

19 October 2020

Dear Sir,

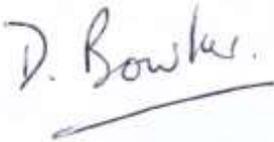
Please find attached a submission on your consultation paper.

I am currently retired after many years spent in the market regulation field. I am currently the Chair of an International working group for CIGRE which is investigating the application of blockchain technologies in electricity market systems.

Please note that the attached submission contains my personal views and do not necessarily reflect CIGRE's view.

Please feel free to contact me with any queries.

Yours sincerely,

A handwritten signature in black ink that reads "D. Bowker." followed by a horizontal line underneath.

David Bowker

Independent Response to P2025 Market Design Consultation Paper

Consultation Paper Overview

The Consultation paper provides a comprehensive response to the shortcomings which are becoming evident in the market design. The market design is now decades old and the characteristics of the electricity system are changing rapidly. There are three key drivers for the changes which are the increasing use of renewables, managing the high levels of inverter based generation and the decentralisation of the system at both supply and demand level.

The Strategy of the Approach

The consultation paper embodies a clear strategic approach to fix the individual problems which are emerging for the NEM. The ESB have recognised the need for a coordination of the changes which are already underway and those which might come out of their work.

This approach seems to have a major piece missing. The missing piece is the opportunity for a redesign of the market from first principles for the new world. Patching up an old structure is never likely to provide a sound basis for long term investment. The changes in the electricity infrastructure which are underway are just too radical for the existing market design to be a good solution, even with patches.

One succinct view of the change is that the NEM paradigm is to take the load as given and dispatch generation to meet that load. In the new world, because of the nature of most renewable generation, the generation is a given and we need to tailor the load to consume it.

One further analogy is in relation to the renovation of an old house. There does not need to be much renovation needed before a better solution is to remove what is there and build a new house. One thing the consultation paper highlights is the significant level of change which is needed to the NEM to address the current issues. This is surely a sign that a new design should at least be considered. Potentially, many of these issues would not exist in a market with a different design.

Proposed Additional Strategy

I would like to propose an additional work stream to develop a new market design for the new world and then assess the merits of this design against the patched NEM approach.

The best way to approach this would be to postulate the physical equipment which would be expected to make up the electricity system in 2040 or 2050 which would clearly be zero emissions. Then a new market design could be overlaid on this physical infrastructure to

understand what incentives will exist for investment and how the market would be dispatched operationally.

This type of work has already been undertaken in Europe in 2017 when Eurelectric and the Florence School of Regulation ran a conference in which they requested several market designers to present their market design for 2050. The proceedings from this event, “Design the Electricity Market(s) of the Future – Proceedings from the Eurelectric-Florence School of Regulation Conference 7 June 2017” are available at

https://cadmus.eui.eu/bitstream/handle/1814/50004/Rossetto_Ebook_2017.pdf?sequence=2&isAllowed=y

I commend this work to the ESB so that they can appreciate the scope of potential future market designs.

Concluding Remarks

NEM is one of the most successful market designs globally as it was developed with strong industry input. Australia is in a world leading position in the adoption of renewables. This review by the ESB is an opportunity to re-assert this leadership role. However, patching up the NEM will not be the path to leadership.

David Bowker

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