stanwell

12 December 2014

Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

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Dear Mr Pierce

Stanwell Corporation Limited (Stanwell) welcomes the opportunity to comment on the Optional Firm Access Supplementary Report: Pricing as published by the AEMC on 31 October 2014.

We thank the AEMC for publishing both the pricing prototype and the EMC[a] review in conjunction with the supplementary report in order to allow a comprehensive response to be developed. We acknowledge that the AEMC have invested significant resources in the development of the prototype.

We wish to acknowledge David Scott of CS Energy who shared the results of his analysis on the model in relation to load distribution and transitional access studies (as discussed at the Brisbane Pricing workshop). Given the intricacy involved in testing the model and competing time pressures, these results were greatly appreciated.

Attached is a detailed response to Supplementary Report.

We welcome the opportunity discuss the matters raised in our submission. If you wish to discuss any aspects of this submission, please contract me on (07) 3228 4529.

Yours sincerely

Luke Van Boeckel
Manager Regulatory Strategy
Energy Trading and Commercial Strategy

OPTIONAL FIRM ACCESS

RESPONSE TO AEMC SUPPLEMENTARY PRICING REPORT

DECEMBER 2014

Stanwell Corporation Limited
ABN 37 078 848 674

1 Executive Summary

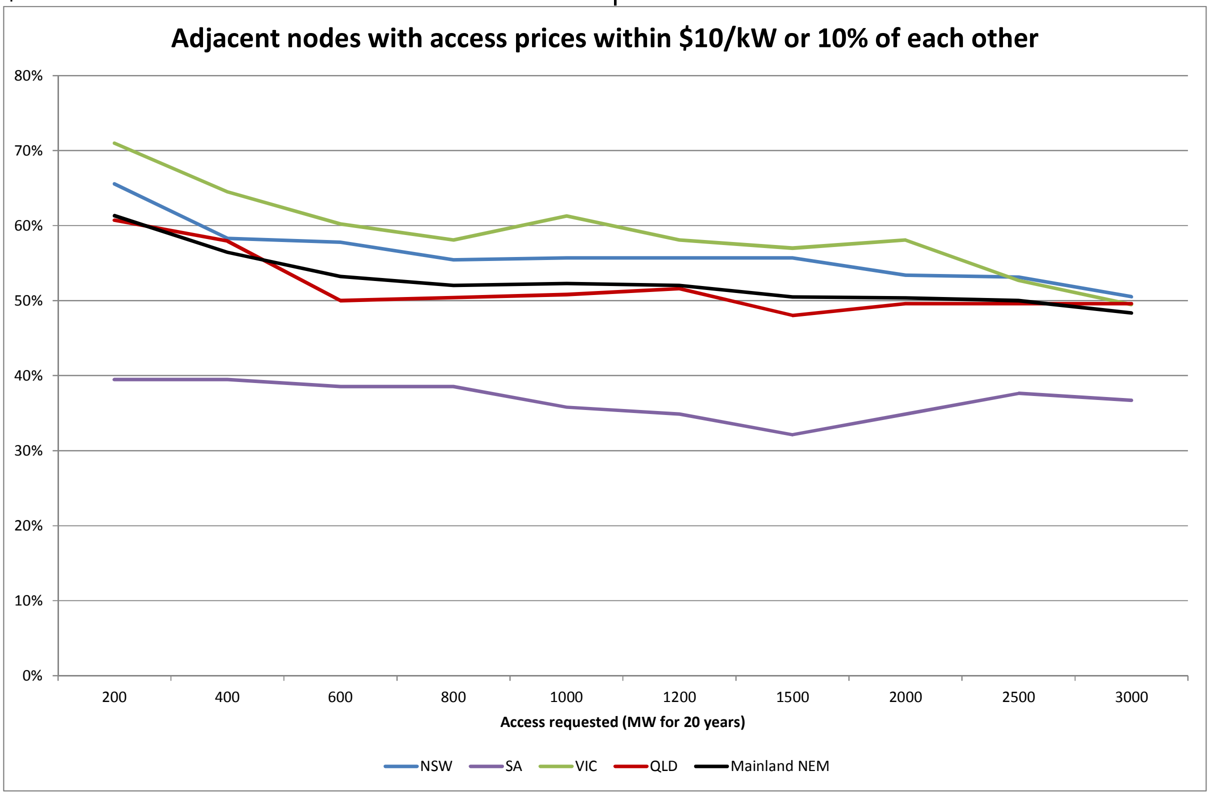
The AEMC pricing prototype *does not* provide sufficient proof of concept to recommend the implementation of OFA and contains a number of extremely material omissions and distortions. Even with significant further work, the model appears unlikely to reflect the incremental transmission costs of a generator requesting a particular level of access.

