6 February 2012

John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
SOUTH SYDNEY NSW 1235

Dear Mr Pierce,

EPR0019: Transmission Frameworks Review First Interim Report

Origin Energy Limited (Origin) welcomes the opportunity to contribute to the Australian Energy Market Commission's (AEMC) Transmission Frameworks Review (TFR).

Origin notes that some of the proposed policy options being investigated under this process have the potential to significantly alter the functioning of the NEM. If this in fact the intended outcome, then the case for change (i.e. the materiality of any perceived problems) and resultant implementation costs and efficiency impacts must be taken into account. In particular some of the options pertaining to network access represent a fundamental departure from the current arrangements. At this point Origin is not convinced that fundamental changes to the current access regime are required.

This submission focuses on access and planning issues. Our views on network connections are outlined in the Private Generators Group submission.

If you wish to discuss any of these issues further please do not hesitate to contact me on (02) 8345 5250 or Steve Reid on (02) 8345 5132.

Yours Sincerely,

Tim O'Grady
Head of Public Policy

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Executive Summary

Access

- At the conclusion of its 2008 *Congestion Management Review* (CMR) the AEMC found that network congestion was not a problem of sufficient materiality to warrant a significant change to the current transmission framework. There is no evidence to suggest that there has been a material change in circumstance that would warrant a re-think of this position.
- All the evidence indicates that at least half of all congestion is as a result of outages and thus unlikely to benefit from the adoption of any of the proposed options outlined in the Interim Report.
- The AER's analysis of congestion costs has shown these to be negligible with respect to the value traded in the NEM.
- There was initial concern that climate change policies could lead to a significant increase in congestion levels. However now that the details surrounding the carbon price and Renewable Energy Target (RET) are now known, it appears unlikely that this will be the case. Wind build is likely to be sufficiently dispersed to allow for the avoidance of unmanageable levels of congestion in particular areas. Additionally the measured start to the carbon pricing scheme means that it will not significantly alter the generation mix in the medium term.
- Given the NEM's history of having relatively low congestion costs and that the outlook for congestion does not indicate that this is likely to change significantly, we question the need for fundamental changes to the current access framework.
- Certainty, equal treatment and least cost outcomes are three desirable features of an efficient access regime.
- Open access provides an appropriate balance in satisfying the above objectives of an efficient access regime, allowing for the key principles to be optimised. In contrast some of the proposed options seek to enhance one principle often at the expense of another.
- The continued success of the open access regime is largely dependent on the various parts of the transmission framework working well together. The disproportionate focus on network access as a means of addressing any perceived issues pertaining to congestion seems to discount the significance of planning and investment (as well as the operation of the network), in maintaining an efficient level of congestion.
- Origin is not convinced that the introduction of a congestion pricing mechanism is required given that the costs of any mis-pricing have been historically low. Congestion pricing allows for greater dispatch efficiency but diminishes certainty for generators by exposing them to greater levels of basis risk.
- It seems impractical to have separate standards for generators and load, and it is not clear how the AEMC would reconcile both under Option 3. If the generation standard calls for a greater level of network build than the load standard, it could result in over-investment.
- It seems unlikely that it would be economical for an intermittent generator to pay for firm access under Option 4 when that access would only be required less than half the time at largely unknown intervals. Similarly, peaking plant utilise the network infrequently when compared to baseload generators and it is not clear how any firm access charge would take this into account. Therefore, a potential outcome of the

Optional Firm Access (OFA) model is a situation where only baseload plant opt to be firm, and intermittent and possibly peaking plant choosing to be non-firm and hence liable to pay compensation when there is congestion.

- Concerns around revenue adequacy may come into play if there is imbalance between those generators wishing to be firm and those wishing to be non-firm.
- There is a different dynamic in establishing any type of financial transmission right in an established market such as the NEM where the issue of property rights is bound to be problematic. For non-firm generators the exposure to greater levels of basis risk could diminish the value of existing contracts. This is likely to heighten concerns regarding regulatory risk and lead to calls for compensation by affected parties.
- The implementation of Option 5 would require a major change to the market, with dubious ensuing benefits, and may ultimately prove to be unworkable. Having one zone may be appropriate in a relatively dense transmission system such as the UK, but is unlikely to be suitable for a long 'stringy' network such as the NEM.

Planning

- Generally we are of the view that the new national planning arrangements along with the recently revised Regulatory Investment Test – Transmission should be given time to work before the contemplation of significant changes.
- Notwithstanding this we support an investigation into the appropriateness of adopting the South Australian model where the planning function is conducted by a separate entity to the transmission owner.
- We are, however, strongly opposed to the national roll out of the Victorian model. The history of network connections in Victoria has shown that they can be more complicated, expensive and time consuming than in any other jurisdictions.

1. Network access

The Interim Report outlines a number of options to bring about change to the NEM's access regime primarily as a means of enhancing congestion management. In contemplating these alternative arrangements it is therefore useful to examine congestion in the NEM against a number of key parameters, including: historical occurrence; nature (transitory/enduring); materiality (efficiency impact); and future outlook. Origin's assessment has led us to conclude that congestion has not been a serious problem for the market given that its incidence and efficiency impacts have been minimal. We have also found no compelling evidence to suggest that this is likely to substantially change.

