3 December 2012

Commissioners
Electricity Network Regulation
Productivity Commission
GPO Box 1428
Canberra City ACT 26001

Dear Commissioners

Re: Electricity Network Regulatory Frameworks

The National Generators Forum (NGF) welcomes the opportunity to provide comments on the Electricity Network Regulatory Frameworks Draft Report. We appreciate the important role networks play in delivering competitive priced, reliability and safe energy to Australian consumers and the need to ensure the regulatory settings provide incentives to deliver efficient network investment and operation.

We have reviewed the Draft Report and the majority of our comments relate to transmission pricing reforms and the Optimal Firm Access (OFA) model developed by the Australian Energy Market Commission (AEMC). In this regard, we note the Commission is recommending implementation of the OFA model (unless any unintended issues arise during the AEMC consultation process). NGF does not support this recommendation. Our key issues relate to:

1. Tthe **level of focus on dis-orderly bidding** as a key determinate for change, without appropriately identifying the size of the issue. The Draft Report refers to isolated events without providing the necessary broader context. Specifically, it refers events reported by the Australian Energy Market Operator (AEMO) that occurred in 2010 during a period of a major transmission corridor upgrade and subsequent to which these constraint issues have been resolved. If dis-orderly bidding represented a significant issue we would expect far more examples to have been highlighted. Members of the NGF have already commented publically on the AEMO analysis.

2. All analysis to date suggests that dis-orderly bidding represents well below 0.1 percent of market turnover annually based on the figures provided to the AEMC Congestion Management Review There is also no supporting evidence to indicate that the level of disorderly bidding is expected to increase into the future.

   The NGF is proposing to undertake further analysis of the level of dis-orderly bidding in the National Electricity Market (NEM).

3. The analysis is based on a narrowly defined theoretical framework which fails to capture the broader issues including the large implementation costs, the extreme complexity of the arrangements and the potentially negative impacts on the contract market (e.g. introduction of additional price risk). A full cost-benefit analysis needs be undertaken before any recommendations are formulated.

These issues were raised with the AEMC and we are continuing to work with the AEMC and other stakeholders to ensure these points are thoroughly considered in the context of the Transmission Frameworks Review.

We also have concerns regarding a number of specific statements included in the Draft Report. These relate to dis-orderly bidding incentivising generators to locate in congested parts of the network and the suggestion to introduce financial contract trade reporting requirements to regulatory bodies.

We would welcome the opportunity to meet directly with the Commission to expand on these concerns and provide an update on our dis-orderly bidding analysis.

Yours sincerely

Tim Reardon
Executive Director

NATIONAL GENERATORS FORUM

RESPONSE TO THE

PRODUCTIVITY COMMISSION

DRAFT REPORT ON ELECTRICTY NETWORK REGULATORY FRAMEWORKS

November 20

1 Executive Summary

The National Generators Forum (NGF) is very concerned at the Productivity Commission's (the Commission) conditional endorsement of the draft Optional Firm Access (OFA) proposal which the AEMC has developed under the Transmission Framework Review.

One of the principle drivers for the Australian Energy Market Commission's (AEMC) OFA concept appears to be addressing disorderly bidding and transmission congestion. However, the NGF considers neither of these are material issues in the scale of the NEM. There is very limited reference in the Draft Report to the size of these problems which the OFA is designed to address. Importantly, the NGF believes that the OFA will introduce pricing risk in financial contracts which would profoundly and negatively impact the efficiency in the contract/financial market for energy. In addition, the NGF's submission (attached) to the AEMC process demonstrates that OFA will not resolve these immaterial problems in any case.

A further concern is the theoretical framework within which the OFA has been considered by the Commission. NGF believes there are significant practical difficulties in implementing OFA and this view is reflected in almost all the submissions to the AEMC. We note that the few generators that have indicated support for the OFA, have also identified implementation issues. The NGF engaged Frontier Economics to provide an independent economic review of the OFA and identify material flaws in its design and potential impacts for market efficiency. One of its important findings is that the OFA is likely to result in more centralisation of decision making regarding transmission and generation investment (i.e. it is not a market-led approach). Further it does not find any material benefits over the current arrangements. A copy of this Report is attached.

At this stage the AEMC has not conducted a full cost-benefit analysis. It is likely the costs of implementing OFA will exceed the costs which the OFA claims to address by several orders. The level of analysis the Commission has undertaken on this issue is insufficient to warrant the recommendations regarding the OFA. It is not clear yet whether the AEMC will support the OFA proposal in its recommendation to Standing Council on Energy and Resources (SCER) in March 2013 and it would be prudent for the Commission to review the more detailed assessment that the AEMC is undertaking prior to making a recommendation in this area.

NGF strongly recommends that the Commission reconsider its support for the draft OFA concept along with its comments on nodal pricing.

In relation to other issues, NGF has also responded to selected transmission questions. A desirable outcome is to have clear accountability in the transmission planning area and to consequently leave this function with the TNSP's. We believe there are sufficient processes in place to address a whole of NEM view. Generators, as customers of transmission require a straightforward, but integrity-based connection process (e.g. minimising the number of parties involved). Connections are already a fraught process and increasing complexity and reducing accountability by involving more parties is a regressive step.

NGF also has one comment in relation to the nature of sunk costs in distribution and a request that the Commission note that reduced peak demand today cannot remove sunk costs. Reduced peak demand can limit new investments.

