Major Energy Users Inc.

Australian Energy Markets Commission

Strategic Priorities for Energy Market Development

Comments on the Discussion Paper

Submission by

The Major Energy Users Inc

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The views expressed in this document do not necessarily reflect the views of the Consumer Advocacy Panel or the Australian Energy Market Commission. The content and conclusions reached in this submission are entirely the work of the MEU and its consultants.

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Executive Summary

The Major Energy Users (MEU) welcomes the opportunity to comment on the AEMC's strategic priorities discussion paper, and in particular, the proposed three strategic priorities.

The MEU is uncomfortable with the AEMC's discussion of the electricity market which provides the context to its development of its strategic priorities for energy market development. Significant deficiencies in that discussion are shown.

The AEMC has proposed that it should devote attention to:

1. Providing a predictable regulatory and market environment for rewarding economically efficient investment
2. Building the capability and capturing the value of flexible demand
3. Ensuring the transmission framework delivers efficient and timely investment

The MEU accepts that these are headline issues that need attention, but it also considers that they should address the following strategic priorities in their place:

1. Network revenues and pricing structures
2. Re-aggregation, concentration and competition in the NEM
3. Consumer ability to absorb price increases

These three MEU priorities were the focus of the presentation by Mr Milo Foster of Kimberly Clark Australia, an MEU member, for the AEMC forum on 1 April 2011. Mr Foster pointed to the need for rule making and regulation to have more rigour, the fact that energy markets were re-aggregating and so reducing competition, and that there needed to be a refocussing on consumer concerns and consumers' ability to pay.

The MEU provides a more detailed explanation in section 5 as to why these are aspects which require AEMC attention but draws attention to the need to:

- Investigate and develop network rules that provide sufficient incentives to ensure that under-investment does not occur but that over-investment is minimised
- Investigate the nexus between State-owned network businesses and their owners, the absence of private sector capital disciplines and accountability, and the resulting distorted impact on network investments and pricing
- Assess the competitiveness of the NEM and the related issue of barriers to new entrants in generation and retail

- Recognise that there is a limit as to the ability of consumers to continually absorb ever increasing energy prices and to impose some limits on what can be accepted as a rise which can be accommodated.

Essentially, the MEU strategic priorities seek to rebalance the AEMC's approach by demonstrating that the energy markets (especially the electricity market) need to be assessed from the viewpoint of consumers, because the National Electricity and Gas Objectives are focused on the long term interests of consumers. The current approach of assessing changes by using broad brush assumptions as to consumer interests does not result in effective outcomes.

In contrast, two of the priorities nominated by the AEMC really are about providing the supply side with a better outcome and the other priority whilst addressing demand side responsiveness, looks at the issue more from the benefits demand side responsiveness can provide to the supply side.

1. Introduction

The Major Energy Users Inc (MEU) welcomes the opportunity to provide views on the AEMC's Strategic Priorities for Energy Market Development Discussion Paper.

A key challenge for the AEMC in providing the context to develop its strategic priorities for energy market development is to clearly distinguish between **facts** from **expectations**. Another key challenge is to draw a distinction between **quality of outcomes** (that meet the National Electricity Objective of delivering benefits in the long term interests of customers) and simply **outcomes**. Thus, the MEU agrees with the AEMC that:

> "A discussion of strategic priorities must be grounded in an understanding of the energy sectors. From this understanding we can identify the key challenges facing the sector and those which may increase in importance in the coming years" (AEMC, page 15).

But the MEU notes that Chapter 2 (Market overview and the key challenges) which seeks to provide "the context for the rest of the paper" (AEMC, page 14) is very disappointing because all it does is provide a rendition of general "outcomes" relating more to a description of the development of the National Electricity Market rather than the "quality of outcomes" (that deliver the NEO).

Thus, for example, the following three graphics (Garnaut update #8, pages 7 and 8) provide the **facts** in respect of perspectives on the **quality of outcomes** of the NEM reform programme and stands in marked contrast to the claim by the AEMC that:

> "Over the last decade there have been major changes in the Australian energy markets. The reform programme that created the National Electricity Market (NEM) …has delivered substantial benefits to consumers. These benefits included more competition, continued strong investment and reliable supply" (AEMC, page 3).