1.1 Congestion today

The adverse impacts of congestion have been well documented, in that it can influence the efficiency of dispatch and ultimately the cost of meeting demand by allowing for the displacement of lower cost plant with more expensive generation. Additionally, the 'constraining off' of generators on the network can create uncertainty over revenue streams, which is not conducive to investment. Clearly it is not efficient to eliminate all congestion, given that the resultant benefits would be outweighed by the cost of the required augmentations. The challenge therefore is to ensure that congestion levels are kept within efficient / manageable limits. In our view there is every indicator that the NEM has been successful in this regard.

At the conclusion of its 2008 *Congestion Management Review* (CMR) the AEMC found that network congestion was not a problem of sufficient materiality to warrant a significant change to the current transmission framework. The AEMC noted that:

'*…most constraints had a relatively short life cycle in that they caused some mis-pricing for only one or two years before being largely addressed by investment in transmission or generation infrastructure'*[1].

Similarly, the AER's work in estimating the impact of network congestion reveals some useful insight as set out in its State of the Energy Market Report[2]. These include that:

- The cost of congestion (as exhibited in Figure 1) is minuscule when compared to the scale of the market. For the study period, congestion costs were highest in 2007-08, at $189 million - a mere 1.7 % of total NEM turn over that year. It also appears that these costs are inclusive of both inter-regional and intra-regional congestion. This is significant given that it is intra-regional congestion that is the focus of the proposed options outlined in the Interim Report. Given that the overall cost of congestion is negligible, the introduction of radical measures to address the even smaller cost of intra-regional congestion seems to be a disproportionate response.
- Typically, most congestion costs accumulate on just a few days, and are largely attributable to network outages[3] as seen in Figure 2. Factors such as extreme weather have a major impact on outages and hence congestion. For example there were significant congestion costs in January and February 2009 partly due to a number of unplanned outages on days of high demand – e.g. in January the

[1] AEMC 2008: Congestion Management Review Final Report, pg 13
[2] AER 2009: State of the Energy Market Report 2009, pg 143
[3] AER 2010: State of the Energy Market Report 2010, pg 63

Basslink interconnector and some transmission infrastructure in the Latrobe Valley were out of service. This is noteworthy as it suggests that the nature of congestion is more transient as opposed to enduring. It also calls into question the effectiveness of explicit measures to enhance locational signals (a feature of some of the proposed options) where congestion is outage driven.

Figure 1 Cost of transmission congestion

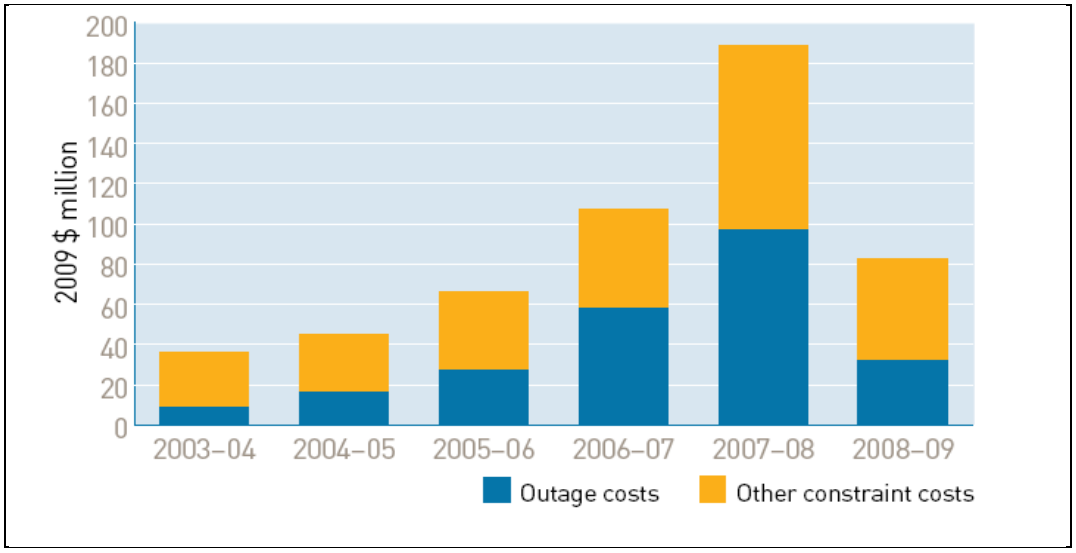
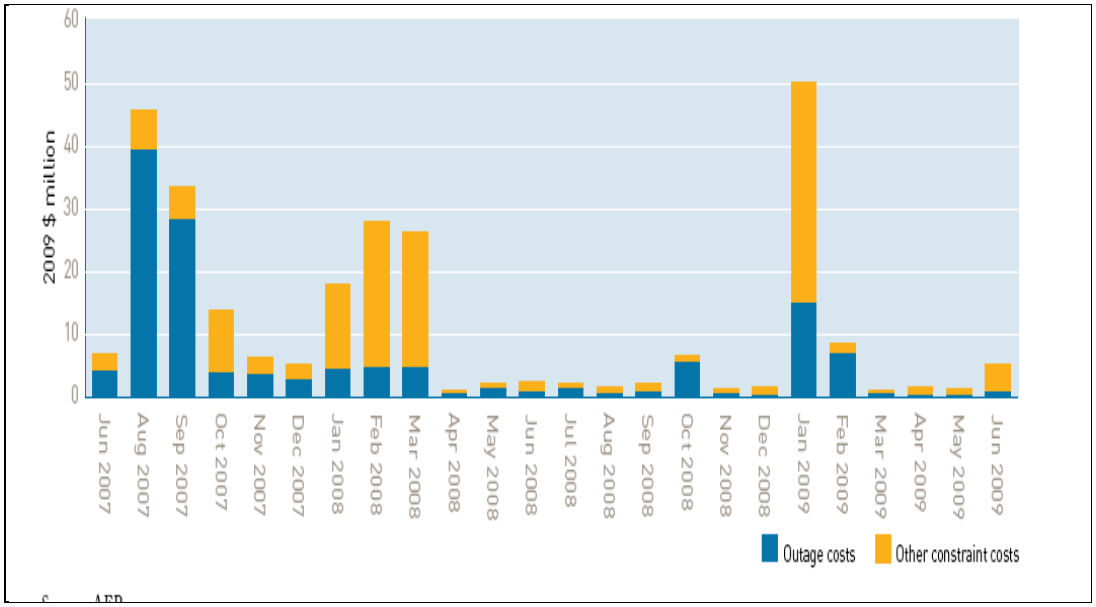