2 Overview of NGF Response

This NGF submission addresses two key areas of the Productivity Commission (The Commission) Draft Report on Electricity network Regulatory Frameworks.

The first is of most significance to the NGF and concerns the Commission's conditional endorsement of the Optional Firm Access (OFA) Model (Chapter 18) which is one of the options being considered by the AEMC in its Transmission Frameworks Review.

The second area covers Transmission Reliability (Chapter 15), The Role of Interconnectors (Chapter 17), Identifying future transmission investment (Chapter 19) and Governance (Chapter 21). The framework for transmission is a key issue for generation businesses and several of these recommendations are important to the NGF.

The Commission has made a draft finding that existing interconnectors are "reasonably appropriate". NGF supports this view. The RIT-T (and formerly the regulatory test) is designed to only build economically efficient investments. It has now been in place for some time (under different names but with the same principle) and this finding by the Productivity Commission is an endorsement of the outcomes from policy certainty in this area. It also means that any change in this area should only proceed if it can be shown to have a significant benefit.

3 Optional Firm Access

The first draft recommendation in Chapter 18, which addresses The Efficient Use of Interconnectors, is shown below.

DRAFT RECOMMENDATION 18.1

In the absence of any unintended consequences identified during current consultation processes, the Australian Energy Market Commission's 'optional firm access' package for generator access to the transmission network should be implemented.

- ***It should operate for a period of at least 10 years.***
- ***It should be monitored by the Australian Energy Market Operator for its effects on network planning and performance and, in concert with the Australian Energy Regulator, changes in observed patterns of generator bidding behaviour. Monitoring results should be made public annually.***

The NGF finds this recommendation very concerning and strongly suggests the Commission review its position.

This issue is currently the subject of a detailed Review by the AEMC and it would be prudent for the Commission to assess the costs and benefits of the OFA presented by the AEMC before making a recommendation on its merits.

The NGF's major concerns with the OFA proposal are:

- No material practical issue have been identified which OFA addresses;
- OFA is claimed to give generators optional firm access but 85% of major generators oppose it;
- OFA is extraordinarily complex and requires demonstration of a significant net benefit to justify the risk of such a major change**;**
- Insufficient weighting is given to the impact of OFA on contract positions;
- AEMC claim that it addresses transmission congestion which is small and decreasing;
- AEMC claim it addresses dis-orderly bidding but this is questionable and dis-orderly bidding is not material in any case;
- OFA implies a profound centralisation of decision making for planning and new investment and so is not a "market-led" proposal;
- Generation investment decisions are driven by a mix of factors and transmission locations signals are likely to be a low priority.

3.1 No material practical issue has been identified which OFA addresses.

One of principle drivers for OFA appear to be transmission congestion management and reducing dis-orderly bidding. The two key messages from the beginning of Chapter 18 are[1]:

- ***In the presence of congestion, the spot price tends to be high. Under current regulations, this encourages strategic behaviour by those generators constrained by line capacity.***
  - ***Rather than making bids that reflect their true cost, they bid down to the (negative) market floor price to ensure dispatch, and are paid at the high spot price. Even an inefficient generator may supply power. This is termed 'disorderly bidding'***
- ***Disorderly bidding can result in productive inefficiency as less efficient generators are dispatched to meet demand. It can also 'shut off' interconnectors through distorted price signals.***

[1] Electricity Network Regulatory Frameworks Draft Report page 599

– ***The long-term effects are greater, and include inefficient generator location and investment and interconnector planning.***

Whilst not disputing that these effects CAN happen, the key issue is the level of materiality. In terms of congestion, AEMO publish the following graph which shows the cost of transmission congestion falling. Our understanding is that the costs of clamped interconnectors are included in the outage part of the graph. More significantly, the significance of the cost of $22m in 2011 is very small compared to the energy turnover of the NEM of $5,500m.

THE NEM CONSTRAINT REPORT 2011

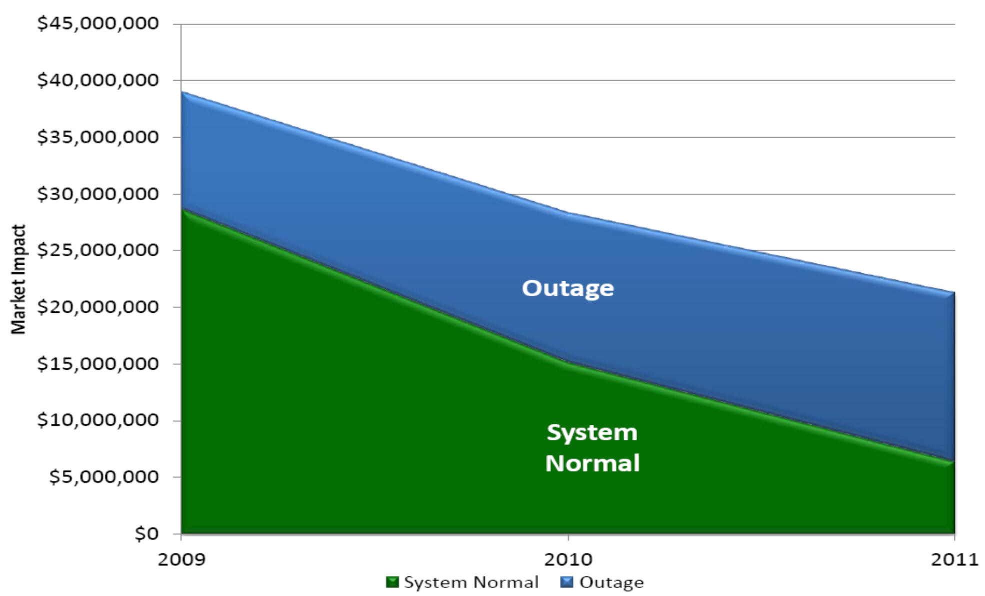


Figure 11: Market impact for system normal and outages

It is also apparent that system normal only accounts for a small proportion of the constraint value. Under OFA, a generator's firm capacity is significantly reduced by the TNSP when lines are out of service, therefore under outage condition the OFA provides little if any access payments..

