NATIONAL GENERATORS FORUM

26 September 2012

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

Reference: ERC0123

Dear Mr Pierce

Potential Generator Market Power in the NEM

The Australian Energy Market Commission announced an extension of the time period for considering the Major Energy Users' Rule change proposal, *Potential Generator Market Power in the NEM*, on 30 August 2012. The AEMC indicated that the extension was necessary to allow the Commission time to consider and analyse issues canvassed in some submissions to the draft determination.

The NGF had previously responded to the AEMC's draft determination indicating its general endorsement of the Commission's analytical framework, modelling results and key findings.

The NGF has formed the view that the main reason for the extension is to enable the Commission to consider matters raised by the Australian Energy Regulator in its response to the draft determination. The NGF has had concerns with the AER's position on key conceptual and analytical questions throughout the course of this Rule change process.

The NGF engaged Frontier Economics to review and critique the AER's submission to the draft determination. Frontier has made the following key observations on the AER work:

- The AER did not address the difficulties of applying the Lerner Index to the NEM;
- Applying the Lerner Index on a half-hourly basis does not inform the assessment of substantial market power;
- The principal drawback of Pivotal/Residual Supply Indexes is that they require a large number of assumptions to be made about various demand and supply factors in the market, including the behavioural responses of other generators;
- It is not enough for a Rule change to make certain unwanted behavioural change unlawful – it must also demonstrate that the benefits of the change outweigh any costs;
- Comparisons between prices and LRMC must be undertaken on a long term basis to inform the assessment of substantial market power;

- South Australian prices have cycled around estimates of LRMC, as one would expect in a workably competitive market;
- Market modelling estimates of LRMC are not definitive and may understate 'true' LRMC;
- On the question of strategic and structural barriers to entry, alternative pro-efficiency explanations for incumbent investments and vertical integration are more convincing than anti-competitive explanations.

We have attached the Frontier Economics report as a further NGF submission to the Rule change.

The NGF intends to participate constructively in the next phase of the Rule change process. We are confident that any further work will re-enforce earlier findings that the NEM design is functional and efficient.

To further discuss this issue and other AMEC initiatives, I would like to invite yourself and other Commissioners to join the NGF Board for a discussion to be held in Sydney on 13 November 2012. I look forward to discussing the arrangements for this meeting in further detail.

Yours sincerely

Tim Reardon
EXECUTIVE DIRECTOR

Potential generator market power in the NEM – Response to AER submission

A REPORT PREPARED FOR THE NATIONAL GENERATORS' FORUM

August 2012

Potential generator market power in the NEM – Response to AER submission

Contents

Executive summary

Frontier Economics has prepared this report for the National Generators' Forum in response to the submission by the AER on the AEMC's Draft Determination on the Rule change proposed by the Major Energy Users Inc on Potential Generator Market Power in the NEM.

The AER suggested measures other than LRMC benchmarks could be used to describe market power in the NEM. However, measures such as the Lerner Index and Pivotal Supply Index are not appropriate alternatives, as they require a large number of assumptions to be made about various demand and supply factors in the market, including the behavioural responses of other generators.

In raising these measures, the AER has highlighted instances of transient pricing power, without demonstrating any clear relationship with substantial market power. This is insufficient grounds for a Rule change, which can only be justified if its benefits exceed its costs.

The AER took issue with the AEMC's use of LRMC to assess market power. In our view, the AEMC considered different estimates of LRMC fairly when comparing costs to prices. We note that several years of wholesale prices above LRMC will typically be followed by several years of lower prices as part of a natural 'cycle' of market outcomes. Indeed, this is what we are now observing across the NEM.

The AER submission devoted substantial attention to analysing market outcomes, particularly in South Australia. The AER contended that average load-weighted spot prices in South Australia exceeded the midpoint of NERA's average incremental cost estimates of LRMC for four successive years from 2006/07 to 2009/10. The AER also said that the load-weighted average price in South Australia for the four year period 2006/7 to 2009/10 exceeded even the average of NERA's top-end estimates of LRMC over the same period. Further, the AER noted that the market modelling estimates of LRMC were low relative to the average incremental cost estimates of LRMC and that the AEMC had accepted the market modelling figures were more accurate.

