



13 August 2020

Ms Merryn York
Acting Chair
Australian Energy Market Commission

Lodged via the AEMC website

Dear Ms York,

SYSTEM SERVICES RULE CHANGES (ERC0290, ERC0295, ERC0296, ERC0300, ERC0306 AND ERC0307)

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia. We represent and work with hundreds of leading businesses operating in renewable energy and energy storage along with more than 7000 solar and battery installers. We are committed to accelerating the transformation of Australia's energy system to one that is smarter and cleaner.

The CEC welcomes the opportunity to comment on the Australian Energy Market Commission's (AEMC's) '*system services rule changes*' consultation paper. The CEC appreciates the AEMC's approach to this consultation by combining six related rule changes into one paper for ease of stakeholder consultation. This has made it easier to consider these changes as a potential package and easily differentiate those changes that are a higher priority. In future, when combining a large package of rule changes together, we urge the AEMC to consider the length of the period for stakeholders to assess and provide comments on the rule changes. It is difficult to engage deeply in the detail of six rule changes in the time typically allocated to one rule change.

These six rule changes from the four proponents (Hydro Tasmania, Infigen Energy, TransGrid and Delta Electricity) all present a common theme in that they are proposing changes that will either support the network and/or market with higher levels renewable energy generation in the system, or allow the proponents' assets to more efficiently participate in a market with increasing levels of renewable energy generation. Given this, there is significant crossover across the rule changes and other work programs, particularly the Energy Security Board's (ESB's) post-2025 market framework project. Within the ESB's project, these rule changes most closely link with the market design initiatives relating to essential system services, scheduling and ahead markets, and resource adequacy mechanism. With this in mind, the CEC recommends the AEMC consider what changes are required expeditiously to address current issues critical to supporting the power system, and what changes are best explored further in an integrated manner through the post-2025 market review.

During this assessment process, the AEMC should take direction from the Australian Energy Market Operator's (AEMO's) Final 2020 Integrated System Plan (ISP). The 2020 ISP unequivocally demonstrates that the least-cost, least-regrets option to transition the power system as 63 per cent of thermal generation retires by 2040 is a National Electricity Market (NEM) that consists of significant penetrations of renewable energy generation supported by low emissions dispatchable resources and higher levels of distributed energy resources (DER). It is through this lens that the AEMC must assess these and future rule changes in order to achieve the least-cost future system and subsequently meet the National Electricity Objective (NEO).

Increasing the levels of renewable energy generation in the system is not without its challenges. Some of these are already apparent and some will emerge with deeper penetrations of renewable energy generation. The AEMC has the opportunity to address several of the critical challenges already being experienced in the NEM through two key rule changes discussed in this consultation paper. We believe there is sufficient necessity to do so ahead of the ESB's post-2025 process.

The clean energy industry has long noted that there are system strength issues across all NEM jurisdictions and that the system strength requirements as part of the generator connection process are leading to substantial uncertainties, costs and delays to new projects. The CEC broadly supports the intent of the proposed changes in TransGrid's rule change proposal. We consider that this rule change should be one of two rule changes prioritised out of this package of rule change requests.

The CEC's submission on the AEMC's investigation into the system strength frameworks in the NEM provided significant commentary on the industry's issue with the current frameworks. As we noted in that submission, we strongly believe that a centrally coordinated approach to system strength best overcomes the issues with the current frameworks and is more apt for the current transition underway where numerous, more dispersed and relatively smaller generators will connect to the electricity system concurrently as compared with the larger single generator connections the NEM has experienced historically¹.

The CEC strongly supports replacing the 'do no harm' framework with a centrally coordinated model for system strength as it places system strength risk with AEMO and the Transmission Network Service Providers (TNSPs) as they are the parties best placed to manage this risk. Such an approach would lead to more efficient system strength planning and management and remove a significant amount of uncertainty for generator investments by potentially reducing connection times and improving the predictability of the connection process and associated connection cost. The ability for TNSPs to undertake scale-efficient long-term system strength solutions should also lead to lower costs to consumers. As such, we support in principle the intent of TransGrid's rule change and consider its detail should be considered as part of the AEMC's system strength frameworks investigation. Once the AEMC's investigation is finalised, we support the AEMC using the process around TransGrid's rule change proposal to promptly implement the findings of its investigation.

The CEC also strongly supports Infigen Energy's rule change request to establish a fast frequency response market ancillary service. The clean energy industry has long supported the creation of fast response markets that recognise the speed and quality of frequency response that technologies such as batteries can provide to support the transitioning power system. We consider the implementation of this rule change to be a no regrets change.

We suggest that in considering the implementation of this rule change, the AEMC should conduct further analysis on the appropriate speed thresholds for response. The rule change request proposes creating a contingency raise and lower market ancillary service for frequency response within two seconds and up to six seconds. This may well be the appropriate timing thresholds, however the AEMC should explore tighter timing requirements such as response within one second to assess if this could produce a more efficient outcome and subsequently better support the transitioning power system.