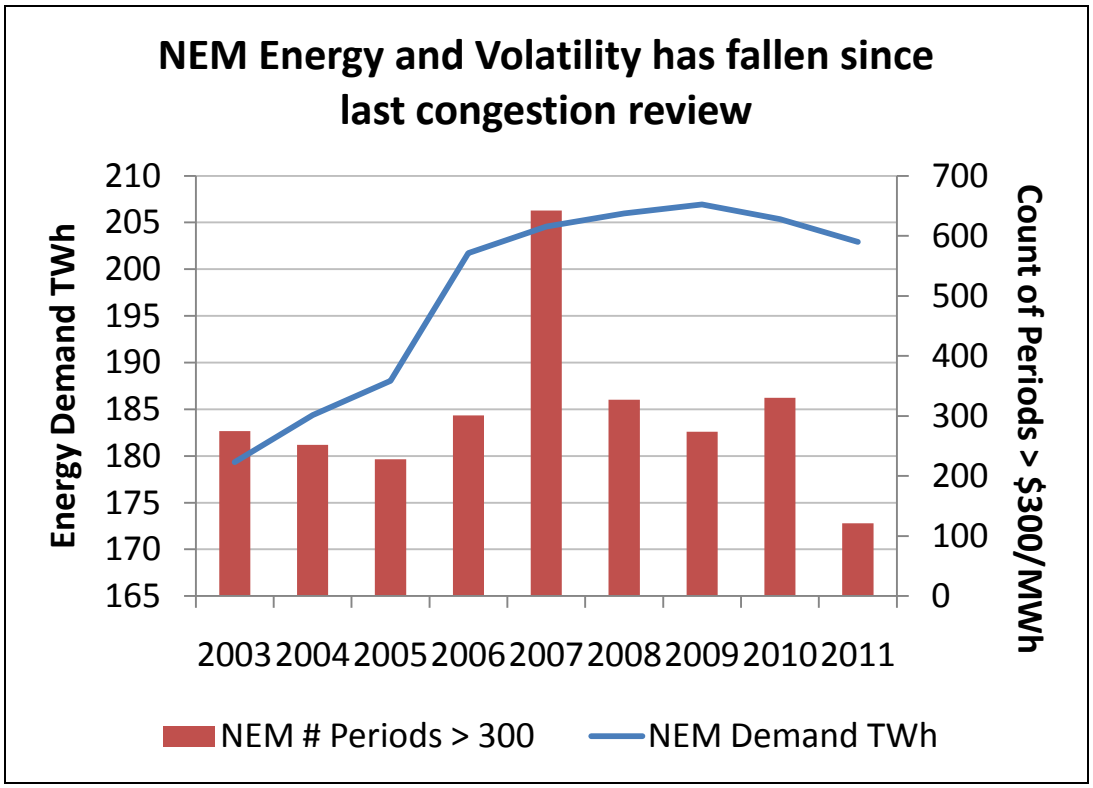
Figure 2 Monthly costs of transmission congestion for 2007-08 and 2008-09



The AER ceased its assessment of congestion impacts in 2008/09, and thus we have not been able to observe these costs for the past 3 years. Nevertheless, we do not consider there to be any significant market changes since that time that would lead to a substantial increase in congestion levels. This is reinforced by our observation of some

key market indicators. Figure 3 shows that over the past few years both demand and volatility (as measured by pricing periods greater than $300/MWh) have declined. The significance of this is that we would expect increasing levels of congestion to coincide with rising demand and increased volatility. We are by no means stating that this is a definitive measure (and it will be important that AEMO broadens its work in this area to more formally assess the impacts of congestion) but it does serve as a useful proxy of the trend in congestion.