The AER analysis of market outcomes in South Australia lacks rigour and consistency. As is well-accepted in the market, the relatively high average South Australian prices over the 2006/7 to 2009/10 period were driven by outcomes in one highly unusual year, 2007/8. Prices in other financial years fell within the range of LRMC prices calculated by NERA. South Australian prices since 2009/10 have clearly been below any reasonable estimate of LRMC. Indeed, the load-weighted average price in South Australia for the four year period 2008/09 to 2011/12 was below even the average of NERA's bottom-end estimates of LRMC over the same period. Further, the 4-year average price was 20% lower than the 4-year average of the AER's midpoint of NERA's LRMC estimates.

While market modelling estimates of LRMC have value in assessing market power, they should not be treated as definitive. Even in the unquestionably competitive environment of 2006/07 in South Australia, the average spot price exceeded the market modelling estimate of LRMC by 24%. This suggests that the market modelling estimate of LRMC could understate 'true' LRMC. Alternatively, NERA's market modelling estimates of LRMC may lack robustness as a guide for what prices should be in a workably competitive market in a given year.

The AER submission commented that a number of findings or observations in the report by CEG for the AEMC indicated the presence of strategic and other barriers to new generation entry in South Australia.

We think alternative pro-efficiency explanations for incumbent investments and vertical integration are more convincing than anti-competitive explanations. There is every reason to expect that a participant with a net exposure to wholesale spot prices through its retail business (AGL) would seek to invest in generation to manage its risks in an efficient manner. On the notion that vertical integration can create barriers to entry, neither CEG nor the AER provided meaningful evidence for this view. Finally, a rational explanation has not been provided to explain, in the event that wholesale market prices were high, why vertically-integrated participants would refuse to contract with a standalone generator that offered power at an attractive price.

1 Introduction

Frontier Economics (Frontier) has prepared this report for the National Generators' Forum (NGF) in response to the submission[1] by the Australian Energy Regulator (AER) on the Australian Energy Market Commission's (AEMC's) Draft Determination[2] on the Rule change[3] proposed by the Major Energy Users Inc (MEU) on Potential Generator Market Power in the NEM.

This report addresses the following points raised in the AER submission:

- Section 2 discusses potential additional measures of market power in the NEM
- Section 3 considers the role of LRMC measures
- Section 4 discusses the significance of historical high spot prices in South Australia
- Section 5 reviews the implications of the CEG report for barriers to entry in South Australia

1 AER, *Submission on Draft Determination – Potential Generator Market Power in the NEM*, 1 August 2012 (AER submission).

2 AEMC, *Draft Rule Determination, Potential Generator Market Power in the NEM*, 7 June 2012 (Draft Determination).

3 MEU, *Proposed Rule Change to Enhance Generator Competition Outcomes During High Demand Periods in the NEM*, 15 November 2010 (MEU Rule change proposal).

2 Measures of market power in the NEM

In its submission, the AER suggested that other measures – in addition to the use of long-run marginal cost (LRMC) benchmarks – could be used to describe market power in the NEM and the relationship between transient and substantial market power. The two key measures the AER referred to were:

- The Lerner Index and
- The Pivotal/Residual Supply Indexes

NERA's June 2011 report for the AEMC stated that while these measures were "commonly employed to assist in the detection of substantial market power in wholesale electricity markets", they were beyond the scope of NERA's report. The AEMC's Draft Determination did not comment on these measures.

It is always possible to calculate additional measures of competition and market power. The issue is two-fold:

- First, as with the determination of LRMC, both of these indexes can be calculated in a number of ways depending on the availability of data and both of these measures suffer from their own flaws in the context of an electricity market such as the NEM.
- Second, in the absence of evidence of substantial market power, it is not clear what purpose the calculation of these indexes would serve. Any policy intervention directed towards reducing the exercise of transient pricing power would still need to be justified against the costs it would impose.

We briefly discuss these issues in relation to each of the measures suggested by the AER.

2.1 Lerner Index

The Lerner Index is defined as:

$$(P\text{-}MC)/P$$

Where:

P = price

MC = marginal cost

In competition economics, the Lerner Index provides one of the standard definitions of market power. However, its simplicity is also its greatest drawback, especially in the context of a complex industry like electricity supply that operates within an energy-only wholesale market. In particular, price and marginal cost are variable over time in the NEM and hence their application in the Lerner Index is problematic.

This is because:

- ***Investments in electricity supply are 'lumpy' and long-lived***

  The fixed and sunk costs of electricity supply are substantial relative to operating costs. This raises the question of over what time period should 'marginal cost' be determined: other things being equal (eg plant type/technology), marginal cost over a long time period when capital can vary will be higher than marginal cost over a short period when capital is fixed and only the use of fuel can vary.