Translating the "benefits", on the basis that the AEMC seems to have used, to describe the above outcomes require extensive qualification. Thus:

- More competition is only beneficial if it equates to efficient (least cost) prices (after all, competition is only a means to achieving certain outcomes)

- Continued strong investment is only beneficial if it equates to efficient (least cost) investments (over-investments or inefficient investments produce inefficient prices)
- Reliable supply is only of value if it equates to achieving reliability in terms of value for money for consumers over the long term[1,2]

The AEMC's assessment of the market benefits from the reform programme is in stark contrast to the key outcomes for consumers shown in the three recent reviews of the electricity market carried out by Garnaut, Parry/Duffy (NSW Government) and IPART. In this regard, the MEU refers to the recent Garnaut Update #8 and its accompanying information

Table 1: Consumer Price Index - Electricity

	Average annual inflation Per cent			Household electricity price[a] Share of income per capita
	1990–1999[b][c]	2000–2009	Year to latest	2009
Australia[b]	1.6	5.0	12.4	2.8
Canada	3.3	2.5	8.1	1.9
France	na	0.8	3.1	2.8
Germany	0.7	4.5	3.3	6.3
Japan	–0.7	–0.8	3.0	5.1
United Kingdom	–2.8	6.0	–0.4	5.6
United States	0.9	4.2	0.6	2.6

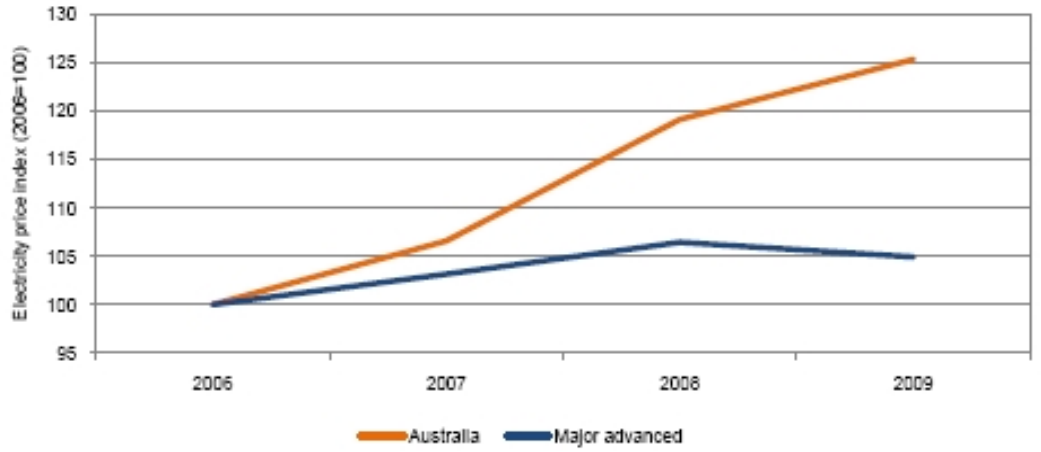
(a) Price per 10 MWh, in local currency; where 2009 price level data were not available, the latest available data were extended to 2009 using CPI electricity prices; United States price includes tax
(b) Data from 1991 for Germany, and from 1996 for the United Kingdom
(c) Adjusted for the tax changes of 1999–2000
Sources: ABS; International Energy Agency; RBA; Thomson Reuters

Source: Plumb and Davis (2010)

[1] The Duffy/Parry review has recommended a further review in 2011 of the methods used in defining reliability standards to ensure the appropriateness of the Licence Conditions that will be in place for the next AER pricing determination to cover the 2014-2019 regulatory period. It also recommended public consultation on them. These steps will allow consideration of the most appropriate approach to determining standards, taking into account price impacts, customer wishes and economic benefits to the NSW economy. NSW Government. Industry & Investment NSW Electricity. December 2010, page 33.

