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Australian Energy Market Commission
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Sydney South NSW 1235

3rd November 2017

Submitted online to: <http://www.aemc.gov.au/Rule-Changes/Generator-technical-performance-standards#>

Dear Mr Adams,

Generator Technical Performance Standards
Reference: ERC0222

The Australian Energy Council (the “**Energy Council**”) welcomes the opportunity to make a submission in response to the Australian Energy Market Commission’s (“**AEMC**’s”) *Generator Technical Performance Standards Consultation Paper*.

The Energy Council is the industry body representing 21 electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the overwhelming majority of electricity in Australia and sell gas and electricity to over ten million homes and businesses.

Introduction

The increasing proportion of intermittent output non-synchronous generation in the power system has the potential to affect the operation of the power system. To maintain the security of the power system the Australian Energy Market Operator (“**AEMO**”) has proposed that the generator access standards and negotiating framework be changed. While the Energy Council is sympathetic to the security issues anticipated, but not yet proven, there is concern that the changes proposed by AEMO are disproportionate to the problem, unnecessarily burdensome for prospective generators, and will add significant costs to new energy supply sources, and potentially existing ones as well.

Where non-energy services are required to secure the power system, the Energy Council’s preference is that where possible these services be specifically valued, i.e. they should be “unbundled” from the energy price. The Energy Council understands that AEMO and the AEMC generally agree with this philosophy and intend, in time, to introduce arrangements that value specific services such as Fast Frequency Response. Unbundling will lead to voluntary, competitive and innovative investments in such services. The proposed approach instead mandates investment in the capacity to deliver these particular services as a condition of entering the energy market. Such an approach creates the following risks:

- that more services will be mandated than are truly required for certain locations;
- that an unnecessary barrier will be created for low-cost energy sources, thereby raising prices;
- that, due to the higher prices, energy consumers will pay for the provision of these services rather than their true causers;
- the urgency for institutions to develop ways to value the services will be reduced;
- the potential for innovative non-power station service provision will be lost; and
- that an artificial oversupply of the services will distort their value when it is ultimately recognised.

Discussion

The power system is a complex system which relies on many different elements to deliver reliable, secure electricity to consumers, within mandated technical parameters. Generator performance standards are one element which contributes to the security of the power system, but as the system’s elements are interrelated, these standards aren’t exclusively responsible for maintaining system security. Instead different performance standards can be exchanged for particular ancillary services, operational methodologies or network

obligations, and it is the essence of the National Electricity Objective that standards and services be optimised to ensure that overall costs to consumers are minimised, while reliable, secure supply is maintained.

AEMO's proposal relates to the technicalities of the generator access standard as well as the negotiating framework to agree the technical performance standards to which a newly connecting generator must adhere. The Energy Council suggests that reviewing generator access standards is premature, while other market reviews (e.g. the *Frequency Control Frameworks Review*), Reliability Panel inquiries (e.g. the *Reliability Standard and Settings Review 2018*) and rule changes (e.g. the *Inertia Ancillary Service Market*) are ongoing.

One of the justifications AEMO cites for the need to change standards (and put the changed rules in place as soon as possible) is the 20GW of non-synchronous generator connections proposed, compared with the 5GW of synchronous generation proposed¹. While the Energy Council accepts that there is a significant queue of possible generation, the likelihood of all these generators connecting to the national grid is low, and is likely to be affected by both the plateauing of the Renewable Energy Target from 2020, and policy proposals being considered such as the National Energy Guarantee. Consequently the Energy Council considers AEMO's justification overstated.

There has also been no assessment of the material costs to be imposed on industry in order to achieve the potential benefits in additional security mooted by AEMO from the proposed changes, apart from a qualitative discussion in AEMO's Rule Change Proposal which cites Business SA's estimate of a \$367m cost for the 2016 SA black system event². Aside from the patent need to perform a cost-benefit analysis, the Energy Council suggests that had the proposed changes been in place, there is no guarantee the South Australian network would have withstood the catastrophic weather events experienced that day if the power system had been operated in the same manner, therefore the necessity of the changes is called into question. The Energy Council recommends that the AEMC engages independent experts to consider whether the higher standards proposed are strictly necessary to maintain power system security, as that term is defined within the National Electricity Rules, and whether imposing such standards will have a detrimental effect on the reliability of the power system if it compromises the ability of generators, particularly synchronous generators, to connect. Indeed, it may not be economically efficient for all generators to aspire to meet the automatic access standard, particularly as the test of compliance is by way of modelling, which means that generators may not comply with the standard in the future as the power system changes, through no fault of their own.