Figure 3 NEM volatility and demand



1.2 The outlook for congestion

As we have outlined above there is nothing to suggest that there have been unmanageable levels of network congestion in the NEM.

In advancing the various options in this review it is important to consider whether there have been any significant market changes (since the CMR) that could impact the outlook for congestion, warranting a re-think of the AEMC's previous position. One obvious development is that there is now greater clarity surrounding the direction of climate change policy with the passage of the Clean Energy Act. Indeed, the AEMC has stated (both in the CMR and its *Impacts of Climate Change Policies Review*) that climate change policies have the potential to place undue stress on the current market settings and could result in greater levels of network congestion. This concern stems from the anticipated new patterns of generation under the RET and carbon price, with increasing amounts of lower emitting plant (particularly renewables) expected to enter the market. The AEMC made the following comments in the CMR:

'The impact on the NEM of government policy initiatives in response to climate change (including the promotion of renewable energy technologies) will be profound. There are likely to be: significant amounts of new generation in remote parts of the network; closure of existing fossil fuel generation capacity; large shifts in the patterns of electrical flows across transmission and distribution networks; and new challenges for system operation and security of supply resulting from significant volumes of intermittent generation, such as wind turbines or small-scale embedded or micro generation. The pattern of these changes will be strongly influenced by policy settings, such as the details of a national emissions trading scheme, which are yet to be resolved.'[4]

There has also been particular concern that South Australia (SA) could experience higher levels of congestion given its relatively strong wind resources which could incentivise a disproportionately large number of wind generators to locate there.

Whilst Origin has not undertaken any economic modelling to discern the impacts of climate change policies on congestion levels, our high level assessment suggests that the perceived impacts may not be as dire as envisioned.

1.2.1 The RET

In SA we have already started to observe some issues associated with high wind penetration. For example high wind output at times of low demand have resulted in low and in some cases negative spot price outcomes. There is also concern that the State is quickly approaching its saturation point in terms of how much wind generation can be accommodated under the existing interconnector limits. Origin considers that these issues will prove to be the natural limiting factor in how many wind farms choose to locate in SA. The expected higher levels of congestion in SA are predicated on the notion that most / all of that State's wind resources will be developed and that network upgrades will not keep pace with generator entry. In terms of the former there are a number of issues that renders this outcome implausible. AEMO noted in its 2011 NTNDP that:

'Wind generator revenue is impacted by a series of market incentives for generation to locate in particular places, including spot market prices, marginal loss factors and network congestion, so that the quality of the energy source is not the only consideration for renewable generation investors'[5].

The above statement suggests that a good wind resource will not be the only factor when wind investors consider location decisions. The prospect of declining revenue should limit the number of wind farms that choose to locate in SA, helping to curb generator induced congestion.

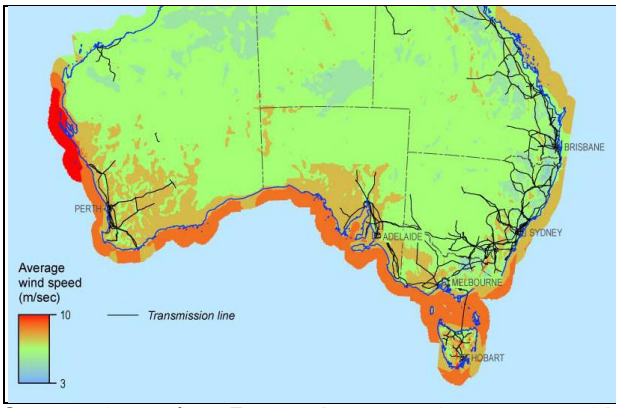
As exhibited in Figure 4 it should also be noted that the quality of wind resources are sufficiently dispersed throughout the NEM which will allow prospective wind generators to choose locations away from congested areas. This dispels the notion that all wind resources in SA will need to be developed in order for the RET to be met. A look at wind build over the past few years (Figure 5) also shows that there has been a levelling off in SA in recent years with a steady increase in other States such as Victoria. This in our view

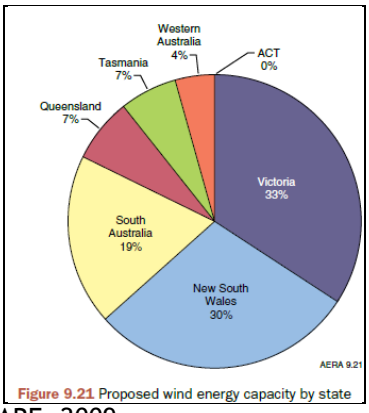
[4] AEMC 2008: Congestion Management Report Final Report, Exec Summary, Pg viii/ix

[5] AEMO 2011: National Transmission Network Development Plan 2011, pg 4-15

is evidence of the market working as wind generators start to weigh up the possibility of declining revenue, lower capacity factors and increased prospects of being constrained off when locating in SA.

