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Australian Energy Market Commission  
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SYDNEY NSW 2001

Submitted online to: [www.aemc.gov.au](http://www.aemc.gov.au)

Dear Mr Aulbury

### **Integrating energy storage systems into the NEM ERC0280**

The Australian Energy Council (the “**AEC**”) welcomes the opportunity to make a submission in response to the Draft Determination on the rule changes submitted by AEMO.

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 overwhelming majority of electricity in Australia, sell gas and electricity to over ten million homes and businesses, and are major investors in renewable energy generation.

#### **Summary**

The AEC supports the intent of AEMO’s proposal to streamline the registration processes for storage and hybrid systems. In that regard it supports the new Integrated Resource Provider (“**IRP**”) concept. The AEC also supports the proposals in relation to non-energy cost recovery.

The AEC considers that storage should not pay deep Transmission Use of System (“**TUoS**”) charges, nor should it have to rely on achieving this outcome through Transmission Network Service Providers (“**TNSP**”) negotiation. The rule change should take the opportunity to reinforce this view in order to provide confidence to storage investors.

#### **Efficient TUoS allocation**

The downstream incidence of the recovery of the shared costs of the transmission system was determined in the National Electricity Code Administrator’s 1998 Transmission and Distribution Pricing Review. It concluded that the shared transmission system should be thought of as a common public good whose costs are unavoidable, or “sunk” at any point in time. This simplifies the matter: objectives of “user-pays” and behavioural modification are abandoned. Instead costs should be recovered following the principles of efficient taxation.

Efficient taxation theory recognises that taxes are unavoidable and our task is to recover them in the least damaging way. As per other activities, this was determined to be a broad based tax placed at the final consumption point of the end-use product.

End use consumption does have some elasticity – and a tax upon it will unavoidably cause some distortion – however this behavioural change is much lower than what would occur were it recovered from any other part of the industry<sup>1</sup>. For an end user, the TUoS charge is a very minor part of its overall business costs of which it would take marginal notice. Contrarily, if it were recovered upstream, a generator would respond through a major restructure of its market offer.

In this regard the AEMC draft determination section D2.2 that purports to explain how the current TUoS incidence arose is not correct:

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<sup>1</sup> See in particular Section 2.2 of National Generators’ Forum submission to NECA Transmission and Distribution Pricing Review 1998 <https://www.accc.gov.au/system/files/public-registers/documents/D99%2B14357.pdf>

“Generators connected to the transmission network do not pay TUoS, as the view has historically been taken that networks are planned for the needs of customers who consume electricity rather than for the generators who generate it.”

This commentary presents an attractively “moral” rationalisation for customers paying TUoS. However this was never the case, and if followed will mislead the AEMC into discovering numerous apparently “unfair” anomalies. The AEMC should instead consider TUoS incidence only through the cold lens of efficient taxation theory.

Consistent with the efficient allocation of a tax downstream, generators do not pay TUoS even when they consume electricity. When a generator is offline, it will draw some load from the grid. Some peaking generators import more of this energy over a year than they will produce. However they do not pay TUoS for this and nor should they: that input electricity is a necessary part of the upstream production process. The peaking generator is adding value to this off-peak electricity by readying its plant to provide more valuable electricity at the time of peak.

Similarly a Market Network Service Provider (“**MNSP**”) does not pay TUoS for electricity it is drawing from one region when transferring it into a region where it has higher value.

Efficient Value Added Taxes such as the Australian Goods and Services Tax (“**GST**”) exempt producer consumption such as these. A factory will receive a GST rebate on its inputs.. Downstream TUoS allocation replicates this approach.

Upstream storage faces exactly the same circumstance as the peaking generator and the MNSP described above. A storage may at times be a *load*, but this is irrelevant. The only determinant for TUoS incidence relates to whether a party is an upstream activity contributing to the production of electricity, or whether it is an *end-user* of the industry’s product. A large stand-alone battery or pumped hydro is clearly the former, and therefore it should not be taxed. This applies to both its gross and net load.

Many examples will be presented to the AEMC as to how applying TUoS to storage would be distortionary. For example:

- By increasing the necessary arbitrage margin and thereby inefficiently underutilising storage.
- “Double charging” when electricity goes into the storage and then later consumed by an end-user.
- Perverse locational signals on storage due to the inter and intra state differences in locational customer TUoS charging.

The AEC agrees with all of these but characterises them all as simply examples of the inevitable inefficiencies that result from failing to follow efficient taxation theory.

### **Recognising TUoS incidence in the Rules**

After the 1998 review, efficient taxation was implemented in the rules through the explicit exclusion of generators paying for shared network TUoS. However there was no clear category for storage, an oversight which AEMO seeks to rectify in this rule change.

At that time, all legacy pumped hydro schemes had negotiated service agreements that resulted in them not paying TUoS for pumping loads. These agreements suggest the parties recognised that allocation of TUoS on storage would be inappropriate. If, as perhaps presumed at market start, no further storages were built, this oversight would have been inconsequential.

The Draft Determination proposes leaving the question of whether a new storage should pay for TUoS up to the connecting participant and TNSP to negotiate. Arguably that is a continuation of

what has always been the case, and it might be hoped that TNSP's will recognise the unsuitability of allocating TUoS upstream and readily exempt storage.

However that would leave in place the investor uncertainty that AEMO attempted to address. To make matters worse, this is compounded by the wording of the draft determination itself. Instead of concluding that TUoS belongs downstream, it states:

“The Commission considers that AEMO’s proposed exemption would not promote the NEO as it would not reflect the efficient cost of providing the service or the benefit or cost impact it may have on the network.”

Whilst uncertain, these words imply the AEMC considers allocating TUoS on storage may in fact be efficient. In the absence of anything to the contrary, TNSPs will draw on the AEMC’s expressed view as the starting point for their future negotiations.

In its October 2020 submission, the AEC expressed its view that storage should not pay TUoS which at that time did not seem to be in question. However it also recognised that there will be complexities with hybrid facilities and that a blanket rules based exemption, whilst beneficial for investor confidence in upstream storage, may unintentionally create avoidance opportunities. For example through the exemption of facilities that contain some storage, but are primarily associated with end-use consumption.

Thus the AEC suggested incorporating within the rules some clear principles about the intent of TUoS charging, which would articulate the principles of efficient taxation described above. This would then present the starting point for TNSP negotiations.

The AEC continues to hold that view and considers it is now more necessary due to industry confusion created by the draft determination.

### **Conclusion**

The AEC supports the bulk of the Draft Determination, in particular the proposed new registration category and changes to non-energy cost recovery.

The NEM has always recovered its shared transmission costs downstream, which is consistent with efficient taxation. The AEC therefore rejects the implication in the draft determination that it may be appropriate for storage to pay TUoS on its load. The AEC supports AEMO’s desire to reduce uncertainty for storage developers, however this may be better achieved through the inclusion of principles to guide TNSPs which would reinforce the expectations of downstream cost recovery. The AEC hopes this can be addressed in the final determination.

Any questions about this submission should be addressed to the writer, by e-mail to [Ben.Skinner@energycouncil.com.au](mailto:Ben.Skinner@energycouncil.com.au) or by telephone on (03) 9205 3116.

Yours sincerely,



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