AEMO have also published the following graph which shows the contribution made by various types of constraint. Our understanding is that generators are only purchasing firmness against thermal constraints. If a generator is constrained off as a result of another type of constraint, they will not receive any compensation.

It is clear that thermal constraints only account for about $5m out of a total of $22m (22%) in the latest year.

OFA clearly does not provide anything like firm access when these two pictures are taken into account.

THE NEM CONSTRAINT REPORT 2011

AEMO

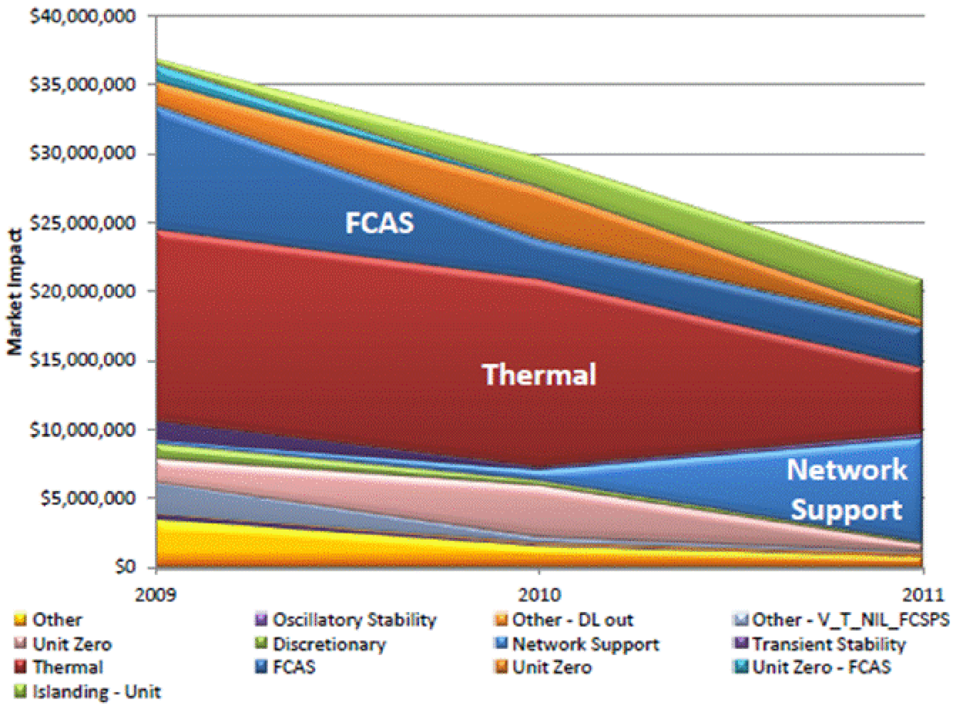


Figure 10: Market impact by constraint equation limit type

3.2 OFA is claimed to give generators optional firm access but only 15% of major generators support it

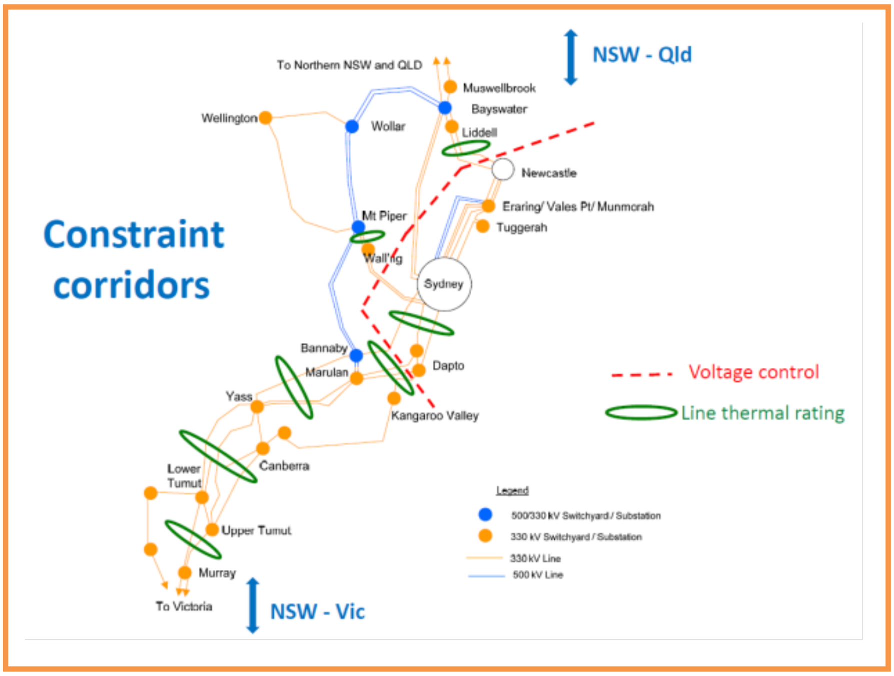
NGF encourages the Commission to consider the response it has received from participants. In the early days of the some NEM generators argued that firm access was an important market design element as it addressed one of their most significant risks, namely access to market. Following numerous reviews it has become apparent that providing physical firm access would be very expensive and, as a result of the outworkings of the NEM, generators have largely found alternative and less costly methods to manage their risks. Managing the cost of congestion has not been a top priority for most generators due to the insignificant level of congestion that ocurrs.

