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Optional Firm Access to the National Electricity Market: Sculpting Transitional Access

A Report for the Australian Energy Market Commission

18 July 2014

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Executive Summary

The Australian Energy Market Commission (the Commission) is undertaking the detailed design of a new electricity transmission framework whereby generators are provided with the option to obtain firm access to the wholesale market – called optional firm access. This allows generators to avoid any lost revenue that might result from being constrained-off as part of the wholesale electricity dispatch process. The purpose of the proposed new arrangements is to better align transmission and generation investments, thereby over time lowering the total system cost to consumers of supplying electricity.

As part of the development of the detailed design the Commission has been considering how best to transition to the new arrangements. Its approach involves a number of stages to manage the risks and uncertainties involved. The Commission has indicated that in designing the transitional arrangements it is seeking to provide a period for participants to adjust to the regulatory change in the market, while at the same time not unnecessarily delay or dilute the benefits that the optional firm access model is intended to promote.

The two critical elements of the proposed transitioning approach are:

- determining an initial firm access level for existing generators; and
- determining how to 'sculpt' the initial firm access level to a lower level, so as to maximise the opportunity for transmission capacity to be used efficiently – ie, by those that value it most highly.

HoustonKemp has been asked to develop a framework to assist with the Commission's decision on the second of these two elements. The specific sculpting parameters we have been asked to consider are:

- X, the length of time where the initial firm access level to existing generators will not be scaled back;
- Y, the length of time over which the initial allocated access will be sculpted for all generators;
- K, is the proportion of initially allocated access that will be retained over the course of the transitional period; and
- Z, which is a proxy for the residual power station life.

For efficient allocation of both existing and new transmission capacity, both existing and new generators should face the same price signals. This can be achieved by either:

- auctioning firm access to both existing and new transmission capacity; or
- grandfathering firm access to existing transmission capacity to existing generators, and allowing secondary trading of existing capacity and the scope to purchase new capacity.

In theory both options should result in capacity being allocated efficiently. However, grandfathered firm access with secondary trading might not lead to efficient allocation in practice if there is uncertainty about future demand and supply at a node (ie, imperfect information) and so uncertainty as to the value of firm access.

We note that the Commission has proposed a mixture of these two approaches whereby grandfathered firm access is granted to existing generators for a limited time. This is followed by a

period where the grandfathered access level is reduced, to allow for the auctioning of both the reduced capacity and new capacity.

An alternative to auctioning for secondary trading would be to introduce a common exchange, which would allow a holder of firm access capacity to offer that capacity for sale at a posted price. Such an approach might assist in lowering transactions costs associated with secondary trading.

In choosing the transitional sculpting parameters the Commission will need to consider the design choices for the optional firm access framework. Specifically consideration should be given to the relative merits of auctions or a common exchange approach to secondary trading of firm access.

In addition, there are a number of uncertainties that will influence the transitional sculpting parameters, namely:

- the timeframe needed to make the necessary changes to the transmission regulatory framework set out in the National Electricity Rules – which forms a lower bound for the X parameter;
- the generation supply and demand conditions prevailing in the market – which influences the choice of X;
- the potential implications for generator bidding and dispatch arising from the new arrangements – which affects the choice of K;
- the length of existing contractual arrangements that might be affected by the changed arrangements – which affects the choice of K; and
- the timeframe needed by market participants to put in place the appropriate skills and capabilities to manage any risks arising from the new arrangements – which affects the choice of X.

Ultimately the Commission's decisions on the transitional sculpting parameters will be influenced by its opinions across these factors, and its preferred method for allocating both existing and new transmission capacity between existing and new entrant generators.

1. Introduction

The Australian Energy Market Commission (the Commission) is currently developing the detailed design of a new electricity transmission framework called optional firm access. Under this model generators purchase 'firm access rights' to transmission networks to manage congestion risks. These financial rights would generally take the form of compensation payments funded by generators without such rights, and would be underpinned by the provision of transmission capacity. Firm access is desirable for a generator since it allows generators to manage the financial risks of network congestion resulting from generators being constrained off.

It is within this context that HoustonKemp has been engaged to develop a framework to assist the Commission in determining how to transition from the existing open access transmission arrangements to this new optional firm transmission access arrangement. Specifically we have been asked to consider the parameters involved with sculpting transitional firm access allocated to existing generators as part of the transitional arrangements.

