



**EnergyAustralia**

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Australian Energy Market Commission

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Dear Commissioners

Lodged electronically: [www.aemc.gov.au](http://www.aemc.gov.au) (ERC0208)

### **AEMC 2017, Inertia Ancillary Service Market, Consultation Paper, 8 September 2017**

EnergyAustralia is one of Australia's largest energy companies with over 2.6 million electricity and gas accounts in NSW, Victoria, Queensland, South Australia, and the Australian Capital Territory. We also own and operate a multi-billion dollar energy generation portfolio across Australia, including coal, gas, and wind assets with control of over 4,500MW of generation in the National Electricity Market (NEM).

We welcome the opportunity to comment on the *inertia ancillary service market* rule change consultation paper. Whilst we recognise the need to value inertia to ensure investment in, and dispatch of, inertia services, this rule change is not urgently required and should be postponed until a more comprehensive frequency control management framework is developed. EnergyAustralia does not support progressing this proposal to a rule change until after the completion of several frequency management reviews that are currently underway.

#### **Taking a unified and orderly approach to frequency control**

EnergyAustralia believes this rule change should not be progressed as a priority ahead of a more holistic review of frequency management in the NEM and the resolution of more pressing network constraint issues, such as low levels of system strength.

The proposed rule change has been developed with inertia constraints on the Heywood interconnector in mind, however, this is not the priority issue affecting the interconnector. Our analysis shows that constraints have not been placed on the interconnector to address large changes in frequency or potential inertia shortfalls since May 2017. The current practice of focussing on managing system strength issues, such as the limitations on wind operations, appears to be addressing the problem. Further, with minimum synchronous generation being dispatched and new obligations on TNSPs obligated to provide minimum levels of inertia,<sup>1</sup> inertia is now a second order issue for Heywood and a rule change set up to address the Heywood situation should not be prioritised over other more useful or urgent changes.

The heavy emphasis on developing a mechanism that is suitable for managing constraints on Heywood limits the potential relevance of this change to the rest of the NEM. There has been very little assessment of the suitability of the proposed mechanism for other inertial shortfall

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<sup>1</sup> <http://www.aemc.gov.au/Rule-Changes/Managing-the-rate-of-change-of-power-system-freque>

issues such as intra-regional constraints. There is a risk that implementing a rule change to address a very specific issue, that is not a primary order issue, will be a distraction from developing more comprehensive solutions to inertia issues facing the NEM.

We urge the AEMC to prioritise progress on the Frequency Control Frameworks Review to ensure a cohesive and universal approach to frequency control is developed. There are questions that need to be answered around appropriate frequency operating bands, maximum ROCOF allowances and distribution frequency within the operating bands. Once these are resolved, the best technical and market mechanisms to deliver operational improvements can be identified and implemented as a unified package of reforms. Taking this approach will allow the AEMC to properly assess how inertia markets will interact with other frequency control services and determine the best combination of mechanisms.

### **Efficacy of proposed approach and perverse impacts on energy markets**

Should the AEMC choose to progress with this change, we have several concerns with the proposed design including:

- **Applicability to other types of constraints**

As outlined above, the proposed mechanism is not a universal solution to inertia shortfall constraints. We are concerned about introducing a change in isolation that only addresses one specific aspect of issue, without considering the broader network environment. There is the potential for unintended conflicts with other changes, or implementation of a change that quickly becomes irrelevant.

- **Energy market bid distortions**

The use of the shadow price, where inertia is valued based on the size of the price separation when there is an interconnector constraint, could have distortionary impacts on the energy market. The inertia payments could incentivise generators in the higher priced regions to inflate their energy bids to increase the price separation difference, and therefore their inertia payment. Given this possibility, EnergyAustralia does not support the value of inertia being linked to the energy price.

- **Funding mechanism**

We do not support the use of Inter Regional Settlement Residues (IRSR) for funding inertia services. IRSRs are a mechanism for managing inter-regional price risk and devaluing these products will reduce their efficacy.

- **Design mechanism ineffective at incentivising inertia service provision**

In our view, the design as proposed will be ineffective at providing incentives for inertia provision and investment.

Our understanding of the market mechanism is that when an inertia shortfall is predicted, and subsequently an interconnector will be constrained, an expected shadow price (derived from the price separation), will be provided in pre-dispatch to incentivise inertia providers to be online. Generators operating at the time of a constraint binding will receive the shadow price as calculated at the time of the constraint.

The reason we believe that this design will not incentivise provision of inertia services is due to the poor link between behaviour and payment. If generators respond to the pre-dispatch price signal there may be sufficient inertia in the market to alleviate the constraint. If the

constraint does not bind, generators will not receive any payments for inertia service provision, only for energy. If these generators bid below their marginal energy cost, on the assumption that they would receive some inertia payment to cover costs, they will be dispatching at a loss. This will disincentive provision of inertia services.

### **TNSPs**

We do not think it is appropriate for TNSPs to be eligible to compete in an inertia services market due to a potential conflict of interest. TNSPs will be competing to provide the same service as generators but as the network operators they could operate the network such that generator provided inertia services are disadvantaged by network operations. It is therefore preferable that TNSP participation is appropriately restricted and monitored.

### **Summary**

EnergyAustralia recommend that this change is postponed to allow a full review of frequency management requirements and mechanisms be completed, and for this proposal to be reassessed in light of the review findings. Following implementation of the recently finalised *managing the rate of change of power system frequency* rule change, minimum levels of inertia will be provided ensuring some stability in the network until a more comprehensive approach to frequency management can be developed. We do not consider that this is a priority issue and would prefer to see further progress in the *frequency control frameworks review* before a market of inertia is implemented. Given the non-critical nature of this change, we think it prudent to obtain a clear understanding of the issues affecting the market and then develop a holistic and integrated energy market that addresses these issues.

If you would like to discuss this submission, please contact Georgina Snelling on (03) 8628 1126.

Regards

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