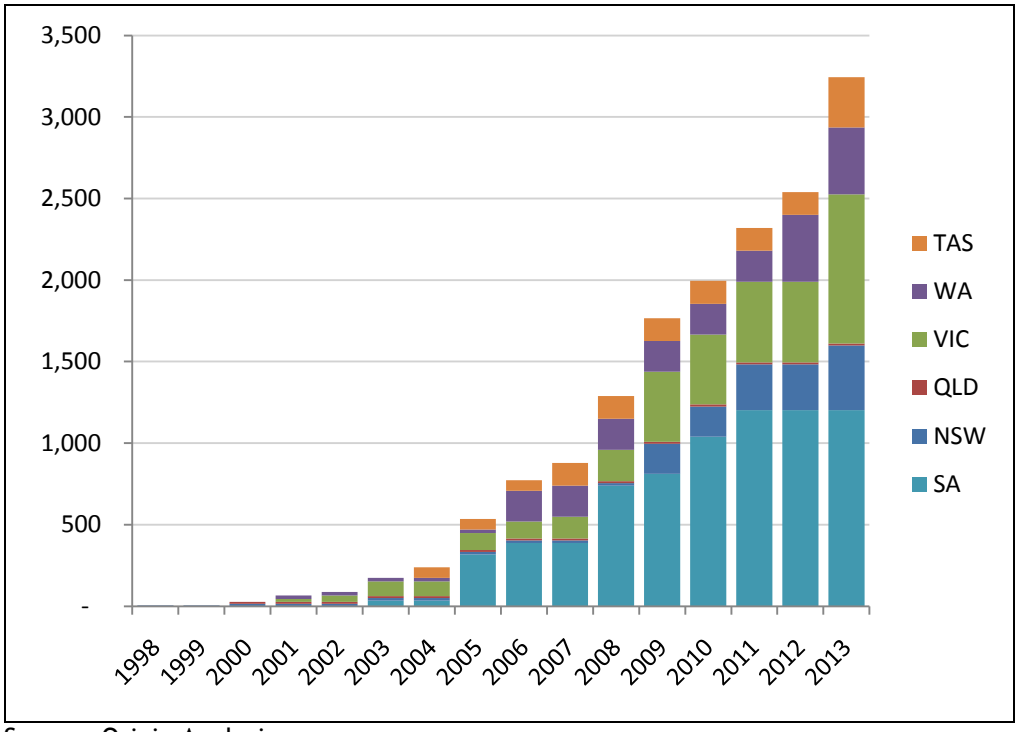
Figure 4 – Australia wind resources





Source: Australian Energy Resource Assessment, ABARE, 2009.

Figure 5 Wind Build Existing and Under Construction



Source: Origin Analysis

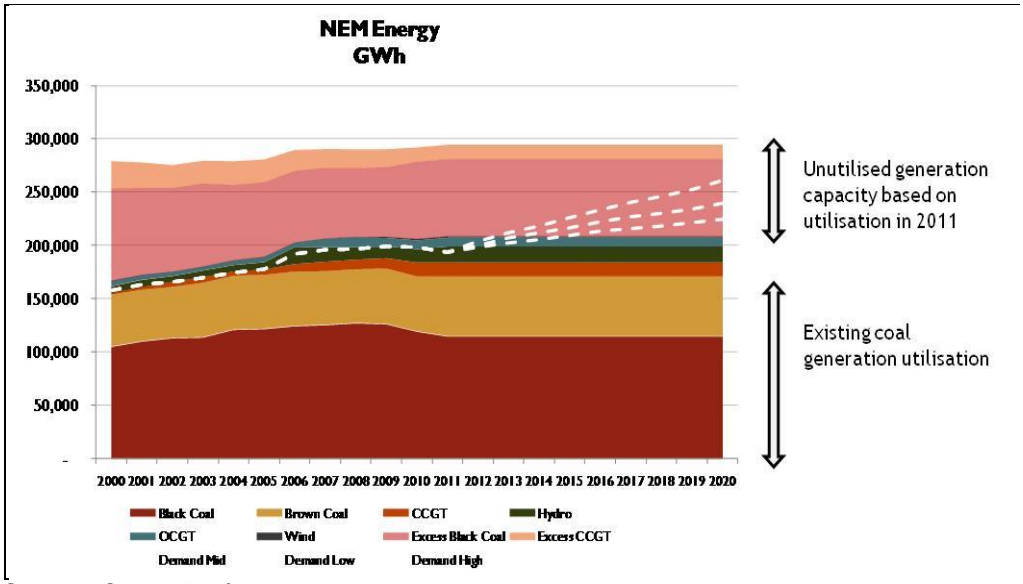
1.2.2 The carbon price

It is unlikely that the introduction of the carbon price will have a material impact on congestion, particularly in the medium term (to 2020), as it will not drastically alter the generation mix compared to the status quo. The reason for this is twofold:

- The carbon price is unlikely to be high enough to encourage a significant shift away from coal fired generation in the medium term. Most capacity growth is expected to come from increased gas peaking plant (to meet growing peak demand) which is more flexible in terms of its location options. It is important to note that peaking plant are able to locate relatively further way from its fuel source relying on relatively cheaper gas transmission, thus potentially avoiding congested areas on the electricity transmission network.
- Generally, demand growth is not significant enough to require large additions of baseload capacity pre 2020 as the lingering effects of the economic slowdown from the GFC, energy efficiency measures, and the increased up-take of solar PV have contributed to the dampening of residential demand growth rates. The NEM's required energy growth between 2012 and 2020 is around 40TWh. Most of this increase can be met by increasing capacity factors on existing black coal generators in NSW and QLD, rather than significant new capacity build of baseload plant. Currently NSW and QLD coal combined, operate at around a 67% capacity factor, leaving significant unutilised energy to accommodate future energy demand as shown in Figure 6 below.