Our approach has involved a desktop review of the proposals for the design of the optional firm access arrangements, and participation in a teleconference discussion with the Commission's stakeholder working group to discuss the approach to transition. The working group included representatives of generators, transmission businesses, and the Australian Energy Market Operator.

The remainder of the report is structured as follows:

- Section 2 provides a brief contextual overview of the proposed transitional arrangements for implementing the new transmission model of optional firm access;
- Section 3 sets out a framework for developing transitional parameters, including outlining the objectives of the transitional arrangements, the relevant economic principles, and the factors relevant to decisions on the transitional parameters; and
- Section 4 brings together the considerations outlined in section 3, to provide a framework for determining each of the transitional parameters.

2. Proposals Relating to Optional Firm Access

In April 2013 the Commission delivered the final report of its Transmission Frameworks Review, which set out an alternative transmission model for the National Energy Market, called 'optional firm access'. This section provides a brief outline of the proposed optional firm access arrangement, and describes the transitional arrangements that the Commission has proposed.

2.1 What is optional firm access?

Optional firm access is an alternative transmission model designed to improve the coordination of investment decisions between electricity generation and transmission networks, and so promote more efficient use of and investment in transmission networks.

Its key feature is providing scope to generators to purchase firm access to the wholesale market thereby insuring them from revenue losses that might otherwise arise due to network congestion. By purchasing firm access from transmission businesses, commercial incentives are provided to support transmission network investment. Over time, this is expected to more closely align generation investments with transmission investments, thereby minimising the total system cost of providing electricity to consumers.

This approach contrasts with the current transmission framework whereby transmission investment is based on a central planning approach involving an assessment of the costs and benefits of a proposed transmission network investment, through the application of the regulatory investment test for transmission (RIT-T). Investments that satisfy the RIT-T requirements are built, with the costs being recovered from end-users via transmission charges.

2.2 What transitional arrangements are being proposed?

The introduction of the proposed optional firm access framework is a significant departure from current arrangements, with implications for existing and new generators, transmission businesses and the general operation of the market. In light of the significant change involved, the Commission has proposed the application of transitional arrangements to provide a period for participants to adjust to the regulatory change in the market while at the same time not unnecessarily delaying or diluting the benefits that the optional firm access model is intended to promote.

The transitional arrangements involve four stages, namely:[1]

- Stage 1: Assessing generator access requirements – which involves determining existing generators' maximum access requirements, given historical output and bidding outcomes;
- Stage 2: Scaling of access requirements – which involves scaling the access requirement of each generator downwards, so as to avoid possible breaches of the firm access standard;
- Stage 3: Sculpting of scaled access requirements – which involves further changes to firm access levels overtime for existing generators; and

[1] Chapter 10, Australian Energy Market Commission, (2013), *Transmission Frameworks Review*, Technical Report: Optional Firm Access, 11 April, Sydney.

- Stage 4: Auctioning access – which allows for the efficient reallocation of transitional access between generators.

