

the incremental expansion needed for each firm access request, in order to keep the costs of firm access reasonably attractive for generators. If TNSPs were to adopt an efficient approach to transmission development which was to take advantage of economies of scale and scope, generators may be dissuaded from paying for firm access rights entirely.²⁴

Alternatively, it may be better to have a procurement process that is based off an auction model, where the auction reserve price is set at the estimated access cost.²⁵ This is because an auction process allows multiple generators to reveal their collective demand for firm access at the same time. TNSPs would be required to build enough capacity to satisfy the aggregate amount of firm access bought at a particular auction, which is likely to be larger than the capacity provided in a single access request. This should allow them to take advantage of economies of scale and scope in their transmission investment planning process.

However, it is also important to recognise that no process is perfect. The auction process would only account for current collective demand, not demand that may arise at a future date. Similarly, inefficient transmission investment can occur under the status quo, where central parties forecast the need for expansion based on a number of assumptions about how the future may look. The benefit of moving towards firm transmission access is that it would introduce more commercial drivers into transmission investment. This would shift investment risk away from everyday consumers, so that they no longer need to wear the full cost of an inefficient decision if and when it is made.

3.3.4

What will be the impact of firm transmission rights on wholesale electricity prices?

Access reform should lead to lower electricity bills for consumers. It is possible that the wholesale component of electricity bills may rise under firm transmission access. However, these costs should be more than offset by a reduction in the transmission use of system (TUOS) charges that are levied on consumers.

A primary aim of access reform is to introduce more commercial drivers into transmission investment, in order to shift investment risk away from everyday consumers. Currently, consumers bear the primary cost of transmission network investment and maintenance by paying transmission use of system (TUOS) charges through the retail component of their bill.²⁶

This means that everyday consumers are burdened with transmission investment risk. If too much transmission infrastructure is built, they will pay for the costs of stranded assets through TUOS charges. If not enough transmission infrastructure is built, they are likely to face higher wholesale electricity prices as well as suffer from lower levels of reliability.

24 This is because of a free rider problem. If the transmission capacity that is created is larger than the exact capacity the generator has requested, then the generator would be subsidising subsequent access requests from its competitors (who would face a firm access price of zero).

25 The access cost would include the estimated cost of expansions required to overcome thermal and security constraints in the transmission system under a particular set of conditions.

26 The Australian Energy Regulator sets the maximum allowable revenue that TNSPs can earn from TUOS charges in each regulatory period, which is set to cover an efficient level of transmission investment and operating costs.

Under the final access regime, transmission investment costs would no longer be recovered solely from consumers through TUOS charges. The majority of these costs would instead be collected from generators.²⁷ This means that the TUOS component of a customer's bill will decrease substantially.

Generators would collectively underwrite the transmission investment that is required to provide them with the level of access they want to the transmission network. Wholesale costs of electricity may go up as a result, because all generators will factor in the cost of purchasing firm access rights or remaining non-firm (and facing a financial penalty when congestion arises) into their bottom line. In other words, they will face the investment risk that consumers face under the current arrangements.

While wholesale prices may go up, the total electricity bill faced by consumers should go down. This is because transmission and generation investment would be better coordinated. In addition, some generators will choose to remain non-firm, which will defer transmission investment that may have otherwise been undertaken under the current arrangements.

These decisions would reflect an efficient outcome of market design. The price of firm access would be set to reflect the costs of alleviating congestion that generators create by choosing to locate a certain type of generation asset in a certain part of the transmission network. If a generator does not value firm access enough to pay the efficient price, then it is ultimately preferable that they choose to remain non-firm rather than to impose the cost of alleviating congestion onto consumers.

3.3.5

Will there be grandfathering of access rights for existing generators under firm transmission access?

Yes, it is likely that existing generators would receive a level of 'transitional access'. Where there are significant regulatory changes in the electricity sector, it is in the long-term interests of consumers that there should be an appropriate transition for investors in the sector.

Currently, generators have some expectation of access to the regional reference price, though this implicit access can be degraded through changes to network conditions or the entry of new participants. The generators have made investment decisions based on the prevailing market conditions, including the assumption that there are no firm access rights for their competitors.

The implementation of a firm access regime would represent a substantial alteration to the current operation of the NEM. Transitional arrangements, including the provision of access rights to existing generators, would help to mitigate the commercial and financial impacts of the new access model on generator balance sheets.

The final design and length of any transitional arrangements will vary depending on the type of firm access regime that is implemented and the preferences of market participants. For example, free access rights could be allocated for a number of years to existing generators using a method based on either their historical level of access, or current transmission

²⁷ Consumers would only need to pay the residual investment and maintenance costs that are required to deliver them with reliable electricity services.

capacity and regional peak demand. Alternatively, access rights could be auctioned off or a hybrid approach could be taken.

Regardless of the final form of transitional arrangements, it is likely that there will need to be gradually lessening of 'transitional access' over a number of years as the new regime commences. This gradual process will encourage generators to acquire and hold the levels of firm access rights that they value over time, thereby increasing the efficiency of transmission investment.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Commission	See AEMC
COAG	Council of Australian Governments
CoGaTI	Coordination of Generation and Transmission Investment
TUOS	Inter-regional transmission use of system
NEL	National Electricity Law
NEO	National electricity objective
TUOS	TUOS