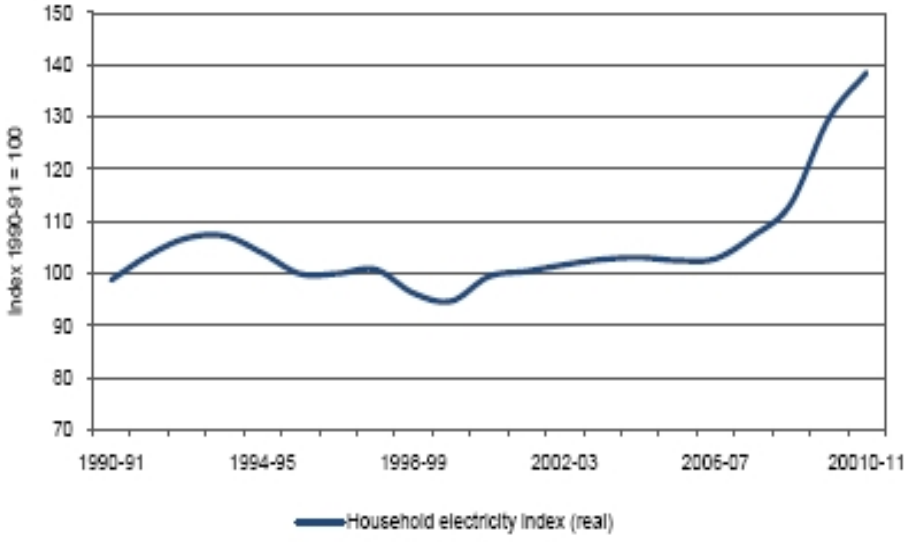
[2] The Maximum Price Cap, which has been consistently raised since inception of the NEM has now reached a level that there are clear concerns (including by the Reliability Panel and the AEMC) of perverse effects impacting on the wholesale market, such as on new generation investments and competition.

Figure 1: Real electricity prices in Australia and the seven major advanced economies, 2006 to 2009, index in US dollars



Source: IEA 2009, OECD 2010.

Figure 2: Real household electricity price movements
(constant 100 would mean electricity prices rising at same rate as other prices)



Source: Australian Bureau of Statistics, Consumer price index for electricity (Category 6401.0).

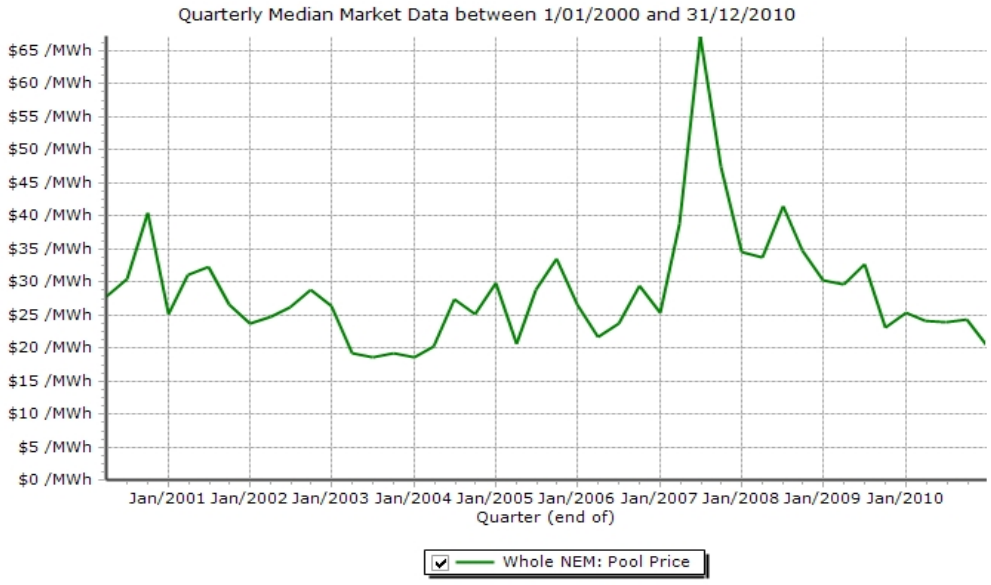
The three graphics shown[3] above would imply that either the NEM has failed to deliver the quality of outcomes (in terms of prices) expected since the reform programme commenced, or that the other (overseas) jurisdictions shown have been more successful and more efficient than the NEM. Either way, it shows that the changes in the NEM are not as

[3] Garnaut Climate Change Review Update 2011 Transforming the electricity sector, pages 7 and 8

successful in achieving good outcomes for consumers as changes in other jurisdictions.