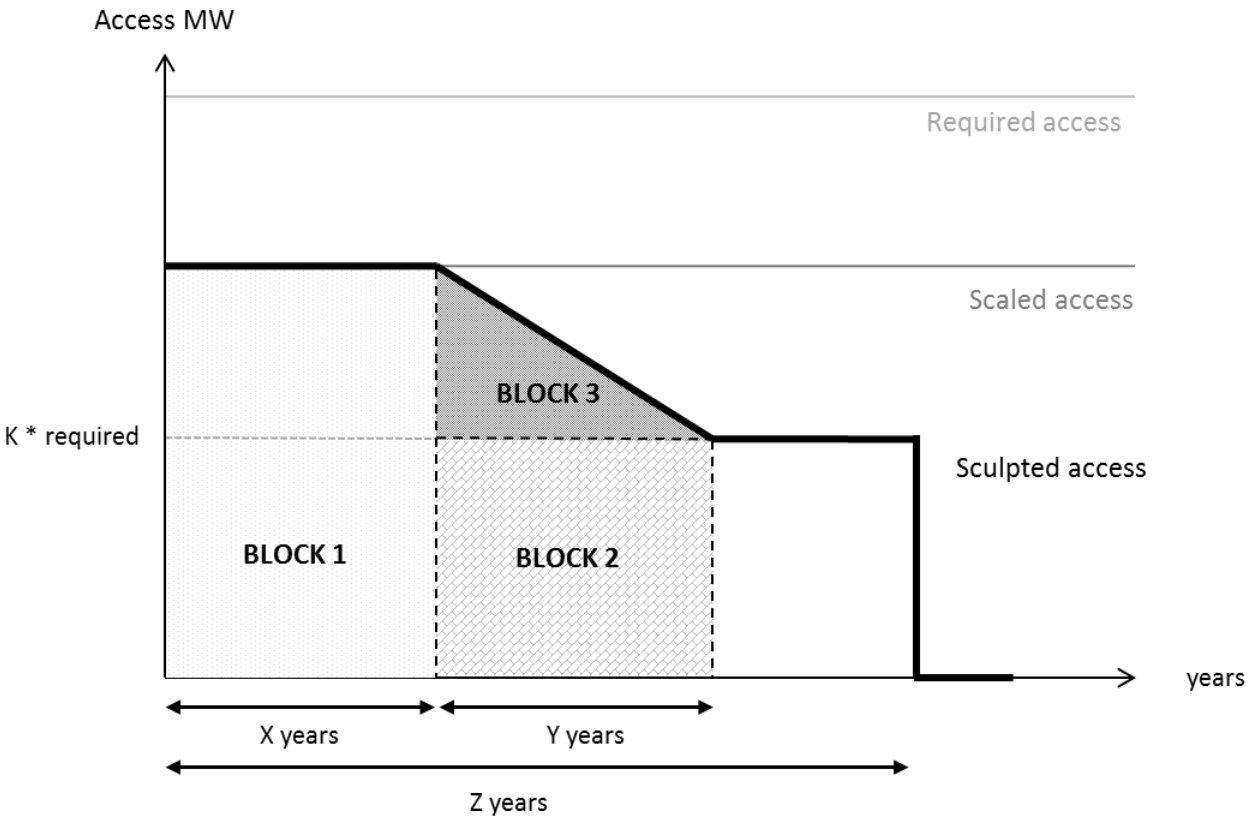
This project is focused on the parameters associated with the sculpting of the scaled access requirements as required by Stage 3 of the transitional approach.

Figure 2.1 provides a diagrammatic representation of the approach to sculpting of transitional access for a generator. The transitional sculpting parameters are:

- X, the length of time where the initial firm access level to existing generators will not be sculpted back;
- Y, the length of time over which the initial allocated access will be sculpted for all generators;
- K, is the proportion of required access (ie generator capacity) that will be retained over the course of the transitional period; and

Z, which is a proxy for the residual power station life.

Figure 2-1 Sculpting of Transitional Access for a Generator[2]



2 *Ibid*, page 135.

3. A Framework for Developing Transitional Sculpting Parameters

As set out in greater detail in Section 2, the Commission is proposing to develop arrangements to manage the transition to optional firm access for existing generators. This section sets out the proposed objectives for the transitional arrangements, outlines the relevant economic principles, and discusses the factors that are relevant to the choice of the transitional sculpting parameters.

3.1 What are the objectives of the transitional arrangements?

As set out in the Commission's Technical Report on optional firm access[3] the objectives of the transition process are:[4]

- to mitigate any sudden changes to prices or margins for market participants (generators and retailers) on commencement of the optional firm access regime;
- to encourage and permit generators – existing and new – to acquire and hold the levels of firm access that they would choose to pay for;
- to give time for generators and TNSPs to develop their internal capabilities to operate new or changed processes in the optional firm access regime without incurring undue operational or financial risks during the learning period; and
- to prevent abrupt changes in aggregate levels of agreed access that could create dysfunctional behaviour or outcomes in access procurement or pricing.

In short the objectives seek to provide a period for participants to adjust to the proposed regulatory change in the market, while at the same time not unnecessarily delaying or diluting the benefits that the optional firm access model is intended to promote.

We believe that an additional explicit objective of the transitional arrangement should be to transition as quickly as feasible to the optional firm access arrangements, so as to achieve the potential benefits envisaged from the introduction of the new arrangements. These benefits arise from the better alignment of generation and transmission investment, and the opportunity to minimise the cost to customers of unnecessary investments given uncertainty in future demand and supply conditions.

3.2 Economic principles for pricing and allocating firm access

The motivation for introducing proposed optional firm access arrangements is to provide incentives for efficient use of and investment in transmission infrastructure.