The Commission should consider why only 15% of the major generators in the NEM have supported the proposal for firm access. This is even more incredible when one considers that, according to the Commission, generators can choose whether to take up this option.

NGF, on behalf of its members who make up some of the 85% of opposing generators, recognises that the majority of constraints occur outside system normal conditions (i.e. during transmission outages) and as a result the so called firm access is actually anything but firm. Consequently, even those generators who choose to be “firm” will need to manage the varying degrees of “firmness”. Further, we do not believe access will be optional as it will be required as soon as one competitor chooses to be firm – there is a classic prisoners' dilemma where all generators are better off if they do no procure access entitlements but all must do so just in case the other does. However, the more serious objections are the extreme complexity for no well defined benefit.

3.3 OFA is extraordinarily complex and requires demonstration of a significant net benefit to justify the risk of such a major change

The Commission's discussion of OFA is at a very theoretical level. NGF members believe there are significant operational issues in implementing OFA (assuming there was some net benefit). Even more important is the OFA increases the risk for generators in Forward Contracting their generation output. This may potentially have the most significant negative impact on the efficient functioning of the NEM. To demonstrate these views we outline an example of the complexity and impact of the OFA as shown below. This diagram shows how Upper Tumut might request firm access to the NSW RRP. There are at least 648 flowgates (constraints) from Upper Tumut to NSW RRP and any combination of transmission lines can constrain.



From a risk management perspective, Upper Tumut is forced to monitor in real time all 648 constraints. Basis risk under constrained circumstances is a tenet of OFA and only ameliorated by an administered allocation of access entitlements. The error in allocating or pricing these entitlements could well result in unintended consequences in the commodity exchange where participants trade derivatives into the future.

From the TNSP's perspective, the TNSP (TransGrid in this example) faces the difficult task of having to price the access entitlements for each of the 648 flowgates. Assumptions will have to be made on the topography of the future network, new generation location and timing, load growth, and the level of demand side response. These would have to be made over a very long forward period to derive a fixed price that would apply for the period. Understandably TNSPs have a difficult time forecasting demand growth one year out due to the complexity of such an exercise. What is required in the OFA model is to come up with access prices that would apply for 30 to 40 years and would increase the complexity of this exercise many times over.

There are over 300 generation units in the NEM so these problems will be multiplied many times. This will cause a significant amount of work for all TNSP's.

Now assuming that Upper Tumut can purchase all 648 Flowgates from TransGrid at a reasonable price there is the complication of operating in a pseudo nodal price regime.

The AEMC have stated that only a handful of Flowgates constrain at any point (dispatch period) in time. This may be true but it is irrelevant from the point of view of managing spot price exposure to forward sold contracts. That is, from a risk management perspective, Upper Tumut is forced to monitor in real time all 648 constraints.

The OFA model is premised on generators being able to purchase access entitlements to Flowgates. These flowgates are simply another word for constraints. When a flowgate binds the generator(s) with access entitlements would receive compensation from Non-firm generators which in effect had used the Firm generators access through the relevant binding Flowgate. The non-firm generator pays this compensation based on their use of the Flowgate multipled by the Flowgate price. The Flowgate price is the difference between the Local Marginal Price behind the flowgate (constraint) and the Region Reference Node price. In effect the non-firm generator when it is required to pay compensation has Basis risk because a proportion of its generation only receives the local price after compensation is paid out to the firm generator.

Hence what can be concluded is that basis risk would increase for non-firm generators. This would reduce the level of forward contracting non-firm generators would be willing to sell in the Contracts market.

Further still, access scaling under the OFA model means that even a firm generator (that has purchased access rights) may be required to pay compensation to an even firmer generator. Hence the degree of firmness (or access to the RRN) varies depending on how "firm" the generator is.

Ultimately, for all generators irrespective of whether they are firm or non-firm there will be an additional risk to manage. This risk is the pricing differential risk between what the generator receives for its dispatch and what the generator has to pay out in difference payments to a counter-party which has contracts sold by that generator with a strike price referenced to the RRN price. This is commonly termed "basis risk". This basis risk in the OFA model is asymmetrical. That is the MPC is at $12,900 and the MFP is at -$1000. For illustrative purposes in the extreme case a generator who has forward sold 100MW at $50/MWh and is required to pay compensation when a Flowgate binds would lose -$115,416 every 5 minutes (ie every dispatch period). Therefore the NGF strongly believes due to basis risk the OFA would drive lower contract levels which would increase contract prices across the NEM. This should be a major concern for Policy makers and Regulators since the majority of energy is agreed and settled through Contracts and the Spot market acts as a balancing market for the much smaller component of energy that has not been contracted.

Notwithstanding, what could be the significant price paid for the access agreement,, the complexity of managing this basis risk is also a significant barrier to entry for new entrants, a key issue for the ongoing success of the market, particularly as small renewable generators seek connection.