When account is taken into Australia's low-cost coal and gas resources, the outcomes shown in the three graphics do demand more rigorous analysis and assessment rather than generalised statements of outcomes that the AEMC has provided. After all, the AEMC's earlier dictum: "A discussion of strategic priorities must be grounded in an understanding of the energy sectors" seems to have been lost in the development of the background that is supposedly driving the conclusions reached to support the three strategic priorities.

A cursory analysis of the key issue of price benefits shows that electricity prices are driven by three elements – the wholesale cost of electricity, the cost of transport, the costs from renewable electricity programs and the costs of retail margin and risk management. Deeper analysis shows that the wholesale cost of electricity[4] has not been a significant contributor to any increase in the price of delivered electricity as the following graphic shows[5] [6]



Source: NEM Review based on AEMO data

However, this shows that the wholesale price of electricity (the commodity) has not reduced as a result of competition (but remained relatively constant) since the beginning of the NEM, but the noted

[4] The spot price has been selected as the surrogate for the wholesale price of electricity as the contract price (and then the retail price) is driven by the gross pool spot price over time
[5] The high price in mid 2007 was a result of the drought which prevented many of the base load generators operating at normal outputs
[6] The price track shown is a "whole of NEM price" but it is recognised that there are regional differences.

increases in retail prices would indicate that the retail margins and risk premiums have increased due to a reduction in competition at retail level and increased risk margins due to increased volatility.

What it also suggests is that the other two major elements of transport (ie network costs) and the cost of providing renewable electricity are the primary drivers for the increases shown in the three graphics from Garnaut. Examination of the increasing cost of renewables shows that, whilst it is a contributor, it is not the major driver of the price increases for electricity.

Whist the AEMC report does accept that much of the price increases in electricity were driven by network costs, what is noticeable by its absence, is any attempt to identify whether all of the $39Bn of network investment allowed in the current round of revenue rests, was all needed. Observations[7] have been made that much of the reason for this large amount of investment is to improve reliability and replace ageing assets. In fact, only a small proportion of the total investment has been to replace ageing assets, and the investment to improve reliability has little quantifiable benefit to consumers. A lack of quantification of benefits from investment that has been recognised by the AEMC as necessary, is a major failing of the AEMC analysis of the changes seen in the NEM.

What is overwhelmingly obvious is that the increases are primarily caused by massive increases in network costs and this aspect is addressed more fully in section 3, but that retail margins and risk management costs have risen as well.

From the perspectives of consumers, price benefits from the reform programme are viewed from the standpoint of final delivered prices, which is a combination of the price of the commodity, network prices, retail margins, and other transaction costs.

More specifically, from the standpoint of major industrial users of energy, because Australia is an open economy and Australian industries are exposed to international competition, it is the trends in relative prices that are of greatest import. If electricity input costs in Australia are rising faster than Australia's international competitors (despite our abundant energy resource endowments) then the 'benefits' arising from the reform programme in the NEM need to be qualified. If they are not, then the conclusions reached are irrelevant as they appear to be based on incomplete analysis or are based on "expectations" rather than outcomes.

[7] Such as those by AER Chair reported in the Australian Financial Review 11 May 2011

2. The Australian Electricity Industry

The original concepts behind the NEM (as propounded by Professor Hilmer) were that disaggregation of the vertically integrated government owned electricity providers would result in increased efficiencies, prevent the extraction of monopoly rents in sectors that are natural monopolies, and through robust competition in contestable sectors, with the latter delivering efficient services through efficient economic regulation.

Despite the initial moves in the electricity market to reduce the concentration of ownership, the Australian electricity industry has, in fact, become more concentrated, with re-aggregation between retailers and generators[8]. During the 'reform period', this concentration has resulted in fewer retailers and three dominant vertically integrated "gentailer" businesses dealing in multi-fuels, including wind, solar and other renewable energy sources. Investments in new generation have largely been undertaken by these vertically integrated businesses who have also procured any generation assets made available for sale[9]. Intriguingly, there appears little interest by merchant/independent generators building new generation assets and what interest there was, was early in the development of the NEM.