It is well understood in economics that pricing for the provision of a good or service at the marginal cost of production provides the correct signals to users and producers to promote efficient outcomes. These marginal costs are all costs caused by the consumption or use of the good or service.

3 Australian Energy Market Commission, (2013), *Transmission Frameworks Review*, Technical Report: Optional Firm Access, 11 April, Sydney.

4 Ibid, page 64.

In practical terms this means that all generators, whether new entrant or existing, should face a price signal that reflects the costs caused by use of the network. Under the proposed firm access arrangements where there is a need to expand the existing capacity of the transmission network, then all costs caused by the need to expand capacity should be appropriately included in the price charged to all generators, ie both existing and new entrant generators.

The Commission is proposing that the price for firm access be set with reference to the long run incremental cost (LRIC) at the connection node.[5] For those nodes where the transmission network capacity is insufficient for existing generators, the LRIC will reflect the cost associated with expanding the capacity of the network. For those nodes where the transmission network is more than sufficient for existing generators, the LRIC would likely be low, reflecting the relatively low cost of providing additional capacity to either new entrant or existing generators.

For efficient allocation of both existing and new capacity, both existing and new generators should face the same price signals. This can be achieved by allowing existing and new generators to buy firm access at a price determined by a competitive auction, with the maximum price for transmission capacity being set with reference to the LRIC.

Under this approach, existing generators pay for firm access to existing transmission capacity to ensure that it is allocated efficiently between all existing and new entrant generators. This is particularly important if there are limitations or impediments to effective secondary trading of the firm capacity rights.

The alternative approach is to grandfather firm access to existing generators based on historic access capacity for each power station. This is equivalent to existing generators purchasing access at a price of zero. For those nodes where historic generation access has not been constrained, this approach would be expected to lead to a similar allocation of capacity as would be achieved through a competitive auction or allowing capacity to be purchased at a price equal to LRIC (which would be low or practically zero).[6]

For those nodes where historic generation access has been constrained - or may be expected to be constrained in the future - then this approach can *potentially* lead to inefficient outcomes because the grandfathered access may not be consistent with each generator's willingness to pay a non-zero LRIC price for access.

That said, allowing for secondary trading of grandfathered firm access[7] ensures that efficient allocation of existing capacity results irrespective of the initial grandfathering approach. However, the necessary conditions for subsequent capacity allocation to be efficient under this approach are:

- transaction costs must be low;
- there is perfect information about future demand and supply at the node; and
- there is no scope for the exercise of market power by any generator.

5 Australian Energy Market Commission, (2013), Transmission Frameworks Review, Final Report, 11 April, Sydney, page 58.

6 A zero LRIC implies that all the network assets between the generator and the regional reference node are sufficient to accommodate that generator's access as well as any expected new entry that uses those assets.

7 Equally, allowing secondary trading of transitional firm access reduces the necessity for existing generators to purchase firm access to promote efficient allocation of existing capacity.

None of these conditions limit the efficient allocation of capacity if it is initially purchased at a price set with reference to LRIC or via an auction of existing capacity.

We anticipate that the transaction costs for secondary trading capacity will likely be low, given the intention for auctions to be available to existing generators to sell firm access capacity. In addition, there should be little scope for the exercise of market power because of the opportunity for a transmission business to provide potentially unlimited capacity at the LRIC.

The provision for efficient allocation of capacity requires certainty about the value of existing capacity. It is this last requirement that could result in an inefficient allocation of capacity if grandfathering is used for the initial allocation of capacity. It requires good information on the value of existing capacity at each node.

In summary, to promote efficient use of and investment in transmission network capacity, both existing and new generators should be provided with price signals on the network costs caused by use of the transmission network. This ensures that capacity is allocated to the party that values it most highly.

This means that there are two approaches to allocating initial capacity so as to promote efficient allocation of existing capacity. Either:

- auctioning of existing capacity, which ensures that both new and existing generators receive the same price signal and so promotes efficient allocation of firm transmission access; or
- allocation of existing capacity, with secondary trading of existing firm access capacity (either through an auction, or through a common exchange)[8].

For allocation to be preferred, there is a need to ensure that secondary trading is itself efficient.