The other issue with such significant changes is the risks of not anticipating the incentives of various players. It is interesting to observe that incentives (such as those driving dis-orderly bidding) were not widely understood or even anticipated when NEMMCO sought and NECA approved a change to the Electricity Market Code that changed how constraint equations were formulated. Just as this change created new incentives for generator bidding behaviour, this new regime is likely to drive a new range of incentives, many of which will not be foreseen.

In a situation where there are significant benefits, this risk is justified. Where a change is proposed which has minimal (or negative) net benefit, this significant risk cannot be justified.

3.4 Insufficient weighting is given to the impact of OFA on contract positions

NGF is concerned that there is insufficient recognition of the role which contracts play in the NEM. The physical market has very high visibility, a significant academic theoretical literature base and enormous volumes of data. Regulations enacting the spot market are focused on improving productive efficiency in the market, because it focuses on ensuring the least cost supply in real time. It must be remembered that AEMO only commits to pay generators in real time, not into the future. In contrast, the “commodity exchange” or “derivative contract market” is somewhat opaque, made up of a variety of instruments and not subject to the same level of analytical theory and modelling. The contract market plays an important role in delivering the allocative and dynamic efficiency benefits of implementing a competitive wholesale market. This is because participants in the commodity exchange with diametrically opposing risks can enter into contracts over time (i.e., the next quarter and into future years). Therefore efficiency implications of an effective, commodity exchange are far more important than the spot market.

NGF believes that it is very important for the Commission to treat these two aspects of the market with at least equal weight, notwithstanding their intrinsic differences. This is particularly important in attempting to assess future incentives for participants in the NEM. As an example, dis-orderly bidding might be used to ensure that a generator covers their contract position or it might be used to achieve high spot revenues during a price spike. In the first case, the generator is trying to reduce a potentially significant exposure and in the second case it is trying to maximise their returns.

NGF believes that there are impacts on the volume and price at which generators will be willing to contract. The reduced willingness of, and additional cost of the access agreement to generators under OFA to contract, the additional complexity in the physical market and the increased basis risk could drive more conservative (lower contract) positions for generators. With some contract liquidity concerns already surfacing, OFA has the potential to exacerbate the situation.

Further statements relating to providing hedge positions to the regulator retrospectively (perhaps 12 months after the event and on a confidential basis (page 631)) are of serious concern to the NGF. As part of the recent consultation process relating to the Corporations Legislation Amendment (Derivative Transactions) Bill 2012, the NGF has been very active in outlining the importance of the maintaining the current arrangements applying to electricity Over-the-Counter (OTC) derivative arrangements regarding reporting and clearing.

The requirement to provide additional disclosure on OTC contracts would undermine the integrity and efficiency of this market. This would represent a significant step change, as this level of disclosure, is not a requirement in other OTC markets. We consider there is sufficient information publically available to external stakeholders including individual company financial reports, the data published by the Australian Stock Exchange on energy futures trades and the Australian Financial Market Association (AFMA) reports, which provide market turnover information at a regional level. Moreover it is unclear how this information would be used and disclosed.

The reporting requirements would also impose additional compliance costs on businesses with a demonstrable net benefit. The NGF would strongly oppose a more in this direction.

3.5 AEMC claim it addresses dis-orderly bidding but this is questionable and dis-orderly bidding is not a material concern

In 2008 Frontier Economics was engaged by the AEMC to assess the cost of disorderly bidding[2]. This review nominated a value of $8m per annum as the cost of dis-orderly bidding in 2007/8. This is insignificant in the scale of the NEM which in 2007/08 had a spot market value of $10,400m (ie less than 0.07%).

Moreover, as demand has declined and transmission and constraints have been removed, the number of constraint incidents has declined. To further better understand the issue, the NGF is proposing to update this 2008 analysis

[2] AEMC Congestion Management Review, Final Report, June 2008, p.33.

of the costs of disorderly bidding. The NGF will provide this to the Commission when it is completed.

The NGF is also concerned about statements raised by the Commission linking dis-orderly bidding and generator locational decisions (page 607). Specifically, “that disorderly bidding will create a greater incentive for generators to locate new investments in (congested) areas where they can better control dispatch outcomes through disorderly bidding”. The NGF would appreciate the Commission citing evidence of this issue, as we cannot understand the basis of this position. In reality, investors are more concerned about delivering a product to market and securing a stable revenue stream. It is highly unlikely investments would meet project evaluation requirements (and receive financing) if revenues are based on the level of dis-orderly bidding. As previously stated, dis-orderly bidding is not a material issue in the NEM and its occurrence is largely due to transient congestion which is highly unpredictable, as it often occurs outside system normal conditions (i.e. in any event difficult to model).

This claim may exist in theory but it will have no practical impact for two reasons. The first is that the size of the effect is far too small to impact an investment decision. The second is that investment decisions do not typically consider, and certainly do not rely on, these abnormal situations. No commercial business would choose a constrained location in the expectation of using disorderly bidding to contribute to their business case. The opposite incentive is in place, which is to supply customers, ensure gross margin and hope to recover fixed costs. The main reason why this is the case is because the NEM’s average regional prices do not allow constrained generators to set the price. Therefore generators in a constraint are price takers and may be subject to volume restrictions. These vagaries to revenue certainty provide incentive for investors to avoid locations on the grid where they face delivery risk (constraints).

We have consistently highlighted the issue of investment being driven by a mix of factors. Given the structure and geographical characteristics of the NEM, access to cost competitive fuel and water, community acceptance of the proposed project, along with other portfolio considerations are the key drivers of business decisions. More importantly, to ensure it can deliver its product to market, a robust project evaluation process requires investors to consider future transmission development. It is not clear that the Commission understands the full extent of these issues.