Poor locational signals

While the prototype model is not expected to produce fully cost reflective pricing, the AEMC has stated that the model is producing 'relative' prices broadly in line with expectations. Accordingly, Stanwell investigated the strength of the locational signal provided by the prototype model.

The model demonstrates that OFA does not provide a significant locational signal in most instances.

As shown below, access pricing shows a strong correlation with nearby locations. For example over 60% of neighbouring mainland locations have access prices within 10% or $10/kW[1] of each other for a 200MW access request.



Systemic over pricing

It is proposed that future firm access generators are incorporated into the baseline assumptions for access pricing. At the same time, the AEMC has stated that access prices generally increase as the level of pre-existing firm access increases. This means that new firm access requests are generally over priced.

[1] $10/kW equates to under $0.10/MWh for a baseload plant over 20 years.

This was demonstrated through David Scott's[2] modelling using the prototype. In some cases the prototype produced very high prices for new access requests despite network capacity being available. This was due to network upgrades triggered as a result of the combination of the capacity required for the access request and the capacity required by background assumptions.

Removing future firm generators will remove this bias and will reduce the reliance on central planning assumptions.

Other sources of systemic over pricing also exist due to simplistic modelling assumptions:

- the "duplication only" assumption for network augmentation (Section 2.3)
- the unsophisticated augmentation path modelling(Section 2.4)
- the use of deterministic standards (Section 2.5)

Windfall gains to TNSPs

The pricing prototype confirms that access pricing is systemically biased towards higher costs for generators. We have also reconfirmed our view that a high level of firm access is likely to be required for most scheduled generators.

If high levels of firm access are procured, and this access is systemically overpriced, firm access payments may exceed the TNSPs maximum allowable revenue. This creates a risk that windfall gain accrue to TNSPs at the expense of generators.

Inconsistent with the Terms of Reference

The pricing prototype does not consider inter-regional effects from access requests, or allow for pricing of inter-regional access, both of which are required under the OFA Design and Testing Terms of Reference.