3.3 Factors relevant to the choice of transitional approach

In the limited time available for our evaluation of the approach to transition, we have identified five principal factors that are relevant to decisions on the approach to transition, namely the:

- specification of the firm transmission access service;
- approach to allocating firm transmission access capacity beyond the transitional period;
- changes to the current transmission regulatory framework that are needed to implement the proposed optional firm access arrangements;
- need to renegotiate pre-existing contractual arrangements entered into by existing generators; and
- need for generators and transmission businesses to develop the internal skills and capabilities necessary to manage any new risks that arise.

8 The concept of a common exchange is discussed further in section 3.3

The remainder of this section describes each of these factors and the likely influence of the factor on the choice of approach to transition.

3.3.1 Specification of the firm access service

The central feature of the proposed optional firm access arrangements is the provision by transmission businesses of firm access to generators. This provides generators with financial compensation during periods of transmission congestion.

We understand that a firm access standard will specify the level of service that must be provided to generators that hold firm access. The standard translates the amount of firm access held by generators into the level of transmission capacity that transmission businesses are obliged to provide through their planning and operations.

A generator's firm access holding will be specified for each generating unit in megawatts of transmission capacity. In addition, the firm access service for a particular generator will be specified in terms of the period for which firm access is provided.

There will be a long-term product, whereby a transmission business guarantees firm access for a specified quantity for a period of, say, 15 years.

There may also be a short-term product, whereby a transmission business could guarantee firm access for a specified quantity for a period of say up to 3 to 5 years. This short-term product will be based on the sale of existing spare capacity on the network.

The level of capacity available for the short-term product could depend on the risks to the transmission business in providing the requisite firm access to this existing capacity[9]. This is because the available existing transmission capacity for a generator at a particular network node is itself a function of:

- the physical characteristics of the network and its remaining physical life;
- network loads, and the location of those loads across the network; and
- network generation, and the location of network generation across the network.

We understand that the intention is for the long-term product to provide the basis for funding new investment in the capacity of the transmission network. In other words, any new transmission investment would most likely be underpinned by the sale of firm access to generators making use of the transmission capacity created through the investment.

Any new long-term firm access would be purchased at the LRIC value. A regulated LRIC price would be produced for a particular location, in the network.

We understand that short-term access could be auctioned by transmission businesses. Short-term access could be largely based on existing spare network capacity, ie, capacity that does not already underpin holdings of firm access. Short-term access could have the same service quality as long-term access.

This discussion highlights that the uncertainty surrounding the scope for a transmission business to guarantee transitional firm access for a long period, say three plus years, will influence the quantum of initial scaled firm access provided to existing generators.

9 These risks are managed in part by the initial scaling down of historic access levels for existing generators as part of the initial allocation.

If TNSPs provide grandfathered firm transitional access to transmission capacity that is subsequently found to not be available, the TNSP will be responsible for incurring costs to expand capacity to satisfy its transitional firm access obligations to existing generators. This will potentially result in inefficient transmission network investment during the transitional period, which ultimately would need to be recovered from consumers or the owners of transmission businesses. Grandfathering of high levels of transmission capacity therefore creates the potential to provide inappropriate transmission investment signals leading to inefficient outcomes.

3.3.2 Approach to trading of firm transmission access capacity

As described in greater detail in section 3.2 above, for capacity to be allocated efficiently there must be scope for generators to trade firm access rights. Such trading of firm access can be:

- temporary – ie trades for periods less than the period of the firm access; or
- permanent – ie, for the length of the firm-access right.

The Commission proposes that short-term access could be sold via periodic auctions, conducted by transmission businesses. The periodic auctions might be held quarterly, and would also make available for sale spare capacity. Generators may also offer for sale in this auction some or all of the transitional access capacity (either on a temporary or permanent basis).

An alternative to the proposed periodic auction would be the trading of firm access rights through a common exchange. Such an exchange could be managed by transmission businesses or a third party provider. Irrespective of the party responsible for managing the trading exchange, the key features of the exchange would be:

- an obligation on transmission businesses to specify the price that new capacity will be provided;
- opportunities for holders of firm transmission access capacity to offer capacity for sale through the exchange; and
- information on the exchange rates to apply to trades.

An auction approach to trading firm access whereby the capacity available could be adjusted by the transmission business provides flexibility to manage the risks associated with providing firm access for extended periods of time. The auction approach also periodically provides information on the value of access and ensures periodic reallocation of capacity to its highest value users. This approach will be preferred where an alternative approach to trading is believed to be unlikely to lead to efficient allocation of transmission capacity.