These outcomes (ie fewer independent generators and a very few very large retailers which are also the major providers of new generation) would seem to indicate that the barriers to entry are higher now in both retail and generator sectors than earlier in the disaggregation process.

In the wholesale market, the exercise of generator market power is frequent, especially in certain regions such as South Australia, and there is evidence of the resulting economic damage on consumers[10].

The AEMC notes "the increased trend for vertically integrated gentailers to finance new investment" (AEMC, page 27) and states:

> "It is important that the energy markets provide opportunities for a range of business models to have a chance to succeed. Those models which best meet the needs of customers and shareholders will be the ones that survive in the longer term. Business models will differ in terms of company structure, such as the degree of vertical

[8] For example, ilt is interesting to note that Origin Energy and AGL Energy are now larger businesses than any of the state owned entities that were the initial focus of the disaggregation

[9] These include the "gentrader" assets sold recently in NSW

[10] This is extensively documented in the MEU's Proposed Rule Change to Enhance Generator Competition Outcomes During High Demand Periods in the NEM

> integration, ownership structure and capital structure, including the role of debt and equity in financing" (AEMC, page 28).

This observation would seem to indicate that the AEMC considers that re-aggregation in the NEM is to be expected, yet disaggregation was seen as one of the key drivers for increasing efficiency in the sector.

The MEU believes that the NEM's volatility (and hence the increased risks and higher transactions costs), and the consequential re-aggregation of generators and retailers (along with their observed increased investments in new generation) are the result of higher entry barriers to new entrants. The future, therefore, is that the NEM will continue to rely on the dominant vertically-integrated businesses to make new generation investments. This is in stark contrast to the expectation that greater competition and efficiency would result, and be maintained, from the disaggregation of the government owned vertically electricity supply entities.

Essentially, what is being achieved **now** under the existing energy market framework is the progressive replication of an industry structure that was previously seen as inefficient, but without the controls/discipline that applied under government ownership.

It seems obvious, therefore, to investigate:

- How barriers to new entry in generation (and retail) could be minimised or reduced to encourage new entrants
- How the volatility, risks and increased transactions and prudential costs could be minimised or reduced to facilitate/enhance competition and thereby reduce retail margins
- How the exercise of market power by dominant generators could be minimised and competition enhanced
- Whether the increase costs for providing networks reflect increased efficiency and whether the rules institute inefficient practices.
- Whether new trading arrangements or new business models, (such as those embracing bilateral physical contracts to be underwritten between major users and merchant/independent/existing generation businesses) would facilitate increased investment in new generation

The MEU agrees with the AEMC's assessment that if the trend in new generation investment observed in recent years continues (concentrated amongst a smaller number of large generator retailers) then,

> "...it could have implications for the degree of competition in the market and the liquidity of the contract markets" (AEMC, page 27).

The MEU has analysed the degree of competition in the NEM based on calculations of the Herfindahl Hirschman Index (HHI), which is typically used to provide a helicopter view of market competition. The revealed trends are not encouraging.

For example, the HHI for retail in the NEM (now that EnergyAustralia, Integral and Country Energy retail functions have been acquired by Origin Energy and TRUenergy) indicates that the electricity retail market is classified as "highly concentrated".

Generation is classified as "moderately concentrated" on a NEM wide basis, but in each region of the NEM, generation is "highly concentrated" in all regions but Victoria, where it is classed as "moderately concentrated".

Of interest is that the HHI for generation in the NEM states prior to disaggregation indicates that generation only just reached the classification of "highly concentrated", and the market concentration of retail was of a similar order. This indicates that whilst the process for disaggregation of generation has achieved some small reduction in generation market concentration, the outcome for retail shows that there has been an increase in market concentration on a NEM wide basis.

Quantitative analysis such as this, clearly reinforces the intuitive views that the NEM has achieved only small gains in generation competition (although there are marked regional differences) but retail concentration has increased markedly in recent years. Yet despite such quantitative analysis demonstrating the reverse, there is a general view that competition has increased as a result of the disaggregation of the government owned vertically integrated supply businesses. This would seem to support a view that competition in the NEM is in fact a mirage and the mirage is propagated by the supply side, governments and regulators to give support to earlier decisions.