- ***Short-run marginal cost can be unclear and ambiguous***

  Even in the short term, the marginal cost of a firm (SRMC) can be difficult to estimate and ambiguous. This is because generators' cost curves are not smooth; they incorporate discontinuities due to plant technology, operational limitations and capacity constraints. Consequently, a generator's supply curve may contain gaps and kinks such that SRMC cannot always be defined as a specific number.

- ***Real-time wholesale prices in the NEM apply market-wide and are extremely volatile***

  The use of spot prices to settle all transactions region-wide makes it difficult to compare price against the costs of any individual generator, except for the generator with the highest SRMC of all generators dispatched at a particular time. Further, the volatility of spot prices makes it necessary to again consider the relevant time period over which price is determined. Another complication is that most generators in the NEM choose to hedge the bulk of their expected output by selling derivatives such as swaps and caps. This means that they are only partly exposed to wholesale spot prices, at least in the short to medium term.

Contention 1

The AER did not address the difficulties of applying the Lerner Index to the NEM

The AER did not engage with the difficulties and drawbacks raised above of applying the Lerner Index to the NEM. Rather, the AER seemed most interested in using the Lerner Index as a means of measuring transient pricing power under tight demand-supply conditions. In particular, the AER submission referred to specific instances of behaviour, such as the bidding of Torrens Island power station in March 2008.

Contention 2

Applying the Lerner Index on a half-hourly basis does not inform the assessment of substantial market power

If the only purpose of calculating a Lerner Index is to compare half-hourly price outcomes with the marginal generator's SRMC, it cannot demonstrate the existence of substantial market power. Under these circumstances, the Lerner Index merely serves to largely restate or re-express the observations of the AER in its reports on price outcomes above $5000/MWh.

2.2 Pivotal/Residual Supply Index

At a theoretical level, residual supply analysis is essentially a special case of the basic Cournot model of oligopolistic competition.

For any industry with a given 'N' number of firms, the Residual Supply Index assumes that:

- N-1 firms are price takers – that is, they face a flat demand curve and bid at marginal cost.
- The N-1 price-taking firms constitute the 'competitive fringe' of the industry. The short run supply curve for the competitive fringe is given by the sum of the N-1 marginal cost curves.
- The Nth firm faces a residual demand curve given by total demand less aggregate supply of the N-1 firms constituting the competitive fringe. The Nth firm produces along this downward sloping residual demand curve, and is thus, by construction, the only firm that exercises market power.

The approach thus places restrictions on the basic Cournot model, by imposing price-taking behaviour on N-1 firms. The Nth firm, in order to maximise profits, bids spot prices that satisfy, for each half-hour of the day, the equation:

$$(P\text{-}MC_j)/P = -1/e_j(p)$$

where MC_j denotes the marginal cost of generator j, and $-1/e_j(p)$ measures the inverse elasticity of residual demand facing generator j.

Pivotal or Residual Supply Indexes have been applied in a number of electricity markets and the use of such an approach forms a key component of the MEU's Rule change proposal. The MEU proposed that where demand rises to a level such that a generator must be dispatched regardless of the price it offers

(meaning that it is a 'dominant generator'), the generator will not be permitted to offer a price above the Administered Price Cap (APC).[4]

The key advantage of these indexes is that they take account of variations in demand and in price elasticity when estimating market power, thereby addressing one of the flaws observed with concentration measures of market power.

Contention 3

The principal drawback of Pivotal/Residual Supply Indexes is that they require a large number of assumptions to be made about various demand and supply factors in the market, including the behavioural responses of other generators

In the *AGL v ACCC* Federal Court decision of 2003, Justice French highlighted some of these shortcomings. In particular, when commenting on the applicability of the residual demand analysis presented by Professor Frank Wolak, Justice French concluded that by leaving out the potential supply response of other generators to any unilateral change in behaviour by the generator in question (Loy Yang A), the model was:

> …not capable of being used to test the likely outcome in the real world of the behaviour [Wolak] prospectively attributes to [Loy Yang A].[5]

To the extent that assumptions about the way other parties respond or do not respond are invalid, Pivotal/Residual Demand Indexes risk providing biased or spurious indications of market power.