In relation to the level of dis-orderly bidding which might be expected under OFA, Frontier Economics have undertaken a report for the NGF[3]. Frontier provides examples where non-cost reflective bidding will still occur under OFA. Their conclusion is that the position is ambiguous. They also note on page 34 that incentives for dis-orderly bidding for constrained on generators will remain as the OFA provides no change with regard to this..

[3] Attachment to NGF Submission to AEMC Transmission Frameworks Review Second Interim Report 15 October 2012

The Commission have a section titled Size of the Problem?[4] But unfortunately this does not provide a full analysis of the issue. It discusses some specific instances intertwined with some economic theory but fails to provide any quantification. The commission also draws on the AER suggestion that Kogan Creek was located to take advantage of the revenues created by disorderly bidding. If they did so, it would have been a very uncommercial approach to making their business case.

CS Energy, the owner of Kogan Creek power station, is a member of the NGF and finds assertions that it located to profit from disorderly rebidding misguided. The reason why Kogan Creek power station is located in the downs is because the coal resource is stranded from export markets, the mining costs are extremely low and the transmission access is superior to that in competing locations. It also benefits from economies of scale due to the large unit size. Kogan Creek has a short-run cost that is lower than any generators in NSW, displacing NSW generators in serving both QLD and NSW demand. Even under a congestion management scheme, such as OFA, efficient counter price flows could occur with Kogan Creek displacing competition from NSW because the cost and resultant offer pricing is more competitive. In addition, the constraint equation which limits the export flow on Queensland-NSW and Directlink interconnectors has nothing to do with the location of Kogan Creek in Queensland: instead it relates to the size of the unit itself and stability limits of the circuits themselves.

3.6 OFA implies a profound centralisation of decision making for planning and new investment and so is not a "market-led" proposal

Implementation of OFA would cause a profound shift in the nature of transmission planning. This has been expounded in considerable detail in the Frontier report[5] in Section 2.

This report identifies several advantages of the current RIT-T process including:

- Extensive public scrutiny of TNSP modelling
- Assessments done close to when the asset will be built so information is current

  Frontier further state (page 17) that under OFA: *By contrast, the pricing of firm access under the OFA proposal reflects the crystallisation of the TNSP's present views on patterns of generation investment well into the future. Once settled, firm access prices cannot be revised in light of new or changed information. This serves to effectively 'lock in' the implications of errors in the TNSP's assumptions. Further, there does not appear to be a significant role for stakeholders to comment on or influence the assumptions on which prices are based. This means that the price signals*

[4] Electricity Network Regulation Draft Report page 606

[5] Attachment to NGF Submission to AEMC Transmission Frameworks Review Second Interim Report 15 October 2012

under the OFA proposal may not reflect the best information available to the marketplace.

Pricing under the OFA proposal also gives rise to incentives and opportunities for TNSPs to misprice firm access to enhance their own financial positions.

There is a significant difference in that the construction times for transmission construction and a new generation build. This is a function of the planning and environmental approvals and the multiple stakeholders typically involved in such approvals for transmission lines. This effectively means that generators need to build close to existing or already planned transmission lines. It is unclear in this situation how a market led transmission planning regime can be implemented and be effective.

3.7 Interconnector firm capacity increased

The Commission makes some comments (page 633) in relation to firming inter-regional trade:

A more national hedging market would allow for improved risk pooling, enable an efficient spread of generation and load across the NEM and more competition in the generation and retail sectors. The best way to achieve this is to improve the effectiveness of IRSRs.

The AEMC's OFA package includes the option to purchase firm interregional transmission rights.

NGF has the view, shared by several parties who submitted to the AEMC Transmission Frameworks Review, that OFA will not lead to significant benefits in firming inter-regional trade. The reason for this is that, under the AEMC proposal, a transition arrangement will be implemented which effectively gives existing transmission access rights to generators. Inter-connectors would receive the balance, which will be small. Although disagreeing with the fundamental premise of OFA, the NGF agrees with this measure: to reallocate access from regional generators to interregional generators through interconnectors would be akin to moving the regional generator into the other region.

The AEMC propose that this level of rights will be maintained for interconnectors after transition. This means that, at best, a very small volume of firm access rights will be available for inter-connectors which will not contribute materially to any increased inter-regional trade. Without building any more interconnector capacity there is no more "access" available. What this means is any reallocation is just a zero-sum game – therefore the access should remain with those regional generators. We note however that there is little case for the building of more interconnection over the present level in the NEM – such investments, given falling demand, low prices and uncertain policy environment will be at high risk of proving to be inefficient. The NGF has concerns over the recent application of the RIT-T by AEMO and Electranet for the Heywood Interconnector upgrade which the association believes does not include all relevant costs (such as regional transmission costs); has benefits based on speculative differences in fuel costs for generation plant unlikely to enter the market; and has not been updated to the most recent demand forecasts. The NGF believes the RIT-T can ensure efficient outcomes if applied properly, however we consider AEMO and Electranet's application for the Heywood Interconnector upgrade relies heavily on selective input assumptions to the proponents modelling and does not realise the commercial reality in the sector where capital investment is extremely hard to justify.

4 Nodal Pricing

The Commission has the following recommendation in respect of nodal pricing:

DRAFT RECOMMENDATION 18.2

After the optional firm access package has been operational for 10 years, a cost-benefit analysis should be conducted, with particular regard to the structure of the National Electricity Market at the time, the views of consumers, and any remaining barriers to the introduction of nodal pricing.

