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By e-mail info@esb.org.au**City of Sydney submission to Post 2025 Market Design Issues Paper**

The City of Sydney welcomes this opportunity to make a submission to the Energy Security Board (ESB) Post 2025 Market Design Issues Paper - modifying the National Electricity Market (NEM) to integrate non-dispatchable generation, distributed energy resources, demand side response and storage.

Nearly all states within the NEM now have ambitious yet achievable renewable energy targets. The City of Sydney target is for net zero emissions across its local government area by 2050 and for 50 per cent of electricity to be from renewable sources by 2030. Any future scheme will need to work with these levels of ambition.

**State based renewable energy targets 2019**

Victoria 40% by 2025	Queensland 50% by 2030	South Australia "net" 100% by 2030
Tasmania 100% by 2022	ACT 100% by 2020	

The issues paper identifies key challenges that will be material to market design in the post-2025 era, including innovation to benefit the consumer, investment signals to ensure reliability, integration of distributed energy resources, system security services and resilience, and integration of variable renewable energy.

While agreeing that each of the challenges identified by the ESB are real and material, climate change is a broader context into which each of these challenges must be placed and which inevitably will drive responses to those challenges, if not immediately then certainly in the medium and long term.

The design of the future electricity supply system must be based on the urgency and importance of achieving long-term environmental and social sustainability, including but not limited to ensuring that the transition to a low-carbon electricity supply system is enabled and actively promoted.

**Recommendations**

- 1. Update the National Electricity Objective.** The National Electricity Objective (NEO) needs to include environmental and social objectives as a priority to ensure compatibility with other government policies. In particular, the objective needs to align with government energy and emissions targets and climate change risks. As noted in the issues paper, the AEMC has recently clarified how climate change manifests through the NEO as mitigation and adaptation risk. Updating the objective would provide greater long-term certainty than modifying the National Electricity Market alone. Further, many consumers are making

decisions based on environmental reasons, which may be supported by including an environmental objective in the NEO.

2. **Include climate change as a guiding principle in redesigning the NEM.** The issues paper identifies potential impacts of climate change on the performance of the system through more severe and prevalent heatwaves, bushfires and storms. However, there is no reference to climate within the list of draft principles in Annex A. Given the severity of these impacts, climate must be a core principle, for both mitigation and resilience aspects.
3. **Develop a new paradigm for electricity services.** As outlined in the issues paper, the end game is to provide a full range of services to customers and deliver a secure, reliable and lower emissions electricity system at least-cost. The current system was built for a vastly different era of one-way synchronous energy supply. Significant changes are underway due to aging assets, technological change, environmental concerns and customer preferences. As stated in the issues paper, a holistic view is necessary to avoid the risk of simply layering incremental changes and potentially producing an inefficient outcome. A new framework akin to the National Energy Guarantee may be acceptable beyond the current term of government.
4. **Move beyond market mechanisms.** Market mechanisms alone are inadequate to supply economically and environmentally responsible energy in accordance with long-term societal goals. Current reliance on market mechanisms has resulted in a narrow focus on rules and administration – often with confusing and contradictory signals. The discussion paper notes that despite the need for flexible and dispatchable capacity to ensure reliable supply under a range of conditions, the market is currently attracting only limited investment of this nature. Electricity supply is an essential service, and like defence and public health, requires more than market mechanisms.
5. **Adopt the Step Change Integrated System Plan scenario.** The ESB needs to design a future system that is in line with the Step Change scenario as outlined by the AEMO Integrated System Plan – the only scenario consistent with keeping global average warming below 1.5 degrees. The costs of climate related impacts for not achieving this aim would be unacceptable and must be quantified and taken into account.

Should you wish to speak with a Council officer about this submission, please contact Chris Derksema, Sustainability Director by telephone on 9265 9733 or by email at [cderksema@cityofsydney.nsw.gov.au](mailto:cderksema@cityofsydney.nsw.gov.au).

Yours sincerely



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