As noted in the paper by Alex Henney for the MEU, a Residual Supply Index:

> does not illuminate actual supplier behaviour, indicating whether a supplier may have exercised market power. The [Residual Supply Index] also does not indicate whether it would be profitable for a pivotal supplier to exercise market power. However, it does identify conditions under which a supplier would have the *ability* to raise prices significantly by withholding resources.[6] [Emphasis in original]

As with the AER's interest in the Lerner Index, the development of a Residual Supply Index does not provide useful additional information on whether a generator has substantial market power in the NEM. The purpose of developing

4 MEU Rule change proposal, p.68.

5 *Australian Gas Light Company v Australian Competition and Consumer Commission (No 3)* [2003] FCA 1525, para 566.

6 Henney, A, *Generator Market Power in the Electricity Supply Industry*, October 2008, p.46, attached to MEU Rule change proposal (Alex Henney paper), pp.45-46.

the measure appears to be solely geared towards identifying particular generators that may have an ability to raise prices at particular times.

Indeed, even the AEMC's peer reviewers of the NERA report noted only that measures such as the Residual Supply Index are imperfect means of trying to capture the relationship between transitory and substantial market power.[7]

2.3 Use of measures to justify regulatory response

The suggestions made by the AER in favour of examining other measures of competition lack a robust rationale. These suggestions largely appear driven by a desire to highlight instances of transient generator conduct that the AER considers objectionable, without having any clear or necessary relationship with the existence or exercise of substantial market power. Indeed, the suggested alternative measures of market power could and would not, of themselves, provide evidence that the harm flowing from the exercise of transient pricing power was substantial enough to warrant the proposed regulatory response.

Contention 4

Justification of a regulatory response requires benefits of change to outweigh the costs

The Rule-making test in the NEL requires that a Rule can only be made if it contributes to the achievement of the National Electricity Objective. This, in turn, requires a comparison of benefits and costs from the proposed Rule change. Therefore, it is not enough for a Rule change to make certain unwanted behaviour unlawful – it must also demonstrate that the benefits of the change outweigh any costs. This is something the MEU could not demonstrate in relation to its Rule change proposal.

7 Gans, J. and King, S. (Profs), *Re: Review of NERA Report dated 22nd June 2011 (Final Report)*, Letter to Richard Owens, Director, Australian Electricity Market Commission, July 24, 2011, p.2.

3 Use of LRMC measures

The AER took issue with the AEMC's approach of assessing market power in the NEM by comparing wholesale price outcomes to measures of LRMC.

3.1 AER submission

In its submission, the AER criticised the AEMC's use of a wide band of LRMC estimates. The AER noted that there was a $23.30/MWh difference between the upper bound and lower bound LRMC estimates for South Australia for 2010/11. The AER commented that rather than reflecting prices that would prevail in a workably competitive market, prices that fall within the upper bound estimate of LRMC "clearly have the potential to reflect non-competitive prices".[8]

The AER questioned the AEMC's 'preference' for the upper bound estimate and suggested greater attention be given to the 'market modelling' estimate of LRMC.[9]

The AER also suggested that the AEMC's Draft Determination indicates that prices would need to exceed LRMC for a number of successive years to indicate substantial market power. The AER said:

> …it appears that the under the AEMC's proposed test, the substantial market power threshold will not be breached provided that for one year in every three, price does not exceed the top-end estimate of LRMC, regardless of how extreme prices are in the other two years. The AER considers such an approach may not capture the exercise of substantial market power.[10]

3.2 Response to AER

Section 5.3 of the AEMC Draft Determination discussed the results of NERA's comparison of LRMC with wholesale market prices. The Draft Determination discussed these results on a NEM-wide basis as well as on a region-by-region basis.

According to our review, the Draft Determination consistently referred to the *range* of LRMC estimates, not just the upper bound of NERA's estimates.

8 AER submission, p.5.

9 AER submission, p.5.

10 AER submission, p.6.

For example, in discussing the NEM as a whole, the Draft Determination noted that:

> …annual average spot prices were above the range of LRMC estimates in 2006-07, moving back to within the range in 2007-08 and 2008-09, and below the range in 2009-10 and 2010-11.[11]

As the NGF's submission on the Draft Determination pointed out,[12] pricing outcomes for 2011/12 fell even further in all jurisdictions except for Tasmania. This strongly suggests that prices across the mainland NEM were below the range of LRMC estimates for the third consecutive year.