[2] CS Energy

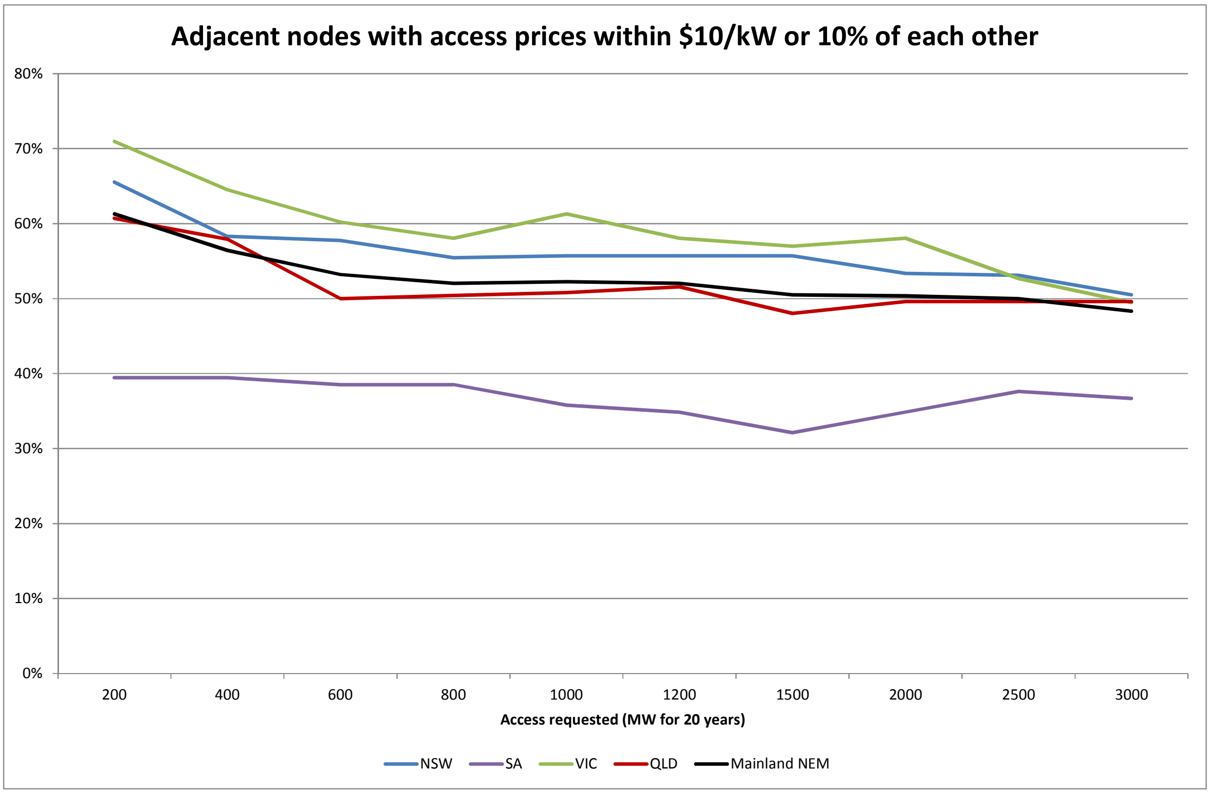
2 Key results

2.1 Poor locational signals

While the prototype model is not expected to produce fully cost reflective pricing, the AEMC has stated that the model is producing ‘relative’ prices broadly in line with expectations. Accordingly, Stanwell investigated the strength of the locational signal provided by the prototype model.

In the Transmission Frameworks Review (TFR) Technical Report the AEMC used the term “zone of interest” for the location of new generators. That is, a new generator may be able to alter their locational decision slightly, but is unlikely to move significantly due to the reliance on other inputs such as fuel, workforce or infrastructure. In Stanwell’s analysis we have approximated a “zone of interest” by evaluating electrically adjacent node pairs[3] however in some cases, the nodes pairs are not physically very close.

As shown below, access pricing shows a strong correlation with nearby locations. For example over 60% of neighbouring mainland locations have access prices within 10% or \$10/kW[4] of each other for a 200MW access request. While the proportion drops slightly as request size increases it remains above 50% across the bulk of foreseeable requests.



This analysis confirms that the locational signal provided by the prototype is generally quite weak.

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[3] Nodes are considered to be adjacent if there is a line contained in the “aemc-lines.csv” file for the relevant node. This analysis has removed lines to the regional reference node since access price is always zero at that location, creating outliers when compared to neighbouring nodes.

[4] \$10/kW equates to under \$0.10/MWh for a baseload plant over 20 years.

Stanwell has previously provided analysis on the irrelevance of the locational price signal to investment decisions[5].

2.2 Systemic overpricing due to forecast firm generation

The pricing model is proposed to include a forecast of new generator entry obtained from the 2013 National Transmission Network Development Plan (NTNDP). The forecast is provided at the zonal level so, in order to incorporate it into the LRIC pricing model, the prototype spreads the forecast increase across generating nodes within the zone. The prototype also assumes only two rates of new entrant per zone – a short term rate for the first 10 years and a long term rate beyond that. The new entrant generators in the forecast are assumed to be fully firm.

This forecast of new fully firm generation has the effect of increasing the baseline firm access in the model even though the generation is not committed, and if it does eventuate it may not be fully firm. When a new generator uses the pricing model to obtain firm access, it obtains a price based on network expansions in addition to those expansions necessary for the forecast generation. This would occur even if the new generator was one of the generators anticipated in the NTNDP. That is, the model envisages a system based on a number of central planning assumptions, then prices access which is incremental to that vision.

The AEMC have stated that access prices generally increase as the level of pre-existing firm access increases. This means the new generator is likely to pay a premium for firm access because a forecast generator has been assumed. The TNSP only needs to build the network for the new generator since it has no obligation to the forecast generator. The premium the new generator has paid is then a wealth transfer from generators to TNSPs (and on to consumers) which generators will attempt to recover through wholesale prices (paid by consumers).

The existence of a premium because of forecast generators is consistent with the results of David Scott's[6] modelling. David removed the transitional access from each generator in turn, then purchased it again through the model. In some cases very high prices resulted at some generators despite the network capacity being available (having previously been granted as transitional access). This was due to network upgrades triggered as a result of the combination of the capacity required for the access request and the capacity required by the forecast generator.

To avoid the pricing model's inflation of firm access prices, the AEMC has previously suggested that forecast generators must be removed from the zone of interest before a new entrant prices firm access. This would be problematic to implement and is not reflected in the prototype.