In contrast, a common exchange approach places greater emphasis on providing holders of firm access capacity with a low transaction cost framework for trading access. Efficiency in the allocation of capacity is achieved through the functioning of the exchange facilitating efficient trading of capacity.

An auctioning approach is consistent with:

- a relatively short period for grandfathering of firm access capacity to existing generators – ie, low X; and
- rapid transition to the complete auctioning of all firm access capacity (ie, to both existing and new firm transmission access capacity) – ie, low Y.

A common exchange approach is consistent with:

- a longer period for grandfathering of firm access – ie, high X;
- relatively short (or zero) transition to sculpted firm access capacity for existing generators – ie, Y approaching zero; and
- a significant quantity of capacity grandfathered for the remaining life of existing power stations – ie, high K.

3.3.3 Interaction with the transmission regulatory framework

The introduction of the optional firm access arrangements and the scope for generation to fund transmission augmentation requires consideration to be given to how this revenue will be treated within the regulatory arrangements for pricing transmission networks. Any revenue resulting from the provision of firm transmission access services will need to be subtracted from each transmission business' maximum allowable revenue for the purpose of determining regulated transmission revenues.

The timeframe required to implement any necessary changes to the transmission regulatory arrangements will be relevant to the timeframe within which auctioning of existing and new firm access capacity can be practically implemented.

This means that X, ie the period for grandfathering of firm access, will need to be a minimum of the time required to make the necessary changes to the transmission regulatory framework to implement the proposed optional firm access arrangements.

The period of time required to alter the transmission regulatory framework will be influenced by the approach adopted to ongoing allocation of capacity. We anticipate that an auctioning approach will require greater changes to the regulatory arrangements as compared to the adoption of a common exchange approach. The Commission should give further consideration to how its design choices affect the changes that will be needed to the transmission regulatory framework.

3.3.4 Financing and contracting considerations for existing generators

The next factor relevant to the transitional approach is the impact of the new transmission access arrangements on the revenues of existing generators, with implications for existing hedging contracts or financing arrangements.

The extent to which the transitional arrangements should be adapted to minimise the potential financial impact on existing generators relates principally to the extent that the proposed changes are expected to alter the financial position of existing generators. This requires consideration of:

- the generation supply and demand conditions prevailing in the market, and so the extent that changes to the location incentives of new entrants affect the location of new generation investments;
- the potential implications for generator bidding and dispatch arising from the new arrangements; and
- the length of existing contractual arrangements that might be affected by the changed arrangements.

We believe that the Commission should assess each of these factors as part of its considerations for the choice of transition parameters.

To the extent that the new transmission access arrangements impact on existing generator revenues, then:

- K, ie the capacity grandfathered for the remaining life of existing power station could be chosen to provide greater certainty of access for those longer term contractual arrangements; and
- X, ie the period of grandfathered capacity, should be sufficiently long so as to minimise the risks arising from existing contractual arrangements.

3.3.5 Development of skills and capabilities

The proposed optional firm access arrangement is a significant change to the existing transmission framework and so will require all market participants to develop new skills and capabilities to ensure that any risks arising are properly managed. In addition it will likely involve the need to create new systems and mechanisms to conduct and participate in the anticipated auctions of firm access capacity.

The timeframe required for these skills and capabilities to be put in place is relevant to the choice of X, ie, the period when scaled firm access to existing generators will not be sculpted downwards.

In our discussions with market participants, it was apparent that the required skills and capabilities could be put in place fairly quickly (ie, within 1 or so year). We therefore believe that this likely forms the basis for a lower bound on the choice of X.

3.4 Summary

In summary, we believe that there are a number of considerations relevant to the choice of transitioning parameters, namely:

- the design choices for the optional firm access framework, and in particular whether an auction or common exchange approach to secondary trading is adopted; and
- a number of uncertainties including:
  - the timeframe needed to make the necessary changes to the transmission regulatory framework set out in the National Electricity Rules;
  - the generation supply and demand conditions prevailing in the market;
  - the potential implications for generator bidding and dispatch arising from the new arrangements;
  - the length of existing contractual arrangements that might be affected by the changed arrangements; and
  - the timeframe needed by market participants to put in place the appropriate skills and capabilities to manage any risks arising from the new arrangements.