If the analysis finds net benefits are likely, and no significant and insurmountable barriers or risks are identified, nodal pricing (including financial transmission rights) should be introduced with appropriate transitional arrangements and arrangements for disadvantaged consumers.

NGF is of the view that there are serious flaws with the OFA approach and that it is not a proportional response to the transmission problems of the NEM. It consequently does not see OFA as a step forward and proposes that the Commission should remove recommendation 18.1 from its report.

There appears to be no rationale at all for the recommendation of a nodal pricing review. These reviews are very expensive for industry and introduce significant investment uncertainty. A nodal pricing review would probably take several years and would then take at least two years to implement. Many investments would be on hold during this time as there would be no certainty of its impact on individual participants.

NGF is of the view that reviews should only be initiated where there is a material problem that has been clearly identified and well quantified regarding costs . In NGF's view, this is not currently the case with regard to the NEM.

NGF believes the Commission should remove Recommendation 18.2 from its final report.

Further the NGF in its initial submission to the TFR highlighted issues with nodal pricing markets implemented internationally.

5 Transmission Issues

This section addresses selected recommendations from the Chapters covering Transmission reliability, the role of interconnectors, identifying future transmission investment and governance.

5.1 Chapter 15 Transmission reliability

5.1.1 DRAFT RECOMMENDATION 15.1

The Standing Council on Energy and Resources should, in consultation with the Australian Energy Market Operator and the Australian Energy Market Commission, develop a National Electricity Market-wide reliability framework in which reliability settings would be determined by customer preferences.

This framework should replace all jurisdiction-specific reliability settings.

The creation of a reliability framework based on customer preferences would clearly be a desirable outcome. NGF, however, is very concerned that customers will a) find it hard to conceptualise the different reliability choices and b) it will lead to much greater complexity.

Any approach to reliability is by its nature, an averaging approach as the ability to discriminate customers for different reliability settings is very coarse. Energy is a technical area, where customers do not necessarily have access to or the necessary skill set to understand the derivation of network costs (including the recent cost increases). They have been shown to be able to respond to price signals in some of the demand side management work, but this is a very simple choice compared to reliability choices.

NGF is concerned that it will be hard to engage customers meaningfully and that there will be significant additional costs for very little reward. NGF would encourage the Commission to establish further safeguards to ensure that there really are benefits FOR CUSTOMERS in this area.

The NGF has studied the work completed by AEMO on the NEM's value of customer reliability or VCR. This work, completed by Oakley Greenwood, discussed the subjective approaches that could be taken to establish a VCR. One such approach was to survey customers, segment the market and create and an average VCR. It was presented as a very scientific analysis but all it showed to the NGF was that it was very subjective and highly dependent on the choice of method and also the questions addressed to customers. As such a VCR should not be considered as an indicator of value that the regulator should consider when making the decision as to how much system reliability it should procure on behalf of customers.

5.1.2 DRAFT RECOMMENDATION 15.2

Drawing on the current Victorian experiences, the Australian Energy Market Operator should carry out transmission planning for all transmission networks in the National Electricity Market. The Operator should:

- ***use Values of Customer Reliability (as obtained through draft recommendation 14.1)***
- ***use best practice probabilistic processes in its cost-benefit analysis of network and non-network options to address reliability issues and/or constraints***
- ***describe its full cost-benefit analysis as part of its process for the Regulatory Investment Test for Transmission***
- ***make public all methodologies, parameters, data and other inputs used in the analysis***
- ***work closely with each of the transmission companies concerned to make sure that their experience and input is fully understood and where mutually agreed, appropriately incorporated into the analysis***
- ***use its best estimate of peak demand forecasts, having sought input from all relevant stakeholders***
- ***ensure that planning decisions are consistent with National Electricity Market-wide efficiency objectives***
- ***not carry out the 'procurer' role currently done in Victoria until it can be demonstrated that the benefits of such an approach exceed the costs in the Australian National Electricity Market environment.***

This recommendation has several elements. The first is the proposal to implement probabilistic planning, as is used in Victoria. The NGF has continued to question the practical application of a probabilistic approach as the network is, and can only be operated in real time on a deterministic basis and it is unclear how this fits with the probabilistic planning model. It is also interesting that contrary to this recommendation, the Commission has reached the view that transmission in the NEM is appropriately sized and this view tends to imply that the planning regime is working.

There are currently two major interconnector studies being undertaken so there does not appear to be any problem in the assessment of inter-connector upgrades.

NGF is very concerned with the fragmentation of responsibility under the Victorian model. In most states, one organisation is responsible for transmission planning, asset ownership and operations. This approach simplifies decision making, applications for connections and makes it clear who is responsible for any problems. In our view, there is not a material problem in transmission planning that needs to be addressed with the exception of Victoria where the existing problem will be solved once AEMO is removed from the planning process..

5.1.3 DRAFT RECOMMENDATION 15.8

The Australian Energy Market Operator should act as the planner of last resort where it considers that underinvestment could expose the network to serious reliability problems, with the right to direct investment should the Australian Energy Market Operator believe that not to do so could seriously compromise the reliability

of the National Electricity Market. The Australian Energy Regulator would act as an arbitrator in any disputes.

NGF believes that this is an unnecessary addition. It is another version of dividing and diluting responsibility. NGF believes that an underlying principle should be to have clear accountability and responsibility for each participant.