An alternative approach which avoids this complexity would be to include existing non-firm generators in the baseline, and include new entrant reliability generators as non firm generators. This would create a baseline which meets both FAPS (firm generators only) and the reliability standard (using firm and non firm generators) without modelling FAPS compliance for forecast firm access. In this approach, new firm generators would gain the capacity currently used by non firm generators but would still trigger augmentations in appropriate instances.

[5] Stanwell response to OFA 1st interim report, page 11.
[6] CS Energy

While an element of central planning would remain through demand forecasts, the removal of the firm generator forecasts would significantly reduce the reliance on central planning assumptions.

Stanwell believes that the current approach systemically increases access prices above efficient levels. Rectifying this bias can only be achieved through a change in approach, rather than a change in the model mechanics.

2.3 Systemic overpricing due to "duplication only" assumption

The AEMC have confirmed that network augmentations are based on the simple assumption that existing elements are duplicated. We agree with the EMC[a] that:

> "*It is most unlikely that a prudent and efficient network development plan will simply involve replication of existing network elements and we consider it likely that this aspect of the modelling is likely to lead to a network augmentation cost that is far removed from a network expansion plan that is developed using prudent network planning principles.*
> *Moreover we consider it likely that an augmentation plan determined by 'replication' will be biased towards over-estimating the costs of augmentation, because prudent planning will typically identify strategic solutions with lower long-term costs*."

Referring again to the recent QNI upgrade study: duplication of (part of) QNI was estimated to cost $560m for a 230MW increase in Northward flow at summer peak compared to an alternative non-duplication based augmentation of $179.5m. Both augmentations provide a 230MW increase in capacity but the duplication option is over 3 times more expensive. This mispricing provides a materially inaccurate firm access price signal.

It appears that the "duplication only" assumption introduces systemic bias towards *over* pricing firm access. Unfortunately it does not appear as though this bias can be removed while the "duplication only" assumption remains.

2.4 Systemic overpricing due to augmentation path logic

The prototype pricing model does not appropriately reflect the way TNSPs plan to upgrade their network. Currently, once a TNSP has identified the need for an upgrade, they conduct a RIT-T to identify all the upgrade options. The TNSP then selects the option that is the most commercially feasible. Stanwell understands that this process is expected to continue under OFA, albeit with some operational variations.

While it is impossible for the pricing model to replicate this process, it should apply robust logic in order to identify a reasonable, least cost augmentation option. As an example, Stanwell understands that the pricing prototype upgrades a transmission element whenever the security study indicates that the element will exceed its safe operating level. However after the upgrade, the model does not adjust network flows to reflect the new topology. This means that duplicated lines continue to take the same proportion of flow across a cut set, when in reality the share of flow is likely to increase over the augmented path. Making no change to the flow pattern has implications for where and when future augmentations are required.

Similarly, the prototype makes the simple assumption that an element must be upgraded whenever its flow exceeds its rating, ignoring upgrade options on alternate paths. For example, the stakeholder workshop examined an access request at Keith in South Australia where multiple upgrades of a 132kV line (Keith to Talem Bend) were required and contributed over half the cost of the access request. However it appears likely that the access could have been provided by upgrading lower cost alternative paths which were uncongested or only lightly congested. Augmentation of these alternative paths would alter the distribution of flow between the parallel paths, reducing flow on the limiting line. A TNSP performing a RIT-T would investigate these alternative options, so it is expected that this logic should be incorporated into the pricing model.

The Keith example also showed the TNSP duplicating the same line five times. In reality, a TNSP faced with five duplications of a given line in successive years would investigate increasing the operational voltage of the transmission corridor or reducing costs by stringing multiple lines at once.

Each of these simplistic modelling examples systemically increase access prices above efficient levels. Depending on the sophistication of the final pricing model, these distortions may be reduced, however it is unlikely that they would be eliminated.

2.5 Systemic overpricing due to deterministic modelling

The prototype applies a deterministic (simple N-1) standard to network security which is in accordance with the deterministic nature of the Firm Access Planning Standard (FAPS).[7]

Stanwell has consistently raised concerns that deterministic standards are likely to increase access prices and network size to the detriment of both generators and consumers.

The pricing model appears to support Stanwell's concerns.

2.6 Windfall gain to TNSPs

Stanwell considers that the pricing prototype confirms that access pricing is likely to be systemically biased towards higher costs for generators. As discussed in Section 5.2, we have also reconfirmed our view that a high level of firm access is likely to be required for most scheduled generators.

