AUSTRALIAN ENERGY COUNCIL

Joel Aulbury
Australian Energy Market Commission
GPO Box 2603
SYDNEY NSW 2001

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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 subject to some adjustments to lessen impact on existing plants. The AEC also supports the proposals in relation to non-energy cost recovery but continues to recommend a holistic review for the near future.

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 Provider ("**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 occurs in other parts of the economy, 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 supply chain[1]. 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.

[1] 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

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

> "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 inputs such as these. For example, a factory will receive a GST rebate on all 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 should relate 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.
- Paying for network capital despite the storage's consumption occurring outside peak times.

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.

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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, a matter 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.

Re-registration of legacy storage

The AEC supports the introduction of the IRP concept to simplify the registration of new storages.

The AEC also supports the draft determination's grandfathering of existing pumped hydro storages such that they may continue to be classified as generation and load. These facilities overcame this registration complexity at NEM start and there is no benefit, and considerable cost, in requiring changes to their bidding structures now. They should also be able to retain existing Dispatch Unit Identifiers ("**DUID**"s).

Following that logic, the AEC disagrees with the draft determination's requirement for these existing storages to re-register to IRP. The cited rationale for requiring this change does not seem valid:

> "The Commission considers that allowing existing storage participants to maintain the current registration and classification model would lead to unnecessary regulatory complexity and create an uneven playing field." [2]

It is unclear what is meant by "an uneven playing field" and how a question of equity could arise in relation to a long-sunk asset. In any case, to the extent they are purported to exist, the AEC considers that both cited detractions would be immaterial. Indeed they would arise more from the

[2] Draft Determination pg 72

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continuation of the generator/load classifications (a technical matter) than the IRP registration (an administrative matter).

To avoid unnecessary administrative burdens and re-registration risks for existing storage, the AEC suggests grandfathering of all their registration arrangements. Alternatively, an automatic rules-based re-registration of all existing parameters into the IRP could be used.

Non-energy cost recovery

The AEC welcomes the significant change proposed in this area as explained in figure C.1, which will have implications well beyond the operation of storage. The AEC agrees this presents a fulsome response to the concerns that motivated the AEMO and Infigen rule changes.

The AEC also welcomes the discussion in this context of its 25 February 2021 letter that recommended a holistic review of non-energy cost recovery in the NEM. Notwithstanding the improvements achieved by this rule change, the cost recovery will still largely retain its 20 year old structure, being developed under a very different industry paradigm.

As one of many examples, consider Retailer A in figure C.1. A gross consumption of 2, whilst more appropriate than zero, still implies that its customer with behind the meter generation avoids contributing to non-energy costs. Yet the market challenges of managing such customer suggest it should contribute at least as much of these costs as its neighbours.

Updating non-energy cost recovery to a fairer and more efficient regime will be challenging, but it is feasible. A self-initiated AEMC Review presents the best available framework to carry out the necessary breadth of research, consultation and innovation for such a task.

The AEC suggests the AEMC should not wait for a Rule change. Any rule change is likely to be directed narrowly and will mostly likely focus on only one of the many non-energy costs cited in our letter.

In the absence of a holistic review, further serious anomalies are likely to emerge. Conversely, an AEMC Review allows it to take leadership of the issue and head off future urgent rule changes such as that proposed by AEMO in late 2020.

Conclusion

The AEC supports the bulk of the Draft Determination. This includes the proposed new registration category although it feels existing storage can be grandfathered from requiring an IRP registration. The AEC also supports the proposed changes to non-energy cost recovery and encourages the AEMC to soon begin a self-initiated bottom-up review.

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 that would reinforce the expectations of downstream cost recovery. The AEC hopes this can be addressed in the final determination.

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