The Draft Determination also referred to the range of LRMC estimates when discussing the results for individual jurisdictions. In particular, when discussing South Australian prices, the Draft Determination noted that prices were within the range of LRMC in 2006/07, but considerably above the range in 2007/08.[13] Further, it noted that prices in 2008/09 and 2009/10 remained high but were within the LRMC range and fell considerably below the range in 2010/11. As noted above, average South Australian prices fell further in 2011/12 and were thus again likely considerably below the range for the year just completed.

For these reasons, it is not clear how the AER came to the view that the AEMC exhibited a 'preference' for the upper bound estimate of LRMC over the lower bound estimate.

It is also not clear how the AER came to the view that the AEMC would consider that the substantial market power test was not breached provided that prices were below the top-end estimate of LRMC for one year in three, even if prices were extreme for the other two years. A close reading of the Draft Determination does not support this interpretation. The Draft Determination simply pointed out that in assessing the presence of substantial market power, it is necessary to consider a long enough timeframe to reflect the possibility of new entry in response to high prices.[14]

Contention 5

Comparisons between prices and LRMC must be undertaken on a long term basis to inform the assessment of substantial market power

11 AEMC Draft Determination, p.25.

12 NGF, *Draft Rule Determination: Potential Generator Market Power in the NEM*, 20 July 2012, pp.3-4.

13 AEMC Draft Determination, p.27.

14 AEMC Draft Determination, p.15

Use of LRMC measures

Even from a theoretical textbook perspective, it does not make sense to compare prices and LRMC estimates over a short time period in assessing the presence of substantial market power. At the limit, even if all generators in the NEM were to bid all of their available capacity at SRMC at all times (ie even in the absence of transient pricing power), it is quite possible that under certain conditions average outturn prices would exceed estimates of LRMC for more than one year at a time.

More generally, we consider it would be hard for the AER to disagree with the proposition that, in determining whether a generator has substantial market power, a comparison of average prices and estimates of LRMC should be undertaken over a period of more than one year. In our view, several years of wholesale prices above LRMC will typically be followed by several years of lower prices as part of a natural 'cycle' of market outcomes reflecting changes in the balance of demand and supply in the market over time. Indeed, this is what we are now observing across the NEM.

4 South Australian prices

4.1 AER submission

The AER submission on the AEMC's Draft Determination devoted substantial attention analysing to market outcomes, particularly in South Australia.[15]

The AER made a number of points directed against the AEMC's Draft Determination finding that the data are supportive of a conclusion that there is insufficient evidence of market power across the NEM or in any given NEM region. These were:

- Average load-weighted spot prices in South Australia exceeded the midpoint of NERA's average incremental cost estimates of LRMC for four successive years from 2006/07 to 2009/10.
- The load-weighted average price in South Australia for the four year period 2006/7 to 2009/10 exceeded even the average of NERA's top-end estimates of LRMC over the same period. The 4 year-average price was $77.8 while the 4-year average LRMC (upper) was $70.3. The AER said that this suggests the need for further investigation.
- Market modelling estimates of LRMC for South Australia produced by NERA were low relative to the average incremental cost estimates of LRMC.
- The AER further noted that the AEMC had recognised that the market modelling estimates were more accurate estimates of the 'true' LRMC than estimates generated using the average incremental cost approach. The AER said that this suggests that the average incremental estimates substantially overstate the true LRMC. In the AER's view, market modelling estimates of LRMC should be calculated for every year and compared to prices.[16]

4.2 Response to AER

4-year average price vs LRMC

The AER analysis of market outcomes in South Australia lacks rigour and consistency.

On the first and second points made by the AER – that average South Australian prices were excessive over the 2006/07 to 2009/10 period – we consider that the data do not demonstrate the existence of substantial market power.

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15 AEMC Draft Determination, section 4, pp.7-12.

16 AER submission, p.9.

Contention 6

South Australian prices have cycled around estimates of LRMC, as one would expect in a workably competitive market

As was pointed out in the NERA report and the AEMC Draft Determination and is well-accepted in the market, the relatively high average South Australian prices over the 2006/7 to 2009/10 period were driven by outcomes in one year, 2007/8. More particularly, the high price outcomes in 2007/08 were strongly influenced by prices during unprecedented and unseasonable heatwave conditions in March 2008. Prices in other financial years fell within the range of LRMC prices calculated by NERA.

