

Australian Energy Market Operator (AEMO)
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Submission to AEMO Consultation Paper - Draft Competition Benefits Inputs and Assumptions and Methodology

The Australian Energy Council (AEC) welcomes the opportunity to make a submission to AEMO's Consultation Paper Draft Competition Benefits Inputs and Assumptions and Methodology (Consultation paper).

The AEC is the industry body representing 20 electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the majority of the electricity in Australia, sell gas and electricity to over ten million homes and businesses, and are major investors in renewable energy generation.

Introduction

At this stage of its development the NEM is a rapidly evolving market. The NEM has seen a dramatic increase in variable renewable energy (VRE) and rooftop PV and this trend is expected to continue especially as the NSW Electricity Infrastructure Investment Act¹ is implemented and Renewable Energy Zones are established across the NEM. In addition to this utility scale batteries now operate in the NEM and more are expected in the future as well as increasing take-up of batteries by households and businesses. Loads are also expected to be able to be more responsive to market conditions. The wholesale spot market is also experiencing more negative price events as demonstrated over the third quarter of this year.²

In 2018 the AEC commissioned Frontier Economics (Frontier report) to investigate the effects of technological progress and policy changes on the performance of the NEM. Frontier concluded that these developments are likely to encourage "more competitive behaviour in NEM wholesale market and thereby lead to more efficient and cost reflective pricing outcomes".³ The AER has also observed the benefits of this trend in its 2020 Wholesale Electricity Markets Report.⁴ In this report the AER further states,

"...we have not identified a concerning exercise of market power by generators in this review"⁵

In light of the current trends occurring in the NEM, which are likely to increase competition, the AEC cautions against attempting to estimate and incorporate competition benefits where these cannot be clearly identified or easily modelled. Nevertheless, if such benefits are to be estimated the AEC would prefer an independent market body (ie, AEMO) to be responsible for undertaking the estimation as part of its Integrated System Plan (ISP). But only after careful consideration of the merits of undertaking the task.

¹ <https://legislation.nsw.gov.au/view/html/inforce/current/act-2020-044>

² <https://aemo.com.au/-/media/files/major-publications/qed/2021/q3-report.pdf?la=en&hash=F7831B51290237F9033B5D22E52EF4C1>

³ <https://www.energycouncil.com.au/media/ar0leqfx/20181213-final-report-advice-on-nem-structure-in-light-of-technology-change-stc.pdf>

⁴ <https://www.aer.gov.au/system/files/WEMPR%202020%20-%20Wholesale%20electricity%20market%20performance%20report%20%E2%80%93%20December%202020%20-%20Publication%20version%20%283%29.pdf>

⁵ Ibid, p2

Discussion

The approach (outlined in the EY report) to estimate competition benefits requires:⁶

- assumptions of market power and strategic bidding behaviour; and
- estimates of wholesale price elasticity to calculate demand response benefits.

Furthermore, it is proposed that the competition benefits are estimated for a 10-year period.⁷ AEMO itself acknowledges the complexity and range of potential outcomes for strategic bidding.⁸ Accordingly, the EY approach rationalises strategic bidding by assuming four generators across the NEM in the HumeLink example.⁹ Hence, the results are already heavily assumption dependent.

A complexity that needs to be considered in AEMO's approach is that the likely strategic generators and generation types will not be static over the 10-year modelling horizon. As generation patterns change with increased VRE and the exit of coal generation the role of baseload, peaking generation and energy storage will likely evolve. This may mean that using historical data to estimate market power is not a reliable guide.

The benefits are subjective and likely to be immaterial as there are currently many solutions to improve the performance of the NEM as it decarbonises and the results of this type of modelling are likely to favour certain types of solutions. If after careful consideration AEMO believes there are material benefits to be explored through competition benefits modelling, then the Frontier/EY approach where only "static" benefits are estimated is preferable to more complex and increasingly questionable approaches that attempt to also estimate "dynamic" benefits.

Demand response competition benefits

The AEC is particularly concerned with the complexity and subjectiveness associated with estimating demand response competition benefits. While estimating the supply curve is relatively straight forward and forms part of the analysis AEMO already undertakes, estimating a demand function is a far more complex task. As the demand curve is likely to be dynamic and exhibit significant variability over time. It also requires electricity price elasticity assumptions.

In the first instance, the elasticity assumptions need to be divided between short run (SR) and long run (LR). Currently the SR electricity price elasticity is highly inelastic and this likely to remain the case until more load has the ability to respond to high wholesale spot prices.¹⁰ In contrast, the LR price elasticity does have a degree of elasticity. Estimating demand responses to wholesale electricity changes requires an assumption as to when electricity users respond. As an example, it is likely to require a sustained reduction in wholesale spot prices and forward prices before a gas using business would undertake capex to switch from gas to electricity.

Conclusion

The AEC has concerns regarding the accuracy and resource intensive nature of estimating competition benefits and is generally of the view that they should not be included as part of AEMO's ISP modelling. The AEC also understands that there are degrees of divergence across its membership on this matter. Nevertheless, if AEMO is to consider competition benefits, the AEC believes AEMO must be extremely judicious and circumspect before deciding to undertake estimating competition benefits. The AEC believes

⁶https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2021/isp-methodology/ey-draft-competition-benefits-inputs-assumptions-and-methodology.pdf?la=en

⁷ Consultation paper, p18.

⁸ Consultation paper, p13.

⁹ EY Report, p13.

¹⁰ <https://www.energycouncil.com.au/media/ar0leqfx/20181213-final-report-advice-on-nem-structure-in-light-of-technology-change-stc.pdf> p14.

AEMO should treat the results carefully and possibly adjust them downwards to reflect the uncertainty surrounding the estimates.

Any questions about our submission should be addressed to Peter Brook, by email to peter.brook@energycouncil.com.au by telephone on (03) 9205 3103.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'P Brook', is placed on a light yellow rectangular background.

Peter Brook
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