The Commission's opinions about these considerations will ultimately influence the choice of transitional sculpting parameters.

4. Choosing the Transitional Sculpting Parameters

This section brings together the considerations outlined in Section 3, to provide a framework for determining each of the transitional sculpting parameters outlined in the Commission's approach to transitional arrangements.

4.1 Approach to choosing K – the capacity to be grandfathered for the remaining life of existing power stations

In our opinion, an important question that the Commission needs to consider in developing the transitional arrangements is the role of auctioning as the process for facilitating efficient allocation of both existing and new firm transmission access capacity.

If auctioning of access is considered to be the preferred methodology for promoting efficient allocation of existing and new firm transmission access, then the initial presumption should be for K to be set to a relatively low level, say zero, for each existing power station.

In this circumstance, setting K greater than zero would reflect concern about the revenue implications and so risks arising for existing generators, given the extent of long-term contractual arrangements. However, this may only arise if the Commission believes that the revenue outcomes of generators are likely to be substantially affected by the introduction of the optional firm access arrangements. This in turn will be influenced by prevailing demand and supply conditions at the time optional firm access is implemented.

If a common exchange approach is considered to be the best methodology for promoting efficient allocation of existing and new firm transmission access, then K should be set sufficiently high so as to minimise the need for auctions to allocate capacity. That said, given that changes in load and new entry can affect the quantum of available capacity at each node, the maximum level for K should in this circumstance be the level of transmission capacity that is unlikely to be affected by unanticipated changes in load.

Finally, existing generators currently face the risk that new generation connections might degrade the level of access they currently enjoy. While this risk is likely to be low it is relevant to the choice of K.

In summary, K should be selected taking into account:

- the preferred approach to ongoing allocation of capacity;
- likely implications for revenues of existing generators, given prevailing demand and supply conditions;
- the likely impact on availability of firm transmission capacity given unanticipated changes in load; and
- the inherent risk that the level of access currently achieved by existing generators might degrade over time.

4.2 Approach to choosing X – the timeframe for grandfathered firm access

In our opinion, the key factor in the choice of X is uncertainty surrounding the estimate of the scaled access capacity. This creates the potential for changes in load to impact on the level of firm access capacity available at a node to existing power stations, leading to inefficient transmission capacity investment to support transitional firm access levels. The choice of X is

therefore principally related to the timeframe within which load forecasts affecting capacity at each node can be considered sufficiently reliable.

This acknowledges the importance of providing flexibility to transmission businesses to alter the available capacity at a node given changes in prevailing load and electricity supply conditions across the network.

A secondary consideration in the choice of X is the timeframe within which changes to the transmission regulatory arrangements can be implemented. X should be as a minimum the length of time needed to make appropriate changes to the transmission regulatory arrangements to accommodate the proposed design of the optional firm access arrangements.

The final consideration relates to the need for generators and transmission businesses to develop the capability to engage with the optional firm access arrangements. That said we expect that uncertainty about load forecasts and the timeframe for making adjustments to the transmission regulatory framework will provide sufficient time for generators and transmission businesses to develop the necessary capabilities.

4.3 Approach to choosing Y – the timeframe over which grandfathered firm access is reduced

The choice of timeframe over which grandfathered access capacity is reduced to the K level is mostly dependent on the extent that multiple auctions for capacity might be needed to provide sufficient information about the value of capacity to ensure that it is allocated efficiently between generators.

It follows that:

- Y should be equal to X, ie there should be no transition to level K capacity if the Commission decides to proceed with a common exchange for allocating new or existing firm access capacity; and
- Y should be at most the timeframe required to allow generators and transmission businesses to manage the uncertainties involved in transitioning to an auctioning approach to allocating capacity in excess of the K level.

4.4 Approach to choosing Z – the remaining asset life for existing power stations

We believe it is exceedingly difficult to independently assess the remaining asset life for each existing power station in the National Electricity Market. This is because the remaining asset life will be dependent on both physical and economic factors. The economic factors will in turn be influenced by the decisions of other generators to enter or exit the market.

In our opinion, the best approach to choosing Z would be for each power station to nominate a proposed remaining asset life, to be objectively assessed by an independent agency (eg, the Australian Energy Market Operator). The assessment should be principally focused on ensuring that the remaining asset life for each power station is consistent with other power stations within the NEM.

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