THE CASE FOR TRANSMISSION ACCESS REFORM

ENERGY SECURITY BOARD - DIRECTIONS PAPER

9x
increase in grid-scale wind and solar capacity
(2022 vs 2050)

$30 billion
expected transmission investment to 2050

30x
increase in storage capacity
(2022 v 2050)

16x
increase in unused VRE as a result of economic spill and transmission curtailment
(2025 vs 2050)

As the National Electricity Market (NEM) transitions towards higher levels of variable renewable energy (VRE), substantial new investment in transmission is needed.

Governments are getting involved to deliver this new investment via Rewiring the Nation and various State government initiatives.

Network investment needs to be co-ordinated with supply-side developments so that we achieve maximum benefits at minimum cost to consumers. The scale and cost to consumers of the optimal development path is already significant.

Storage and flexible loads will become a more critical part of our dispatchable generation mix and demand response. Transmission access reform is designed to value and reward these assets for providing congestion relief services that have benefits to the whole system. If we don't have a market to value these services, we will need to subsidise their investment.

Even in a power system dominated by VRE, there will still be costs to congestion. Our future system will include significant storage, some dispatchable thermal generation (gas or hydrogen fuelled) and flexible loads. In this environment, prices will often be set by non-zero marginal cost generation and the opportunity costs of demand response. Transmission access reform is designed to improve dispatch efficiency and reduce total system costs.

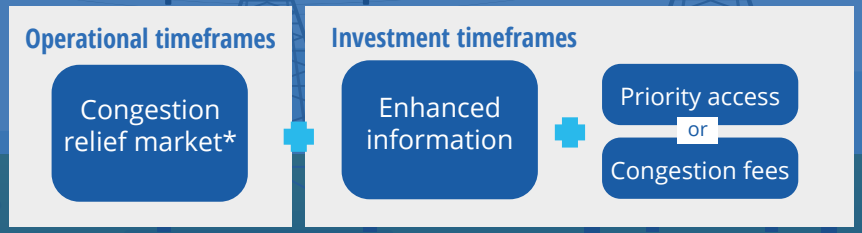
Next steps

The directions paper seeks stakeholder feedback on the preliminary hybrid model and the detailed design choices within it.

Directions Paper released 10 November 2022
Technical Forum 5 December 2022, 2:30-4pm (AEDT)
Submissions due 21 December 2022

To protect consumer and taxpayers' interests, it is vital that we use our infrastructure efficiently. If we use our assets wastefully, we will need to invest more to achieve the same level of reliability and decarbonisation.

The ESB consulted on four shortlisted models including two models proposed by industry. The ESB has taken on board stakeholder feedback to develop a preliminary hybrid model that mixes and matches the best elements of previous shortlisted models.



*The congestion management model is a back up if the CRM costs outweigh the benefits

N.B. Figures from 2022 Integrated System Plan. See full directions paper for further information.