What this therefore means is that the mass closure of existing coal plant and the vast shift in electrical flows across the network that the AEMC alluded to in the CMR is unlikely to occur. With a fairly modest carbon price, any changes in the patterns of generation will be more gradual, giving the transmission framework time to adapt through the implementation of incremental changes.

Figure 6 Underutilised capacity in the NEM



Source: Origin Analysis

1.3 Options to alter network access

In examining the AEMC's options, it is worth examining the desirable characteristics of an efficient access framework.

1.3.1 Principles of an ideal access regime

- **Certainty**. Uncertainty surrounding network access can have negative implications for longer term efficiency if potential generators are concerned about getting their output to market to the extent that they choose to delay or forgo investment. This is generally referred to as dispatch risk. Another issue – basis risk, is where price separation between nodes (regions in the case of the NEM's zonal structure) exposes generators to potential losses when they enter contracts that are referenced to another node/region. The optimisation of dispatch and basis risk allows for greater revenue certainty for generators and should be a key feature of an efficient access regime.
- **Equal treatment**. The principle of equal treatment constitutes technology neutrality and a non-discriminatory approach in dealing with both new and incumbent generators. All generators should have the same rights in accessing the network and the access arrangements should not afford an advantage to any class of generator at the expense of another. This is important given that favouring one generator over another on the basis of technology or incumbency can lead to market distortion.
- **Least cost outcomes**. An access regime should also allow for efficient market outcomes enabling the meeting of demand at least cost (dispatch/productive efficiency) and facilitating the entry of the optimal mix of plant in the longer term (dynamic efficiency).

Arguably no one access regime can satisfy the above objectives perfectly and there may well be tradeoffs.

1.3.2 Option 1 – Open Access

With all generators having equal rights to the network, the open access regime is in some ways analogous to a market where there is minimal intervention. Origin is supportive of markets and considers that intervention can only be justified where there is clear case of market failure. There are no signs of such failure in the case of the current access arrangements. This is not to say that policy makers should not consider incremental improvements where appropriate, but rather that there should be a reasonably high threshold to justify fundamental changes of the nature proposed in the Interim Report.

Generally open access has worked well in facilitating a high level of reliability. If uncertainty around dispatch was of major concern it would be evident in the reluctance of prospective generators to enter the market. It should also be noted that open access provides an appropriate balance in meeting the key principles of an efficient access regime, allowing for these principles to be optimised. In contrast some of the proposed options seek to enhance one principle often at the expense of another. For example the desire for greater dispatch efficiency through more granular pricing diminishes certainty for generators by exposing them to greater levels of basis risk.

The continued success of the open access regime is largely dependent on the various parts of the transmission framework working well together. That is, the ability of open access to deliver the required dispatch certainty and efficiencies is contingent on the setting of appropriate transmission reliability standards as well as a robust and proactive approach to planning and investment. The disproportionate focus on network access as a means of addressing any perceived issues pertaining to congestion seems to discount the

significance of planning and investment (as well as the operation of the network), in maintaining an efficient level of congestion.

In terms of any current inefficiencies, it has not been demonstrated that mis-pricing is of a sufficient scale to warrant the introduction of explicit measures that would have the effect of fundamentally changing the current arrangements. With regard to dispatch certainty, where congestion is a result of outages this is an issue of how transmission businesses plan and operate the network. There is also no evidence to show that any generator driven congestion is at inefficiently high levels.

No set of access arrangements are likely to be perfect, but when compared to the current framework, none of the proposed options are demonstrably better and in general have deficiencies which should preclude their adoption. If there are found to be shortcomings in the current framework, the AEMC should look to make incremental improvements where appropriate not wholesale changes when there is no compelling reason to do so. A particular focus should be how the various elements of the transmission framework can better work together to achieve efficient outcomes.

1.3.3 Option 2 - Open access with congestion pricing

The AEMC states that the purpose of congestion pricing is to introduce a signal to generators that reflects the short run costs of using the network which is intended to remove the incentives for disorderly bidding when congestion occurs. It is envisioned that this would allow for productive efficiency, ensuring the dispatch of the lowest cost plant to satisfy demand. Origin appreciates the intent of the congestion pricing mechanism as described in Option Two and considers that it could lead to a marginal improvement in the efficiency of dispatch. We are not convinced, however, that this mechanism is in fact required. To this point, the materiality of the harmful effects of any mis-pricing in the NEM has not been demonstrated. There is a lack of evidence to support that congestion induced mis-pricing has led to productive inefficient outcomes of a magnitude that undermines the meeting of the national electricity objective (NEO). A key consideration is whether the total elimination of such mis-pricing is in fact an efficient outcome, particularly where:

- the incidence (and ultimately impact) of such behaviour is negligible; and
- the accompanying effects of any congestion pricing tool results in unintended market distortion

In its 2008 CMR the AEMC highlighted that modelling by Frontier Economics (Frontier) found that the impact of constraints binding and causing inefficiency through mis-pricing was relatively low:

'Frontier found that production costs in the scenario with mis-pricing across the entire NEM were $8.01 million higher than in the base case in which all generators were assumed to bid their capacity at short-run marginal cost. This represented 0.47% of the NEM's annual total production costs of more than $1.7 billion, which indicated that the impact of constraints binding and causing inefficiency through mis-pricing was relatively low'[6].