The AEMC has proposed that firm access payments act to reduce TUOS such that TNSPs are able to recover their full revenue allowance but no more. However, if high levels of firm access are procured, and this access is systemically overpriced, firm access payments may exceed the TNSPs maximum allowable revenue. This does not appear to have been considered.

There are three outcomes possible in such a situation:

1. TNSPs receive a windfall gain, customers pay no TOUS
2. Customers receive a windfall gain (ie "pay" negative TUOS)
3. Generators receiving a "discount" on their over-priced firm access, customers pay no TUOS

[7] "*The assessment of 'spare capacity' in the model necessarily requires the application of security assumptions that (on the generation side of the RRN) are intended to mimic the proposed "firm access standard". The model assumes an N-1 security standard.*
Security requirements for TNSPs tend to be moving towards allowing probabilistic standards. This would certainly be more difficult to model, however if the model is to be based on a traditional N-1 deterministic standard, it would need to be established that this provides a reasonable approximation. It is likely that deterministic standards in the model will be biased towards over-estimating the cost of providing a given level of security, as they foreclose lower cost options that may be available." EMCa report page 9

2.7 Inconsistent with the Terms of Reference

The prototype produces results for a single region at a time. It is also unclear how constraints involving nodes on both sides of an interconnector are modelled as there appears to be no load or flow in relation to the boundary nodes.

The Terms of Reference require that inter-regional transmission impacts be considered in access pricing. In addition, the inter-regional firm access product requires a pricing model which can model multiple regions. Accordingly, the prototype provides no proof in regard to the feasibility of modelling LRIC prices in accordance with the Terms of Reference.

While it is likely that the final model could be designed to include multiple regions, we have no indication as to the complexity and effort required to do so.

Another inter-regional consideration is the possibility that TNSPs could have different WACCs, and what impact that would have on the pricing model.

3 Inputs

3.1 Committed TNSP work should be included in the baseline

The prototype model includes a static representation of the current network, while access requests will not commence for several years. Accordingly, committed TNSP work should be included so that the network representation does not skew access prices inappropriately.

It is unclear whether this change would systemically increase or decrease access prices.

3.2 TNSP input to the baseline must be carefully considered

The outputs of any pricing model are heavily dependent on the input assumptions. One of the key inputs in the prototype is the 10 year forecast of peak local demand which is proposed to be obtained from the TNSP's Annual Planning Reports. While some verification of the forecasts may be conducted, the TNSP has a strong incentive to overstate demand in order to build a bigger network. This a conflict of interest for which consumers and generators could suffer.

3.3 Arbitrary long term assumptions affect prices

Long access terms means prices are dependent on highly uncertain long term forecast assumptions including arbitrary annual increases in flow growth. It is likely that minor changes in these forecasts will produce large changes in firm access prices when other prototype distortions are corrected. The risk of mispricing in this regard is considerable and will affect both TNSPs and generators.

3.4 Load must be correctly distributed

The AEMC has confirmed that large industrial loads are currently modelled at the regional reference node rather than at their actual location within the network. This incorrect load distribution results in increased access prices.. We understand that this has been confirmed by David Scott of CS Energy who adjusted Queensland load distributions to better reflect observed values. This adjustment produced access prices significantly lower than for the default load distribution.

Although the final model will include the correct load distribution, the pricing anomalies observed are relevant to other input assumptions. For example, the assumptions concerning the location of load growth within a region or zone can likewise be expected to materially affect LRIC pricing.

The EMC[a] state that currently "end user loads and load growth have little effect on LRIC pricing"[8]. This may be true in the current model but this result is only an artefact of the way in which the prototype addresses reliability augmentations[9] and assumed firm access growth. This is discussed further in Section 2.2.

[8] EMC[a], page 8

[9] EMC[a] page 10 "*However the means by which the model provides reliability access appears to involve scaling in proportion to the assumed zone growth for generation capacity to meet the (present and future) aggregate load. This seems to be a most unlikely way in which reliability access would be delivered.*"

3.5 Network costs must be improved

We agree that the current granularity of network costs could be improved, although the indication that this would be rectified through the appointment of yet another consultant is concerning. This reinforces our opinion that the OFA project is subject to ever increasing costs for what we believe has already been shown to be no material benefit.

As indicated in the EMC[a] report, we expect that, the inclusion of greater network element granularity would be likely to increase access costs[10].

3.6 Network cost input file anomalies

While Stanwell has not performed a comprehensive review of the input files, we have discovered that some anomalies exist. For example in the *linetypes.csv* file for South Australia some transformers are presented as both step up and step down transformers while others are not. Also, one transformer type (132kV to 220kV) has different lumpiness and cost values depending on whether it is a step up or step down transformer.

