AEMC

Transmission access reform

Stakeholder feedback template

The template below has been developed to enable stakeholders to provide their feedback on the questions posed in the consultation paper and any other issues that they would like to provide feedback on. The AEMC encourages stakeholders to use this template to assist it to consider the views expressed by stakeholders on each issue. Stakeholders should not feel obliged to answer each question, but rather address those issues of particular interest or concern. Further context for the questions can be found in the consultation paper.

SUBMITTER DETAILS

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PROJECT DETAILS

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AEMC

CONSULTATION QUESTIONS

Testing and modelling the hybrid model

Question 1: Feedback on cost benefit analysis conducted in 2023 What are stakeholder views on the assumptions used in the CBA?	IB Vogt consider that the premise of the 2023 ESB cost benefit analysis may be flawed, in that it seems to assume that investors will ignore the ample price signals created by the current mechanisms for allocation of scarce transmission capacity. It also assumes an increased cost of the rolling out the renewable energy generation fleet due to stranding of project by overbuild. Some legacy overbuild examples are used to justify this approach. However, the historical examples of overbuilt projects could equally have been attributed to a number of other causes. This includes that insufficient due diligence was applied in assessing overbuild risk at time of development and subsequent investment. Irrespective of the reasons, future investors who apply a degree of due diligence commensurate with the size of investment being made should be aware of the need to model and consider overbuilt risk when assessing new generator opportunities. One of the features of the NEM is the high visibility of NSP network data and AEMO dispatch process. There is sufficient market expertise available for developers to make reasonable assumptions regarding locational signals available from the current market design and select locations that reduce the overbuild risk. We believe that further independent cost benefit analysis must be undertaken. While it is understood the congestion has increased it is important to recognise that the impacts of curtailment have provided very strong and clear price signals to prospective generators to ensure they are selecting the most appropriate point of connection. Further these price signals drive the necessary storage capacity to accommodate the variability of instantaneous generation provided by Solar and Wind. Removal of these drivers would be expected to further increase the cost of electricity to end users.
Question 2: Feedback on prototyping What are stakeholder views on the result of the prototyping analysis? Is there any additional analysis that would be useful?	No comment

Question 3: Feedback on modelling the hybrid model Noting that this work is still being completed, do stakeholders have any initial views on how modelling priority access would impact investment decisions?	The TAR Consultation Paper seems to assume that capacity constraints are undesirable under all circumstances. However, when viewed from an economic efficiency perspective (as required by the NEO) capacity constraints can be a mark of economic efficiency. Some examples of this include: Scenario 1 where a solar generator connects to a radial transmission line, and utilises 80% of the capacity of the transmission line when operating at rated power. Five years after the solar generator is built, the cost of solar declines and new project is economic with 10% curtailment. Such a project will build over the existing generator to the point where market conditions are such that a second solar power station is economic with 10% curtailment. The resultant stranding of the earlier plant, to the extend that it cost more than the later plant, is dynamically efficient. Scenario 2 where a solar/battery generator connects to the same transmission line as a legacy coal generator, resulting in constraint of the coal generator. The new solar/battery generator will have substantially lower short run marginal cost to the coal unit it is displacing, due to the coal units fuel costs and substantial O&M costs. From a dynamic efficiency perspective, the legacy coal plant is a sunk cost. This situation is efficient because any stranding of this sunk capital cost has no impact on overall market cost. Further we are concerned that the hybrid model does not necessarily take into consideration that the existing framework is developed based upon the maximum possible technical transfer capability of the system and the underlying physics of operation. Under its current configuration security constrained economic dispatch is used to solve the relevant generation bids to ensure that demand requirements are met for the lowest possible cost which will not breach the technical limit of any system elements. The proposed hybrid model would remove the possibility of achieving this same total cost to meet demand as new generation would have a different floor bidding price thus the final dispatched solution could be no less than is achieved through the current framework. The only result possible is either the same or much more likely a higher total cost for the same amount of demand. Additionally, it is understood that the AEMC operates on the fundamental principal that there should be a level playing field for all participations. We are concerned that this proposed pathway would not align with equal opportunity for all participants.

Assessment of key model options

Question 4: Assessment of priority access allocation models Each model option outlined in this section addresses the problem	We do not support the priority access models being considered. Our biggest concern with the proposed priority access model is the risk that it provides existing generators with an unfair competitive advantage via being allocated priority transmission rights. No provisions are identified, that would prevent these existing generators from utilising the NER 5.3.9

