



Kate Degen
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Australian Energy Market Commission
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Sydney NSW 2000

Lodged via email: kate.degen@aemc.gov.au

Dear Kate,

Re Integrating storage into the NEM

Neoen welcomes the opportunity to respond to the AEMC's process regarding energy storage in the NEM.

About Neoen

Neoen is the leading French, and one of the world's leading independent producers of renewable energy. Neoen is a responsible company with a long-term vision that translates into a strategy seeking strong, sustainable growth. We have over 3 GW of projects globally in operation and under construction, including in the NEM: Hornsdale Wind Farm (309 MW in SA); Parkes, Griffith, Dubbo, and Coleambally Solar Farms (combined 255 MW in NSW); Bulgana Green Power Hub (hybrid wind/battery system) and Numurkah Solar Farm (combined 314 MW in VIC); and the Degrusa Hybrid Power System (10.6 MW in WA). Neoen is also the owner of Hornsdale Power Reserve (150 MW battery) in SA.

Prioritisation of Reforms

There are a large number of rule changes underway, none as important as those related to system security and the ISP. Participants do not have enough time to properly consider and respond to all of these rule changes. The NEM governing bodies should prioritise those that are critical and stop work on less important ones.

Summary of Submission

1. The issues raised seem relatively small compared to the only fundamentally critical reforms:
ISP and System Security.
Address the minor issues later and individually.
2. The proposed classification is economically inefficient for battery operators and if mandatory would be a barrier to entry for storage plant.
3. Preserving the dual DUID option is necessary for existing and potential storage plant.
4. NUOS tariffs are distortionary and need to be addressed before sophisticated market structures can flourish. Not fixing this will certainly result in an overinvestment in inefficient behind the meter assets for the purpose of avoiding payment, rather than creating benefit.

Answers to Questions

Q2.1 The issues are not significant.

Q3 Agree storage is likely to become more important over time. This makes the proposed registration category less attractive as a reform. The issues have not yet precipitated as serious issues so the industry cannot quantify them and direct reform appropriately.

Q4.1 No, dual DUID storage and having separate DUIDs for co-located units works.

Q4.2 No.

Q6.1 Neoen supports waiting for other reforms even though we don't see practical value in 2SM without NUOS reform first.

Q6.2 This creates additional regulatory work for participants with few benefits.

Q6.3 2SM is not well defined and as previously mentioned, not practical before NUOS reform. Mixing rules is not a helpful transition.

Q6.4 ERM propose "paired DUIDs" which is an idea worthwhile exploring further. Neoen suggest keeping a pair of DUIDs which are physically related can share a common trapezium made from the two bids. This would preserve economic efficiency and give NEMDE better information about physical capability.

Q7.1 No. It is better to have separate DUIDs for each unit and operate each one separately.

Q8.1 It is more challenging to register storage than a simple solar farm, but not difficult enough to warrant rule changes.

Q10.1 Not substantially.

Q10.2 Registration of hybrid units should follow the highest classification level of the individual units. For example, a wind farm with a 4.9 MW battery would still be semi-scheduled.

Q11.1 Yes, this is appropriate for units with non-linearity between charge and discharge around zero.

Q11.2 No, **participants need the option to use dual DUIDs if bi-directional doesn't work for their unit.**

Q12.1 No, we would keep dual DUID.

Q12.2 Yes, we would want to keep dual DUID.

Q14 No, there is not a strong case to add a category. Refer to Q6.4 for an alternative suggestion.

Q15 No, it is not efficient. Refer to Q6.4 for an alternative suggestion.

Q16.1 The complexity is higher because the unit is more complex, the DUID classification does not make it worse.

Q16.2 We would not transition to single DUID because 10 price bands are not enough.

Q17.1 Bidding conflicts in dispatch are rare and not severe in impact.

Q17.2 Improvements have been made in bidding practises through experience, but this does not solve co-optimisation conflicts which are the remaining conflicts.

Q17.3 A bi-directional classification does not appear to solve co-optimisation conflicts either. It does make bidding far less convenient and efficient.

The proposed classification does not make the best use of battery capabilities.

Q18.1 Neoen is not aware of ramp rates being an issue.

Q19.1 There are not yet problems with energy limited plant in forecasts, but it could become an issue over time. Observation is advised.

Q19.2 Neoen is not convinced the proposed approach works well. It may simply produce more volatility in bidding. Availability is highly dependent upon dispatch outcomes and this is circular with the bids themselves. Forecast errors become availability errors.

This issue should be addressed separately and not rushed without further experience in the matter.

Q20.2 It is simpler to have performance standards for the unit separately. **Where possible treat connection assets as if they were part of the transmission network to simplify colocation of units.**

Q21.1 There are inconsistencies in cost recovery which cannot be sustained in the long run.

Q21.2 It creates the incentive to aggregate load and small generation to reduce payment for non-energy services.

Q21.3 Yes, it will get worse quickly. BTM grows 250 MW per month.

Q21.4 The AEMC should consider that the burden of these inconsistencies falls upon vulnerable households, heavy industry, and large generators.

Q22: SOLUTIONS FOR ISSUES WITH FEES AND CHARGES AND NONENERGY COSTS RECOVERY

Behind the meter generation should be disaggregated with load. It would be too complex to recover costs from small generators in the same way as large generators but could be done as the aggregate of small generation (i.e. per kW, kWh of generation). The recovery from consumers should be on gross consumption, not net consumption. This would stop unfair wealth transfer.

Q23 there are other issues with cost recovery that AEMO have been made aware of that could be done without a rule change. Causer Pays recovery for utility batteries is not consistent with the NER.

Q24.1 There is ambiguity around NUOS for batteries.

Q24.4 Yes, there is a risk here.

Q25.1 Yes agree with both.

Q25.2a No, clearly not. Other generators don't pay TUOS either. Batteries don't drive investment in new transmission, in fact the opposite.

Q25.2b there isn't a strong locational signal in TUOS charges. Charging TUOS is a locational signal to build batteries in a different country.

Q25.3a Unsure how it could create double charging.

Q25.3b Yes, it would extinguish battery investment in the NEM.

Q25.5 If DUOS does not apply for small batteries there will be an incentive to further avoid paying for infrastructure shared by the community.

While this is not consistent with the approach for utility batteries it avoids a perverse outcome – major investment in inefficient assets and wealth transfer from poor Australians to rich ones.

NUOS tariff reform is required as a basis for future markets with sophisticated end consumers.

Q26 Reform tariffs, not settlements.

Q31.1 Another framework should be considered.

Q31.2 A separate storage compensation framework needs to allow for partial capital cost recovery similar to the compensation framework for conventional generators. It is currently possible for a battery with "zero" fuel cost to be directed without compensation commensurate to status quo operation. A balance must be reached that does not overcharge consumers nor exploit generators.

Q37 It is appropriate to have two MLFs.

Q38 It is appropriate to have two MLFs.



Neoen is available to participate in further discussions at the AEMC's behest.

Should you have any questions or seek to follow up this submission at any time, please feel free to contact Tom Geiser via email at tom.geiser@neoen.com.

We look forward to engaging with the AEMC and stakeholders further on this and future reviews.

Kind regards,

A handwritten signature in black ink, appearing to be 'TG', positioned above a horizontal line.

Tom Geiser,
Senior Market Manager,
Neoen Australia