Further, South Australian prices since 2009/10 have clearly been below any reasonable estimate of LRMC. Indeed, prices have fallen to the extent that one can perform a similar exercise as the AER did using more up-to-date data to produce the exact opposite result: the load-weighted average price in South Australia for the four year period 2008/09 to 2011/12 was below even the average of NERA's bottom-end estimates of LRMC over the same period.[17] The 4-year average price was $56.3 while the 4-year average LRMC (lower) was $60.7. Further, the 4-year average price was 20% lower than the 4-year average of the AER's midpoint of NERA's LRMC estimates.

These outcomes are entirely consistent with our comment in section 3.2 above that prices in the NEM tend to move in multi-year cycles in response to changes in the balance of demand and supply over time. These outcomes are also consistent with what one would expect in a workably competitive market.

Market modelling estimates of LRMC

On the third point made by the AER in favour of the market modelling estimates of LRMC, we do not consider that these estimates should be treated as definitive for reasons explained below. Rather – and without knowing the precise details of their derivation – they should be considered as part of the set of information that feeds into the assessment of the presence and extent of market power in the NEM.

At this stage, we only have two market modelling estimates of LRMC in South Australia, for 2007/08 and 2010/11, and we would welcome the development of estimates for other years. Nevertheless, the estimates we have show LRMC of $47.4 in 2007/08 and $72.7 in 2010/11.

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17 Assuming that LRMC for 2011/12 was the same as the 2010/11 LRMC estimate in nominal terms.

Assuming LRMC in 2006/07 was the same as in 2007/08 would imply that LRMC in 2006/07 was about $47. However, we note that the load-weighted average spot price in South Australia for that year was $58.9. This is 24% higher than the market modelling estimate of LRMC. Yet, if any year in the recent past fits the AER's criteria for a well-behaved market, it would be 2006/07. In particular, we note that:

- In its submission, the AER did not claim there to be any significant market power issues in South Australia in 2006/07. Importantly, 2006/07 was before the AGL/TRU asset swap took effect. All of the instances of TIPS bidding behaviour highlighted by the AER in its submission occurred under AGL's ownership over the period from January 2008 to February 2010.
- The AER only published one report of spot prices exceeding $5000/MWh in South Australia during 2006/07 and this was on a day (16 January 2007) when demand reached record levels in Victoria and approached record levels in South Australia, coupled with an outage on the Snowy to Victoria interconnector. Further, the ACCC report for that day noted that the then-owner of TIPS, TRUenergy, actually rebid large volumes of TIPS from high-priced bands to low-priced bands.

Contention 7

Market modelling estimates of LRMC are not definitive and may understate 'true' LRMC

As noted above, despite the unquestionably competitive environment of 2006/07 in South Australia, the average spot price exceeded the market modelling estimate of LRMC by 24%. This suggests that NERA's market modelling estimate of LRMC could understate 'true' LRMC. If one increases the market modelling estimate of LRMC in South Australia in 2010/11 of $72.7 by 24%, the result is approximately $90. This compares with average South Australian prices of $42 in 2010/11. The divergence is even greater in 2011/12 given the lower spot prices in 2011/12 compared to 2010/11. We find it difficult to see how these outcomes could be consistent with the ongoing presence of substantial generator market power in South Australia.

The other inference open on the evidence is that NERA's market modelling estimates of LRMC may lack robustness as a guide for what prices should be in a workably competitive market in a given year. This is why we consider that the market modelling estimates of LRMC should not be considered definitive, but rather taken into account as one of many factors in an assessment of substantial market power.

South Australian prices

5 Barriers to entry

5.1 AER submission

The AER submission commented that a number of findings or observations in the report by CEG[18] for the AEMC indicated the presence of strategic and other barriers to new generation entry in South Australia.

The AER highlighted CEG's commentary in relation to:[19]

- Price outcomes – the AER contended that CEG's observation that price outcomes in South Australia are consistent with barriers to entry not being significant was circular. The AER said that:

  > This approach means that the outcomes of the NERA report, in effect, become determinative on the issue of barriers to entry in South Australia.[20]

- Market concentration – in particular, CEG said that AGL's high market share means that its position warrants further consideration.
- Investment/Strategic barriers to entry – in particular, CEG noted that barriers to new entry could be created by pre-emptive investment by incumbent generators such as AGL.
- Low capacity utilisation of incumbent – based on the CEG analysis, the AER singled-out the low utilisation of TIPS at times of high South Australian prices as reflecting the exercise of market power by AGL.
- Structural barriers to entry – based on CEG analysis, the AER commented that due to the sunk and irreversible costs associated with new generation entry, prices can be held 'permanently' above the costs of efficient new capacity without attracting competitive new entry. CEG also referred to vertical integration in South Australia as raising the cost of hedging and giving rise to new entry deterrence.