and reform objectives to different degrees. Which model option do you prefer and why?	process to repurpose their connections for batteries, solar, wind on the end of their allocated transmission lines. Similarly, an existing solar or wind generator could add batteries to their existing connection, again gaining preferential access to the network due to their legacy generator status. The fundamentals of security constrained economic dispatch would be artificially altered as these existing generators may not provide the lowest marginal cost, however, would receive priority in dispatch effectively increasing costs that would directly impact the end users of power. This situation creates a risk of substantial inefficiency. This is due to potential lowest cost new generators on new sites being unable to compete against new higher cost generation equipment connecting at the connection point of existing generators. For example, the proposed "Option 1 - Grouping by time window" creates un-equal playing field by placing a vague lower threshold (" reached some point in the planning process"). This creates the potential for a less efficient REZ project to get preferential access to network ahead of a more efficient project that is not part of the REZ. This is in considerable conflict with the principals of the NEO. The current open access arrangements encourage prudent developments, by rewarding projects that best balance the grid, environmental, planning, land use and community considerations. Any change to the current arrangements will result in allocation of transmission priority based on external factors that risks undermining the benefits derived by these carefully balanced developments. Conversely, parties that are able to secure prioritised transmission rights based on legacy connection at a fixed location may reward developments that do not give appropriate weight to these important policy considerations. This could result in adverse impacts on environment, planning and as a result undermine the social license of the renewable energy transition more generally. Our understanding of the proposed models would indicate that none of these solutions would in fact provide a lower cost to the end customer. Rather than modifying the mechanics of an economically optimised system the focus should be on ensuring network planning is conducted effectively to ensure that the appropriate corridors between REZ's and the respective load centres should provide generators with the most favourable dispatch capabilities. Additionally it is important that further education of the market must take place to ensure proponents are selecting locations within the existing network that take maximum advantage of the available capacity the currently exists.
Question 5: Assessment of CRM implementation approaches	No Comment

What are the relative advantages and disadvantages of each design? Do stakeholders have a preferred design and if so, why?	

Key stakeholder concerns

Question 6: Feedback on impact of the hybrid model on PPAs? What are stakeholder views on the observations and AEMC initial views regarding impacts of the hybrid model on PPAs?	No Comment
Question 7: Feedback on impacts of the hybrid model on financial markets What are stakeholder views on the impacts of the hybrid model on financial markets? Specifically: • How the proposed access model, or particular aspect(s) of the model, may impact their ability to manage price risk in the market? • The subsequent impact that a reduced ability to manage price risk may then have on	No comment

participants' hedging costs.	
Question 8: Feedback on wide-reaching constraints Do stakeholders consider that priority access could increase investment risk due to wide-reaching constraints? Do stakeholders consider that there is value in implementing the dynamic grouping option for priority access to mitigate this concern?	The eastern Australian states have extensive transmission networks reaching deep into areas rich in renewable energy resource, as a result of centrally planned electrification initiatives in the 1970s, 80s and 90s. The economic regulation applied in conjunction with the creation of the NEM drove further augmentation to match the forecast growth in peak demand driven by air conditioning. While there are notable constraints in certain areas, we suggest there is available spare capacity to host batteries in most areas and additional wind and solar in other sections of the 220, 275, 330 and 500kV backbone transmission network. For these reasons, we would encourage the AEMC to prioritise market design settings that maximise the utilisation of the existing transmission networks and corridors. To the extent that new transmission is necessary, centrally planned solutions should be reserved for specifically constrained areas, which are unable to utilise storage as a solution.

Detailed design questions

Question 9: Feedback on detailed priority access design choices What are stakeholder views on the detailed priority access design questions and the AEMC's preferred positions?	There is a considerable risk that the proposed priority access regime would create an uneven playing field that favours incumbents and drives under-utilisation of existing transmission networks. In many instances, a level of overbuild and resultant curtailment is efficient. The proposed priority access regime distorts these economic signals by prioritising access for existing generators, and REZ projects. This risks creating a barrier to potentially the lowest cost new entrant generator, at the expense of overall system efficiency. Of particular concern is the application of the proposed "BPF", which would allow an incumbent generator to monopolise network capacity by 80% prior to being displaced by a new entrant generator that would have created greater utilisation of the existing network.
Question 10: Feedback on detailed CRM design choices Do stakeholders have further views on the detailed design choices for the CRM that were explored by the ESB? Are these views related to a preference for	IB Vogt supports the proposed congestion relief market. We believe this would deliver appropriate investment signals for the development of storage in conjunction with renewable generation and better utilisation of the existing transmission system. We would strongly support further development and selection of the preferred option.

a two-step or co-optimised implementation approach discussed in Chapter 5? What are stakeholder views on tethering, including the relative advantages and disadvantages of each design and any preference?	

Other comments

Information on additional issues	A number of alternative mechanisms should be encouraged to facilitate greater utilisation of the existing transmission and distribution networks. This includes greater recognition of the role of large-scale battery storage, VPP's and demand management. This creates an opportunity to target services to terminal and zone substations close to the load in and around metropolitan areas, so enabling roof top and commercial solar to take a much greater share of the overall generation mix moving forward. We are also concerned that the NSW transmission network appears to be run well below the ultimate capability of the existing assets. This is due to the use of conservative fixed ratings, rather than real time (weather dependant) ratings used in other jurisdictions. Transgrid appear to be applying a policy of no new runback or control schemes for thermal loadings, which will limit the capacity of their network to N-1 capability in many areas. Further, the TUOS arrangements for distribution connected batteries create substantial uncertainty around network costs for large scale batteries connected to distribution networks. This could be resolved by treating distribution connected batteries in the same manner as transmission connected batteries. Changes may be required to the regulatory investment test to ensure that these batteries do not trigger inefficient network upgrade, and this could be easily achieved by simple excluding the charging of batteries from maximum demand and the value of unserved load calculations. The current dispatch method utilised achieves the lowest cost solution for necessary demand. The limits that drive the outcomes are based on the physics of the power system and thus the focus instead must be placed upon effective network planning and further education all stakeholders as to optimised locations within the network the provide the maximum transfer capability of the existing network.