The CEC believes the above rule changes must be prioritised as they present changes to the current market framework that are urgently required. We suggest the AEMC continue to consider these rule changes at this time to ensure they are implemented in a timely manner. The other four rule changes

¹ Clean Energy Council, Submission – Investigation into the system strength frameworks in the NEM, May 2020, available https://www.aemc.gov.au/sites/default/files/documents/cec_response_to_aemc_system_strength_investigation_discussion_paper_200507_final.pdf

relate to important power system issues, however in comparison to addressing the system strength framework and implementing fast frequency markets, they are not as urgent when considering the prevalence of the problems they seek to solve and as such should be deferred to the ESB's forward looking processes.

Infigen Energy's second rule change request considers whether the implementation of an operating reserve is required for the market. An operating reserves mechanism is currently being considered under the ESB's post-2025 market design initiative in relation to a potential resource adequacy mechanism. Looking towards the implementation timeframe for the ESB's work, AEMO's 2019 Electricity Statement of Opportunities notes that there is no predicted unserved energy beyond the 2019-2020 summer in Victoria for the broader system². With no reliability issues expected that the current framework is not capable of supporting, the CEC suggests that the consideration of market reserves is best left for the ESB process that is currently underway. For the AEMC to deviate from this process, it would need to provide evidence that the market requires an operating reserve ahead of post-2025 implementation.

Hydro Tasmania's rule change request presents a differing option for considering system strength procurement and other related integral system services than is presented by TransGrid's rule change request. The CEC believes that Hydro Tasmania's model for 'real time' delivery of system services could be a complementary model to the centrally procured system strength model presented in TransGrid's rule change proposal. We suggest the AEMC further explore the system services required, including identifying the required levels for each, and then assessing the need for a rule change such as presented by Hydro Tasmania to complement a centrally procured system strength framework. In particular, the relationship between an inertia market and the above discussed fast frequency response market should be explored to co-optimize the provision of these services and ensure the best outcomes for a low emissions power system.

When considering the framework for new markets for system services that have been historically provided via traditional thermal synchronous generation assets, it is paramount that the AEMC is forward thinking. New markets should not contribute to the extension of the life of these existing assets. As noted above, the ISP has modelled the least-cost future system based on the expected retirement of these assets. It is clear that the future NEM will be low emissions with significantly higher penetrations of lower cost and low to zero emissions generation technologies. Extending the life of higher cost, more emissions-intensive assets could lead to reliability issues as the reliability of ageing generators declines, and is not in the interest of consumers as it could lead to higher cost electricity through disincentivising the entry of new, lower cost generation. This suggests markets that extend the life of existing assets may not meet the NEO.

Relatedly, the ESB's post-2025 process is also undertaking a market design initiative to consider if and what essential system services may be required. The CEC is concerned that given the strong relationship between Hydro Tasmania's rule change proposal and the ESB's work, there is potential for contradiction or inconsistencies between the two workstreams. The AEMC should ensure that it works closely with the ESB on the overlap between these processes to ensure they are compatible. It is worth noting that any current or future framework for system services required should be clearly defined and have defined levels of the required service. Frameworks created upon that basis will encourage innovation and current and new technologies to provide them.

Similarly, the CEC suggests Delta Electricity's two rule change requests duplicate work that is being undertaken by the ESB in the scheduling and ahead markets and essential system services market

² AEMO, 2019 Electricity Statement of Opportunities, 2019, available https://aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/nem_esoo/2019/2019-electricity-statement-of-opportunities.pdf?la=en&hash=7FE871D75A9C619AB66FA671477551B2

design initiatives. The CEC does not support these two rule change requests being considered as a priority as the system is not in a state of imminent system security threat from a lack of these services that requires immediate attention. Therefore, they should be considered through the ESB's process.

Finally, the AEMC's consultation paper notes the ongoing development (and renaming) of the '*primary frequency response incentive arrangements*' rule change request. The purpose for including this rule change request in this consultation is unclear. It is unclear if the AEMC is consulting on the incentives arrangements for primary frequency response (PFR) through this process or simply noting its interactions. To this end, the CEC reiterates points raised in our earlier submissions on PFR that the mandatory requirement for PFR is not a suitable long-term solution. It is inefficient to require the entire generation fleet to meet PFR requirements when a more targeted method such as an incentives framework will encourage investment, innovation and the low-cost provision of PFR. The CEC supports the frequency control frameworks review's recommendation to develop and implement a market-based option as the long-term framework for the provision of PFR.

In summary, the CEC strongly supports the assessment and implementation of rule changes that present important changes to support the transitioning power system (namely in relation to system strength and fast frequency response) expeditiously ahead of any changes that may come from the fit-for-purpose post-2025 market redesign work being undertaken by the ESB. It is important that these changes are prioritised to ensure the energy transition underway is supported in the interim while we finalise the market design that could apply from 2025.

Thank you for the opportunity to comment on this consultation. If you would like to discuss any of the issues raised in this submission, please contact Tom Parkinson, Policy Officer, on (03) 9929 4156 or tparkinson@cleanenergycouncil.org.au or myself, as outlined below.

Yours sincerely,



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