



INFORMATION

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Transmission Frameworks Review

Final report and recommendations

The Australian Energy Market Commission has finalised a comprehensive review of the transmission arrangements that underpin the National Electricity Market. The Commission is recommending both short-term reforms to facilitate more efficient connections between generators and transmission networks, and further development of a longer-term access model for generators.

The review

The review of the provision and utilisation of electricity transmission services was instigated by the Ministerial Council on Energy (MCE), now the Standing Council on Energy and Resources (SCER).

It followed the Commission's previous Review of Energy Market Frameworks in Light of Climate Change Policies. In the context of changing patterns of generation and demand, we were asked to assess whether current transmission frameworks were likely to lead to efficient outcomes.

The focus has been on the interface between transmission and generation including how generators access the wholesale market, the way network congestion is managed, what charges generators could face for transmission, and how the network is planned.

Many of these issues have been the subject of ongoing debate since the establishment of the National Electricity Market in 1998 and there has been extensive consultation as part of this review.

Much of the review was undertaken against the background of reforms to the rules governing the economic regulation of network service providers, completed in November 2012.

Coordination of generation and transmission investment

Under the current framework, decisions about investment in electricity generation and transmission infrastructure occur through different processes. Investment in generation assets is market-driven and takes into account expectations of future demand, the location of the energy source, access to land and water and proximity to transmission. Investment in transmission is centrally planned according to a cost-benefit test. Transmission businesses are subject to an incentive-based economic regulatory regime.

These differences in generation and transmission investment processes have the potential to result in a development path that does not minimise the total system costs faced by consumers. A key issue is the degree to which the allocation of risks between owners of the businesses and consumers are aligned in these processes.

There is limited firm evidence that the current arrangements have caused significant coordination issues to date. They may, however, increase in significance in the event of changing patterns of demand, technological change, investment in smaller and more dispersed generation, and increased uncertainty concerning the development path that best satisfies the National Electricity Objective.

Commercial drivers on transmission development and operation

The Commission has developed an integrated package of market arrangements, termed optional firm access, which would introduce more commercial drivers on transmission businesses and more commercial financing of transmission infrastructure. The approach should result in a closer alignment of generation and transmission investment.

It has the potential to minimise prices for electricity consumers in the longer term by:

- Minimising the total system cost of building and operating both generation and transmission over time.
- Providing more complete locational signals for generators so that they trade off the cost of congestion with the cost of transmission.
- Transferring some of the risk of transmission investment from consumers to the owners of generation businesses.
- Placing incentives on transmission businesses to maximise the availability of their network when it is most valuable to the market.

The optional firm access model also has the potential to improve the ability of market participants to contract and trade by:

- Providing a firmer hedge against inter-regional price differences than is currently available, which would support trade between generators and retailers in different regions of the NEM.
- Providing financial certainty for generators, which may increase their willingness to contract with retailers at a given price, and may result in lower financing costs for power stations.

Benefits increase with degree of change

The optional firm access model enables better trade-offs to be made between the cost of transmission and the cost of generation. These trade-offs become more significant if there is greater change from established fuel sources and transmission flowpaths.

However, the model is complex. Implementing it would represent a fundamental change to the market, and would not be without risk.

The Commission recommends that detailed design and testing of the optional firm access model is undertaken, in order to insure against the possibility of a future that brings significant changes from current patterns of demand and generation.

Connections

The cost, complexity and time delays associated with connecting new generation to the market are a concern which the Commission considers can be addressed in the shorter term. Transmission businesses could be encouraged to make efficient trade-offs between the specification of connections and their cost. Ambiguity in the current rules also contributes to the problem.

The Commission is recommending an approach to increase competition and transparency in the construction of the assets required for generator connection.

We consider that there is a need to balance increased competition with maintenance of clear accountability for outcomes on the shared network. Therefore, regional transmission businesses would always be accountable for the operation and control of any assets forming part of the shared network, once constructed.

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11 April 2013