5.1.4 DRAFT RECOMMENDATION 15.10

Transmission businesses not already using this approach should transition to dynamic capacity ratings on all critical equipment.

NGF supports this development where it is technically feasible and cost efficient to do so. All TNSP's have been using this approach for several years where it has been possible to implement and further roll outs of .dynamic capacity ratings are highlighted in the Annual Planning Reports provided by the TNSP's. The NGF believes that this will lead to less conservative line ratings and better asset utilisation which will lead to lower costs over time.

5.2 Chapter 17 The role of interconnectors

5.2.1 DRAFT FINDING 17.1

The available evidence suggests that, given the existing network conditions, the current physical capacity of interconnectors is reasonably appropriate.

NGF supports this view. The RIT-T (and formerly the regulatory test) is designed to only build economically efficient investments. They have now been in place for some time (under different names but with the same principle) and this finding of the Productivity Commission is an endorsement of the outcomes from policy certainty in this area.

It is interesting to note that, while the physical capacity was right a few years ago, the declining demand, particularly due to energy efficiency measures, the installation of small-scale generation (i.e.PV) and rising energy prices and with the impacts of the Global Financial Crisis, means that there is possibly some additional capacity available in the network currently. The major challenge will be to build the transmission network needed for a lower carbon generation fleet whilst maximising the value from existing sunk investments.

5.3 Chapter 19 Identifying future transmission investment

5.3.1 DRAFT RECOMMENDATION 19.1

The Regulatory Investment Test for Transmission should not be amended to include indirect effects of investment decisions.

NGF supports this recommendation and the Commission's thinking behind it. It is interesting to note that the RIT-T actually does implicitly recognise the costs of carbon as these are internalised in the generator fuel costs. So a solution with a lower carbon footprint will actually be preferred under an RIT-T test, other things being equal.

5.4 Chapter 21 Governance

5.4.1 DRAFT RECOMMENDATION 21. 1

There should be an independent review of the resourcing and capacity of the Australian Energy Regulator to undertake all its functions, including whether there are impediments to its performance and options for improvement.

This recommendation is redundant if recommendation 21.2 is proposed.

5.4.2 DRAFT RECOMMENDATION 21.2

The Australian Energy Regulator should have greater control over, and accountability for, the resourcing and management of its functions. It should:

- ***have its own separate budget sufficient to meets its role***
- ***submit a separate annual report of its performance***
- ***publicly reveal its strategy for improving its performance***
- ***have an independent capacity to negotiate resource sharing arrangements with a range of agencies, not just the Australian Competition and Consumer Commission***
- ***ensure that it establishes and retains the necessary specialist expertise to competently carry out its role, in accordance with draft recommendation 8.6***
- ***develop a program for regular ongoing communication and interaction with network businesses, their customers and other relevant stakeholders, with those interactions not just confined to periods of regulatory determinations.***

NGF supports this recommendation. AER is a key institution for the NEM which was originally conceived as a separate body from ACCC.

5.4.3 DRAFT RECOMMENDATION 21.4

The National Electricity Law should be amended to expedite the making of Rules arising from any appropriately conducted independent review relevant to the National Electricity Market and that are agreed by the Standing Council on Energy and Resources. This should be achieved by giving the:

- ***Australian Energy Market Commission the power to expedite Rule requests and***
- ***South Australian Minister a broader power to make Rules.***

NGF supports the ability of AEMC to expedite rule changes where there is a recognised review. The expedited rule change process has sufficient safeguards.

NGF does not support the SA Minister being able to make rule changes. One of the major concerns of participants is the level of Government intervention in the market. Such a change will exacerbate these concerns.

In addition, the Draft paper makes a reasoned argument for the first part of the recommendation but provides no evidence for the need for the second part.

6 Information requests

Chapter 18 Efficient use of interconnectors *The Commission seeks participants' views about the extent to which flaws in a state-based hedging market distort the locational incentives of generators and large loads.*

This issue is not about flaws in a state-based hedging marketThe primary locational signal for a generator is to locate where the fuel source is and there are signals which discourage generators from seeking to locate in congested areas. Wind developers appear to be balancing transmission, environmental and energy price factors (level of expected constraint) in their locational decisions more recently.

7 Peak Demand and Demand management

In addition, the NGF has comments on section 9, "Peak demand and demand management" in the Draft Report. The NGF has concerns that the purported benefits of demand management schemes are simply investments in metering technologies or changes in regulations that produce wealth transfers and no improvement in economic efficiency. For example, in the "key points" box on page 301 there is a statement that capacity that caters for less than 40 hours a year of electricity consumption (or under one percent of the time) accounts for around 25 per cent of total electricity bills. The 25 per cent of the electricity bill represents investment that is sunk, either in generation or network infrastructure. These need to be paid for and cannot disappear. If the regulations are changed to allow demand management where a consumer can avoid the "cost" of sunk network infrastructure this is solely a transfer of wealth from those consumers changing consumption to those that do not. This is because networks are fully entitled to recover their costs under their regulatory framework. In either case there is a potential transfer of wealth for no benefit.

We seek assurance that the Productivity Commission's recommendations to incentivise demand management refer to incremental generation and network investment, not that which has already been sunk. To over-incentivise demand response, by crediting the avoidance of sunk costs, would result in an inefficient level of demand response occurring. Wealth transfers could have social repercussions (in the case of network costs as someone has to pay) and in the long term possibly repercussions for reliability in the electricity sector.