AEMO has also proposed that transitional arrangements apply so that connection requests lodged on or after the date of the rule change proposal, 11th August 2017, are captured by the new standards. The Energy Council strongly objects to this proposal, on the basis that the proposed rule change will only come into force (if indeed it does so) at some time in the future, therefore the access standards are not applicable to connection applications lodged prior to the enactment of the rule change. This is supported, as cited in the Consultation Paper, by the fact that the AEMC does not have the power to make rule changes retrospective³.

The Energy Council also notes that while AEMO has suggested that the revised access standards should only be applicable to new connection requests, it mentions that in overseas jurisdictions it is common practice for existing generators to have their performance standards reviewed in light of revised standards⁴, and AEMO foreshadows doing so. While the Energy Council appreciates that the power system will change over time and a review of an existing generator's performance standards is sensible if existing plant is being materially reconfigured, it is inappropriate that existing, unchanged generators have their standards modified and suffer additional costs which were not anticipated at the time of commissioning of the plant or forced to prematurely retire by the imposition of a revised standard that physically cannot be met. There is already the risk that existing plant will be affected by the imposition of the proposed standards on new generators, and the Energy Council would not like to see additional costs imposed on market participants, which would ultimately be passed through to consumers. It is therefore very important that for existing generators undertaking an upgrade (to which the relevant component of the new generator technical standards will then apply), there be a provision that if the generator cannot meet the new minimum standard, then they must be able to continue

¹ AEMO, *Electricity Rule Change Proposal: Generator Technical Requirements*, 11th August 2017, p.5

² *ibid*, p.52

³ p.46

⁴ AEMO, *Electricity Rule Change Proposal: Generator Technical Requirements*, 11th August 2017, p.55

operating. That is, the generator must be able to continue under their current technical standard if they cannot meet the minimum standard.

It is expected that the AEMC will see very detailed technical arguments put forward by the Energy Council's members, so the Energy Council will restrict itself to drawing the AEMC's attention to the consequences of the proposed standards changes affecting operations of generation plant in unintended ways. For example, the changes to the continuous uninterrupted operation definition and its usage within the National Electricity Rules, which nominally affect only a limited number of clauses, actually have a material effect on other rules and performance standards. The effect of making the continuous uninterrupted operation change will be to affect plant operation patterns and generators' opportunities to make returns. Ultimately the removal of generators' operational flexibility by the imposition of the higher continuous uninterrupted operation standard may be to compromise the security and reliability of the power system, a perverse outcome for a standard which is designed to improve the National Electricity Market's operations.

Market Valuation

The Energy Council considers that it is possible to develop mechanisms to value and reward the provision of many of the technical characteristics that AEMO seeks to mandate in generators, which are actually supporting the stability of the broader grid rather than their own connections. The most likely candidates for such mechanisms are:

- Voltage Control;
- Disturbance Ride Through – Reactive Current Injection and Reactive Power Support;
- System Strength; and
- Active Power Control.

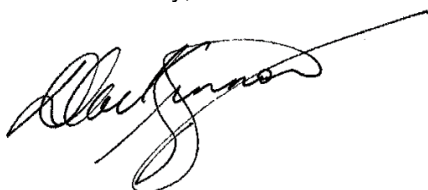
The Energy Council considers that rather than mandating these characteristics, the grid services that AEMO is seeking to obtain should themselves be specifically identified, valued and procured from willing providers in a technology-neutral manner.

Conclusion

In conclusion, the Energy Council is concerned that AEMO's proposed rule change is being prematurely considered by the AEMC based on an anticipated problem which may not materialise, particularly in light of the changes afoot within the industry. Given the thus far unquantified benefits of implementing the change, and the material additional costs to be imposed on industry, which may be unnecessarily and possibly costly for prospective generators, and will ultimately be borne by consumers, the Energy Council does not support the rule being implemented in its current form.

Any questions about this submission should be addressed to the writer, by e-mail to Duncan.MacKinnon@energycouncil.com.au or by telephone on (03) 9205 3103.

Yours sincerely,



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