than for other interconnectors and is high compared to the STPIS outage rates allowed in the AER revenue determination. There is no explanation provided as to why there is an expectation of 2.64% of time for outages on this interconnector. The concern is that the once off problem that occurred in early 2020 on the Heywood interconnector has been assumed to be a regular occurrence. The MEU does not expect that the 2020 failure of the Heywood interconnector will occur on a regular basis.

Generation inputs

As discussed at FRG meetings, the forecast outage rates (Generator Reliability settings worksheet) for existing generators seem high, especially when compared to those settings used for new generators.

Capacity factors (Capacity factors worksheet) for renewable generation seem to be high, especially when compared to actual capacity factors calculated in the Global-Roam 2020 Generator Statistical Digest.

Ramps rates (Maximum ramp rates worksheet) for generators seem quite low (ie generators can start faster and load faster than shown in the worksheet) compared to the data provided by the original equipment manufacturers' (OEM) statements of capability.

Start times for the gas turbines (Min Up&Down Times worksheet) from cold and warm seem excessively long. Most gas turbines (based on OEM data) can start faster – from cold within 5 minutes and from warm, even faster.

Policy settings

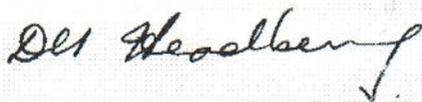
The table (Scenario policy settings worksheet) only has reference to renewable policies yet there are other policy settings that impact NEM supplies that should also be included, such as the Federal government decision to provide up to 1000 MW gas fired generation in the Hunter Valley, the upgrade of Vales Point PS under the UNGI and so forth. These other policies also need to be added to policy settings and the outcomes included in the development of the 2022 ISP.

Forecast demand

As stated at various FRG meetings, the MEU has concerns at the forecast peak demands (10%PoE) being too high caused by AEMO being excessively conservative. This means that there is a need to have a forecast accuracy comparison to explain why peak demands (10%PoE) seem to happen less frequently than once a decade and why 50%PoE happen less frequently than 1 in 2 years. While the MEU is aware that AEMO has provided Forecast Accuracy Reports, the outcomes of these needs to be incorporated into the dialogue to demonstrate why historic demand forecasts might have been incorrect and the likelihood of them being too conservative and overstated.

The MEU is happy to discuss the issues further with you if needed or if you feel that any expansion on the above comments is necessary. If so, please contact the undersigned at davidheadberry@bigpond.com or 0417 397 056

Yours faithfully



David Headberry
Public Officer