[6] AEMC 2008: Congestion Management Review Final Report , pg 15

The AEMC's analysis also found that most constraints had a relatively short 'life cycle', in that they caused mis-pricing for only one or two years before being largely addressed by investment in transmission or generation infrastructure[7].

The intent of a congestion pricing mechanism is to expose generators to their implicit local / nodal price at times of congestion. While we acknowledge that this could allow for efficiency gains in terms of dispatch, it would also have the effect of exposing generators to greater levels of basis risk. Currently generators who enter contracts with counterparties in other regions must contend with inter-regional price separation. If there is added exposure to intra-regional price separation, (with no means of hedging this risk), it could result in lower levels of contracting. This is because generators are likely to limit intra-regional trade as a means of managing their exposure to intra-regional price differences. Frontier in a report to the AEMC for the CMR highlighted the negative impacts of increased basis risk where it leads to a reduction in trading:

'*…competition for financial derivative products across the NEM could be reduced. Retailers tend to rely heavily on such products to hedge their spot market exposures and typically have highly inelastic demand for them, so less competitive contract offerings could increase contract market premiums. This could eventually flow through to higher retail prices, particularly in net importing regions. Higher retail prices could, in turn, lead to lower consumption by loads compared to a situation in which basis risk was lower*.'[8]

This risk could be somewhat mitigated depending on the proportion of the intra-regional settlement residues a generator receives when the constraint binds. It should be noted, however, that there would still be some deviation from the regional reference node, the uncertainty of which could result in the undesirable outcomes outlined above. This highlights the need for the AEMC to be mindful of the trade-off associated with the pursuit of any one principle (in this case greater dispatch efficiency) and the expense of another (e.g. generator certainty).

Another concern with a congestion pricing mechanism is that it does not target the underlying reasons for any given level of congestion. Merely improving the efficiency of dispatch does not address the root causes of any inefficient congestion. For example it is ineffective where congestion is a result of outages or deficiencies in network planning and investment.

1.3.4 Option 3 – Generator Reliability Standards

There are a number of issues that should be taken into account when considering the establishment of a reliability standard for generators. In many ways the robustness of the NEM is gauged by its performance against the reliability standard, which is an explicit measure of the market's effectiveness in meeting demand. This is appropriate as ultimately the market exists to ensure that demand requirements are met in the most efficient manner. This has been the rationale for having TNSPs expand their networks in accordance to a reliability standard for load. From this perspective it also makes sense that it is load that bears the costs of augmentations to the shared network through the payment of transmission use of system (TUOS) charges. The introduction, therefore, of a separate standard for generation, with generators paying some type of deep connection charge or TUOS is not necessarily aligned with the market objective.

[7] *Ibid*, pg 13

[8] Frontier Economics, April 2008, Generator Nodal Pricing – a review of theory and practical application, pg 26

It seems impractical to have separate standards for generators and load, and it is not clear how the AEMC intends to reconcile both. If the generation standard calls for a greater level of network build than the load standard, it could result in over-investment. Another issue is how the generation standard would be determined. The AEMC states that generators would be divided into zones with a common standard applied to each zone; it is not clear, however, on what basis this would be done. Generators in each zone are likely to value access differently based on factors such as plant type (e.g. peaking, baseload, or intermittent). This makes it more challenging to devise a common standard that is amenable to all, resulting in winners and losers amongst generators in particular zones, which is sure to be a point of contention.

Determining the quantum of any deep connection or TUOS charge would also prove difficult. Due to the physical characteristics of shared transmission networks there are externalities associated with augmentations as transmission investment in one area will have flow on effects for other parts of the network. This therefore means that it would be challenging to assign the true cost of a shared network augmentation to any one generator. As a result any TUOS or deep connection charge is unlikely to be truly reflective of the economic cost of that generator's impact on the network and can only be tokenistic.

1.3.5 Option 4 – Optional Firm Access

Congestion can impede investment if apprehension surrounding access to the regional reference node (RRN) is of a magnitude that generators are wary of entering the market. The objective of firm transmissions right (FTR) is to give generators certainty around access to the RRN when congestion occurs. The Optional Firm Access (OFA) model provides generators with the option of obtaining a firmer level of access. Under the OFA a firm generator would be compensated when congestion causes it to be constrained off the network provided it would have otherwise been dispatched. At first glance this seems reasonable as those generators who most value access can decide whether it is worth paying for. A closer look, however, reveals that the implementation of such a regime in the NEM is not as straight forward as it may appear.