These changes are not expected to materially affect access prices, but would improve confidence in the model.

[10] Including greater network cost granularity "may add a significant multiple to the costs currently represented only by transformers" EMC[a] report, page 14

4 Calculations

4.1 Stability constraints should be included

Stanwell supports the proposed inclusion of stability constraints and its associated augmentation and replacement expenditure in the model. The absence of stability constraints makes the model meaningless as pricing bears little resemblance to actual costs.

For example, the Project Assessment Conclusions Report (PACR) on the QNI upgrade stated that an upgrade of limiting thermal elements would have had no effect on peak summer flows[11] due to the existence of a transient stability limit at the same level, under the same conditions. Relieving the thermal constraint by 230MW was forecast to cost $46.5m while relieving the stability constraint was forecast to cost an additional (and independent) $83.5M for 212MW or $133.0m for 382MW. This example demonstrates that should an equivalent upgrade be required for an intra-regional access request, the resulting prototype model price would not be cost reflective.

We expect that the inclusion of stability constraints is likely to significantly increase access prices.

We note that the AEMC is now considering whether LRIC is the appropriate pricing method for stability constraints. We consider that the same pricing method should be used for both thermal and stability constraints. To remain consistent with the Terms of Reference (TOR) for this project, LRIC would need to be used[12]. If the AEMC considers that an alternative pricing method is preferable for stability constraints, then this pricing methodology must be applied to all constraints. In addition, any inconsistency with the TOR must be put to the Energy Council for consideration.

4.2 Replacement expenditure should be calculated

Stanwell supports including replacement expenditure in the model. With the current declining demand forecasts, replacement expenditure could be material. As well as affecting new access prices, whether or not replacements need to occur could affect the rate of sculpting of transitional access if the Commission chose no to progress with the arbitrary X,Y,Z,k sculpting model previously considered.

Because of the prototype's assumption of ever increasing firm access, it appears that the current prototype is unable to meaningfully include replacement expenditure. For example, attempting to set the background forecast firm access growth to zero[13] causes the program to crash. With firm access monotonically increasing, there is no scope for existing infrastructure to be considered redundant at the end of its design life. It is possible that reliability access also creates this discrepancy.

We expect that the inclusion of replacement expenditure will increase (or at best have no affect on) access pricing.

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[11] It is likely that peak summer conditions in the study would be the same as the FAPS peak flow condition.

[12] TFR final report, Table 10.1 "*Access charge based on Long Run Incremental Cost (LRIC), defined as the NPV between baseline expansion costs and adjusted expansion cost (6.1)*"

[13] The reference node was left at the default values of 1 and 1 for short and long term access respectively.

4.3 The final model must be easier to use

The final pricing model must allow generators to easily conduct firm access price experiments involving different connection points, volumes, start dates[14] and tenors. This will help inform a generator's investment decision regardless of whether it ultimately impacts their locational decision - one of the fundamental goals of OFA[15].

This implies that the final pricing model must have the following characteristics:

- Publically assessable on a website, or via a free downloadable program
- Computationally efficient
- Easy to set up a series of requests - each request will be processed separately but it will save time for generators for the pricing model to work through each request in turn and then produce a summary spreadsheet of results. These requests could be provided in a common, readable format such as csv or Microsoft Excel.
- Results should provide a clear breakdown of the cost.

In addition, the model must be accompanied by a network map and information about each connection point.

An example input request file provided by a generator may be:

Request Number	Node	Volume (MW)	Start date	Tenor (years)
1	4SPS275	500	1/07/2018	3
2	4SPS275	600	1/07/2018	3
3	4SPS275	700	1/07/2018	3
4	4SPS275	500	1/01/2019	5
5	4SPS275	500	1/01/2019	7
6	4SBE275	500	1/07/2018	5
7	4SBE275	600	1/07/2018	5

The Excel file exported from this request should have a Sheet for each request detailing the network upgrade costs and a summary Sheet with the cost of each access request. Alternatively, a separate (meaningfully named) file for each request could be provided.

4.4 Participants require a transparent model

To promote generator and TNSP acceptance of the model, maximum transparency of input assumptions, calculation methods and intermediate outputs must be provided. This will allow participants to check the firm access prices produced by the model in order to ensure it is consistent with the pricing methods described in the rules. A generator's ability to analyse its firm access calculations will also help a generator to understand the circumstances that produce the most appropriate access.