5.2 Response to AER

Contrary to the AER, we consider that the findings of the CEG report are consistent with low barriers to entry.

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18 CEG, *Barriers to entry in electricity generation*, June 2012 (CEG report).

19 AER submission, section 5, pp.13-16.

20 AER submission, pp.15-16.

In coming to this view, we do not dispute CEG or the AER's factual observations regarding either:

- Concentration indicators of generation in South Australia
- Measures of TIPS's capacity utilisation when spot prices exceed $250/MWh

These observations have no direct bearing on whether barriers to entry for new generation investment in South Australia are significant. At the same time, it appears curious for the AER to:

- on the one hand reject price outcomes in South Australia as reflective of low barriers to entry, on the basis that this implies a circularity of approach
- while at the same time highlighting the low utilisation of TIPS at high-price times in the context of barriers to entry

Either market outcomes are reflective of the competitive environment including barriers to entry or they are not; the AER submission appears to attempt to have it both ways. Our position is that while reduced utilisation of TIPS at times of high prices may or may not reflect instances of the exercise of transient pricing power, it does not imply the existence of substantial market power.

As noted in the NGF submission on the AEMC's Draft Determination, wholesale prices in South Australia have been relatively depressed in recent years, which perhaps better explains why new entrant investment in generation has not been forthcoming.

Contention 8

On the question of strategic and structural barriers to entry, alternative pro-efficiency explanations for incumbent investments and vertical integration are more convincing than anti-competitive explanations

Thinking first of generation investment by incumbents, it is far from clear that it makes sense for an incumbent to pre-emptively invest to deter entry. Rather, there is every reason to expect that a participant with a net exposure to wholesale spot prices through its retail business (AGL) would seek to invest in generation to manage its risks in a manner that avoided the transactions costs of negotiating derivative contracts with third parties.

CEG noted that investment by incumbents could constitute anti-competitive pre-emption if it was not justified by market conditions.[21] However, the CEG report did not properly evaluate the claim by the MEU that new generation investment was not required in South Australia during 2008-10. In fact, the NEMMCO 2008

21 CEG report, para 164, p.45.

SOO pointed to reserve shortfalls in Victoria-South Australia in 2008/09 of 168 MW.[22]

Second, although the AER commented that due to the sunk and irreversible costs associated with new generation entry, prices can be held 'permanently' above the costs of efficient new capacity without attracting competitive new entry, CEG put this argument much less strongly. CEG noted that because demand in South Australia was growing slowly, it was 'conceivable' that incumbents would be able to raise prices above the level that would make new CCGT plant profitable without inducing new entry by that plant. In any case, as noted by CEG, spot prices over the last two years have been well below the levels needed to make CCGT entry profitable.[23]

Third, on the notion that vertical integration can create barriers to entry, neither CEG nor the AER provided meaningful evidence for this view. The basis on which vertical integration is meant to create barriers is through a lower level of contract market liquidity. However, CEG went on to suggest that:

> The expectation of obtaining, on reasonable terms, a five to ten year contract for a material part of their capacity may be a prerequisite for a potential new entrant to be able to arrange for finance (again, on reasonable term) for the up-front costs of project development. If a potential new entrant cannot expect to obtain such a hedging contract then their cost of financing (both equity and debt) may be materially increased. A material increase in their cost of financing may make entry uneconomic even in circumstances where prices would justify entry conditional on hedging contracts being available.[24]

Such long term contracts have never been negotiated during the life of the NEM, either in the over-the-counter market or the exchange-traded market. This was the case even prior to any moves towards vertical integration. To the extent such long term contracts are necessary to underwrite new generation investment, it is not possible to blame vertical integration for the lack of such contracts. Neither should it be surprising that vertical integration has occurred if such long term arrangements are required to underwrite investment.

Finally, it is not clear why if wholesale market prices were high, vertically-integrated participants would refuse to contract with a standalone generator that offered power at an attractive price. The CEG report provided no compelling explanation for why such contracts would not be agreed.

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22 NEMMCO, *2008 Statement of Opportunities*, pp.2-6, 2-12 to 2-13.

23 CEG report, para 155, p.43.

24 CEG report, para 171, p.47.

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