Firstly it is not clear that the OFA model would provide the level of certainty that would be required by those seeking some firmer access. The AEMC states in the Interim Report that:

'*…firm generators might not be fully compensated outside of defined normal operating conditions. Therefore access would only be truly firm under such conditions*.[9]'

Given that approximately half of all congestion is a result of outages this calls into question the effectiveness of any congestion management tool that only offers protection during system normal conditions. It also raises deeper concerns around the value of implementing such a regime when its usefulness is likely to be limited. If the OFA was to be extended to include outage induced congestion it is illogical that non-firm generators should compensate firm generators, particularly given that the underlying cause of the congestion is outside of their (non-firm generators) control. It would seem more appropriate that transmission companies who are responsible for operating the network be made liable in these instances.

[9] AEMC 2010: Transmission Framework Review First Interim Report, pg 95

Another concern with the OFA is the issue surrounding the type of generators that are likely to seek firm access. Various types of generators (baseload/intermittent/peaking) value access differently which is directly as a result of their capacity factor. It may not be economical for an intermittent generator to pay for firm access when that access would only be required less than half the time at largely unknown intervals. Similarly, peaking plant utilise the network infrequently when compared to baseload generators and it is not clear how any firm access charge would take this into account. Therefore, a potential outcome of the OFA is a situation where only baseload plant opt to be firm, and intermittent and possibly peaking plant choosing to be non-firm and hence liable to pay compensation when there is congestion. This in our view would create a system which gives an implicit advantage to one class of generator at the expense of another, which is in direct contravention of what we consider to be one of the key principles of an efficient access framework. This also raises a number of issues in a broader dynamic efficiency sense particularly when we consider that under the current policy framework, Australia should be on a path to achieving a lower carbon emitting generation fleet in line with carbon legislation.

One of the key issues with any FTR is that of revenue adequacy. Under the OFA proposal the compensation paid to constrained firm generators would be funded through contributions from dispatched non-firm generators i.e. they would forfeit their share of congestion rents. The success of this arrangement seems to be dependent on having a balance between those generators wishing to be firm and those wishing to be non-firm. If there is a disproportionate number either way then there could be too much or too little compensation. Where there is not enough compensation a decision would have to be made whether to socialise the cost or scale down the compensation to the firm generators.

If the OFA is adopted a number of transitional issues are likely to arise. In markets such as PJM which have FTRs, it is important to note that these have been a feature of the market practically since almost inception. There is a different dynamic in introducing FTRs in an established market such as the NEM where the issue of property rights is bound to be problematic. For non-firm generators the exposure to greater levels of basis risk could diminish the value of existing contracts. This is likely to heighten concerns regarding regulatory risk and lead to calls for compensation by affected parties.

1.3.6 Option 5 – National locational marginal pricing

It appears that Option 5 has largely been included for completeness – i.e. to close the loop on the full spectrum of possible options. We have therefore chosen to not place a great deal of focus on this option. It is clear, however, that its implementation would require a major change to the market, with dubious ensuing benefits, and may ultimately prove to be unworkable.

Having one zone may be appropriate in a relatively dense transmission system such as the UK, but is unlikely to be suitable for a long 'stringy' network such as the NEM. Additionally, replacing the current regional TNSP structure with a single national body is ambitious and we have doubts to the practicality of this proposal.

2. Planning

The recent changes to the planning framework, particularly the establishment of the National Transmission Planner should assist in bringing about a more holistic and strategic approach to planning in the NEM. We note that a key focus of this review has been how best to deal with network congestion. Given that congestion levels today are not a significant issue for the market it will be important that the planning framework allows for timely network augmentations to ensure that congestion is maintained at efficient levels. Generally we are of the view that the new national planning arrangements along with the recently revised Regulatory Investment Test – Transmission should be given time to work before the contemplation of significant changes.

2.1 Comments on the proposed options for planning:

- **Improving the transparency of the RIT-T**. Origin would be supportive of this option if it leads to a material improvement in the process without significantly adding to the time it takes to complete the assessment.
- **Aligning TNSPs' regulatory resets**. The AEMC should investigate the practicality of implementing this option as it could allow for a coordinated approach to network planning, with the advantage of being less intrusive than some of the options for significant reform. A key question is whether it would put a strain on the AER's resources.
- **Reliability standard for interconnectors**. We support the further exploration of this proposal. It is not clear, however, how such a standard would be enforced.
- **Harmonised regime based on SA arrangements**. Origin supports an investigation into the adoption of the South Australian model where the planning function is conducted by a separate entity to the transmission owner. This could help avoid any potential conflicts between system planning and the returns received by transmission asset owners. Where this role is undertaken by the same entity it could lead to actual or perceived biases in planning decisions.
- **Single NEM planner – extension of the Victorian model**. Origin does not support the NEM-wide adoption of the Victorian model in which a separate body (in this case AEMO) has a planning and procurement role. The history of network connections in Victoria has shown that they can be more complicated, expensive and time consuming than in any other jurisdictions. For example the tripartite contractual arrangements (where AEMO serves as an intermediary between the connecting party and SP AusNet) leads to a number of inefficiencies. This process adds to the number of agreements required to finalise a connection - which adds to the cost of connection.