Some data (large transmission connected industrial loads) were not able to be incorporated into the prototype pricing model for confidentiality reasons. This caused abnormal pricing results such as the very high access prices for Gladstone Power Station. The final pricing

[14] Stanwell proposes that a generator should be able to procure firm access from a range of start dates in the future. This is discussed in Section 5.5

[15] In fact the pricing model proves what Stanwell has stated in earlier submissions - that OFA does not provide a significant locational signal. See Section 2.1

model will need to incorporate this data but it will be problematic if this data can not be made transparent[16].

Given the expected very high cost of firm access (several dollars a MWh), a generator will spend considerable time and resources checking the pricing model, and attempting to determine the most cost effective access term, node, volume and start date. If, due to material confidential data, a generator is unable to effectively cross check and experiment with the model**,** then the pricing model will not support the key objective of providing a clear and cost-reflective locational signal.

4.5 Frequent review of inputs and assumptions is necessary

The following input assumptions should be updated in the model as soon as they are changed:

- Existing firm access
- Forecast of new generator entry (National Transmission Network Development Plan NTNDP) (although we propose these generators are forecast as non firm generators as discussed in Section 2.2)
- Local peak demand from TNSP Annual Planning Reports
- Granular load forecasts
- Existing transmission network

At all times, the current version of inputs used should be transparent to the user.

Every year before the start of the pricing season, the following elements should be reviewed and updated if necessary. These elements must be updated in a consistent and transparent manner.

- Assumption on the firmness of future generators (if not assumed to be non firm as discussed in Section 2.2)
- Long term peak line flow growth
- Expansion costs
- WACC

The actual calculation methodology, having initially been implemented by the AER following industry consultation, needs only to be formally reviewed every 5 years. However if any material problems arise, participants require the ability to have these problems reviewed by the AER or AEMC through a transparent process.

[16] For clarity, Stanwell does not support the forced publication of commercially sensitive data

5 Other

5.1 Wider benefits of generator location decisions must be considered

The prototype pricing model has been characterised by the AEMC as producing "the right relativities" in access pricing, whereby access from a remote node is typically more expensive than access from near the regional reference node. This in part relies on limitations in the model (eg static transmission losses) and in part on the input assumption that negatively priced elements are treated as zero cost[17]. This approach fails to recognise the wider benefits that can accrue from a generator's decision to locate in a remote area.

Given the extreme spread of access prices in the prototype, for example between South West Queensland (generally sub $200/kW) and Northern Queensland (many around $1000/kW), it is likely that prospective generators will be drawn to locate as close to the regional reference node as possible. However, not all load growth will occur at the node.

Customers in Central and Northern Queensland have long had complaints regarding the high loss factors in their regions, and this appears likely to be compounded by increasing LNG-related load in Central Queensland in coming years. A generator locating in North Queensland would be likely to reduce loss factors to the benefit of these customers and the State economy. There have been a number of proposals to introduce generators in these zones despite the chronic oversupply of generation within Queensland[18]. However under OFA, this prospective generator would be exposed to extremely high access prices due to its location.

5.2 Firm access is not optional so prices must be cost reflective

At the pricing forum in Brisbane the AEMC stated several times that ultimately it would be the generator's choice as to whether or not to procure firm access. This was said in response to various participants' concerns about the input assumptions or calculation methodology. The implication was that it didn't matter if the firm access prices were over stated as generators are not obligated to purchase firm access.

Stanwell disagrees with the AEMC's assumption that their model for transmission pricing is optional. Access settlement is compulsory, and non firm generators will face significantly increased risk when compared with either firm generators or the current market design.

PWC recently surveyed banks in relation to their appetite for financing generators[19]. The overwhelming message was that financiers did not consider merchant generation to be attractive due to the relatively high earnings risk and the difficulty in forecasting wholesale prices. The report clearly states that banks have limited appetite to finance projects that do not have either explicit or implicit (through vertical integration) Power Purchase Agreements (PPA).

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[17] TFR final report, table 10.1 "*No negative access charge on elements where a negative LRIC is calculated (ie expansion can be deferred as the result of the new access)*"

[18] Examples include:
Galilee Power Pty Ltd application 9 June 2009 available on Qld Department of State Development, Infrastructure and Planning website ,
North West Queensland Strategic Development Study by Mt Isa to Townsville Economic development Zone, June 2014, and
Moray Power Pty Ltd announcement 1 December 2014.

[19] *State of the debt markets for the Energy Supply Industry*, PWC December 2014

Under OFA a non firm generator would have increased earnings risk and would likely need to forecast both regional and local prices. We would expect that banks would require significant holdings of firm access before financing a merchant generator, even where a PPA was not required.

In addition, a generator is likely to require significant firm access in order to minimise basis risk between NEM settlements and their sold forward contracts (PPA, wholesale or retail).

Non firm generators will also risk having their implied access taken by a new (firm) generator and then being forced to pay for an expensive expansion to the network despite the fact that it is the new entrant generator causing the increase in congestion.

With firm access being barely optional, the stability and accuracy of access prices is critical to prevent inefficient decision making.

5.3 Inability to include Tasmania is a concern

It appears that the model does not appropriately price Tasmanian firm access. We also understand that AEMC staff may recommend excluding Tasmania from OFA[20].

We believe that the inability of the model to price Tasmania, and its likely exclusion, highlights the fact that even with the current market variations OFA is not robust. Given this, OFA is unlikely to be robust in the face of future changes.

If Tasmania is to be included in OFA now or in the future, and thus a redesign of OFA is required, the impacts on the broader market must be carefully considered.

5.4 Prices are less reliable when minimum transmission lead time is accounted for

The AEMC has developed the prototype pricing model to better understand how the LRIC pricing model could be implemented in practice. In addition, the prototype will help the AEMC to understand whether TNSP costs can be accurately reflected through a model. The default setting for the prototype model is to have access begin immediately which is inconsistent with the fact that there will be a minimum transmission lead time (say 3 years) before firm access can be procured. While Stanwell understands that the base year can be adjusted in the model, we have not performed any sensitivity testing in relation to this assumption and are unaware of any similar analysis performed by the AEMC.

The implication of the minimum transmission lead time is that the forecasts underpinning the pricing model will be less reliable. For example for a 20 year access request, a 3 year lead time means 13 years of the request are priced using less reliable generic line growth assumptions. This is illustrated in the diagram below.

[20] *"AEMC staff noted that they are considering, if a recommendation was made to implement optional firm access, whether Tasmania would be included in this recommendation (or whether the recommendation would be to include Tasmania in optional firm access at some later stage). Our preliminary view is that there would be higher implementation costs in Tasmania (due to a number of technical characteristics of the region), with lower benefits (due to the current market structure)."* AEMC minutes to the OFA working group meeting of 1 December

In addition, the final pricing will only incorporate years 4 to 10 of the 10 year TNSP peak demand forecast and years 4 to 25 of the 25 year National Transmission Network Development Plan. This is problematic as the first years, which are unable to be incorporated, are likely to be the more accurate than the later years which are incorporated.

Less reliable input forecasts mean the firm access prices generated by the model are less likely to reflect the actual TNSP costs. The risk of inaccurate firm access prices is ultimately borne by customers[21].

We acknowledge that the AEMC provided sensitivity analysis as part of the supplementary report, but for the reasons outlined in Section 2.2, we consider that those sensitivities are likely to have been artificially muted.

5.5 Generators need to procure firm access for any period, at any time

The AEMC have proposed that firm access can be procured *only* a certain fixed number of years prior to the commencement of the firm access. The number of years between the access request and the start (base year) of the firm access is determined by the transmission lead time but, at this stage, has been assumed by the AEMC to be 3 years. Stanwell consider that this lead time may need to be longer in order to allow TNSPs to efficiently complete any required RIT-T and construction processes.

This restrictive requirement on the procurement of firm access is likely to make it difficult for new entrant power stations to complete their investment decisions. Although new entrants can use the pricing model at any time to gain an *indicative* price, financiers may require the new entrant to lock in their firm access price in order to approve a finance application. However, the timing of the new entrant's finance decision may not necessarily align with the defined firm access pricing window.

The only apparent rationale as to why a generator can't procure firm access at any time for any point in the future appears to be the complexity of the OFA model. While we accept that some pragmatic limits may be desirable in order to minimise the risk of gross mispricing of access, we do not consider the currently proposed approach to be beneficial. We would support limiting the start of an access request to occurring no later than the end of the short term forecast contained in the model (10 years).

[21] *At most the TNSP would be exposed to 100% of the difference between its actual costs and the LRIC estimate, but only until the end of the current regulatory period.* ***Thus consumers would bear most of the risk of over-runs*** [emphasis added]". FTI Consulting – report to AEMC, April 2013, page 27