If such minimal reductions in generation competition has occurred but retail competition has concurrently reduced, then this provides, prima facie, a view that there are significant barriers to entry of new generation and even more so for new entrant retailers.

In the MEU's view, the issue of competition in the NEM and the related issue of barriers to new entrants in generation and retail, are significant and must be urgent strategic priorities for AEMC research and investigation.

3. Network Investments

The MEU notes the AEMC's description of the recent and future high levels of investments in networks and the consequential impacts on prices to consumers. But despite the AEMC observations, the MEU sees that massively increasing network costs is an issue that must be addressed as a matter of **urgency**. That the costs have blown out of all proportion as a direct result of the AEMC 2006 and 2007 reviews of transmission revenue and pricing (as the reviews also led to the changes to the Chapter 6 rules applying to distribution networks) leads to the view that the AEMC principles that led to the rule changes were the prime drivers for the current excessive network costs.

Recent authoritative reviews (Garnaut, Parry/Duffy and IPART) have pointed to the dysfunctional nature of the economic regulatory regime (assisted by uncoordinated and predatory climate change measures imposed by both Federal and State layers of government, which in some areas resulted in duplicative measures being introduced)..

The AER, in response to the relevant findings of these three reviews (see Box 1) has announced an "internal examination" of the relevant Rules with a view to bringing before the AEMC any Rule change proposals.

Box 1. Brief snap-shot of recent reviews commenting on network investments

- Garnaut update 8 refers to:
  - Network "over-investment"
  - "gold plating" of network infrastructure
  - "overly generous appeals process"

- Parry-Duffy Review:
  - Capital overspend not subject to efficiency or prudency test; NSW businesses capex overspent of $1.4 billion in previous period with more than half in the final year
  - Network businesses could cut spending immediately without risk to reliability
  - Energy Australia could cut spending by 5%, saving $425 m due to efficiency gains
  - Reliability: cost benefit test

- IPART Report
  - Main reason for 18% average retail price increase from July 2011 is due to network costs which add 10% to final prices
    - EA 20% increase on 1 July 2011
    - IE 10% increase on 1 July 2011
    - CE 19% increase on 1 July 2011
  - AEMC review of Rules that "may bias the Australian Energy Regulator's decisions in favour of higher network prices and inefficient outcomes"
  - Relate network reliability to customer willingness to pay and network standards subject to rigorous cost benefit analysis.

The MEU considers, however, that the AER "internal examination" process will be at best a truncated one due to time limitations to get change before the next round of regulatory reviews. This truncation would result in the review having to be limited in scope and hence of reduced value to address why the recent three reviews (and the MEU) consider the NEM to be operating under a dysfunctional regulatory regime.

In regard to the network regulation, the MEU points out that the current investment rules in chapter 6 were primarily a "take out" from the Chapter 6A rules developed and instituted by the AEMC in 2006 and

2007. In the development of the chapter 6 rules in 2007 there was little debate to assess the efficacy of the Chapter 6A changes to identify if the detriments of the Chapter 6A changes would eventuate, due to the influence of States that are also owners of network businesses and the general procedural approach taken.

The detriments identified in the Chapter 6A changes at the time by consumers (especially by the MEU) have since been proven to be prescient, and have caused great cost to consumers. The AEMC has the opportunity to readdress the poor outcomes produced in 2006 and 2007, and should do so as a matter of priority.

It is with this in mind that it is pertinent to examine what the National Electricity Law (NEL) requires of the market rules.

3.1 The Principles of Regulation

The NEL provides for six principles to be applied to network regulation (see section 7A). The MEU points to the following aspects relating these principles and to how the Rules should have been developed:

The NEL highlights 6 principles for regulation of networks (section 7A):

1. A regulated entity must have a reasonable opportunity to recover at least the efficient costs – not its actual costs but costs that are efficient to deliver the service
2. There are to be incentives to promote efficient investment – current incentives only for Opex (EBSS), no incentive for Capex
3. There is to be regard for previous regulatory settings of the RAB – not simply acceptance
4. Return on investment should be commensurate with the risk (commercial and regulatory) faced for each service – maybe not a single rate of return is appropriate for every risk
5. The regulator is to assess the benefit/detriment of over/under investment – so that consumers receive the level of service expected at the right price
6. Utilisation of the assets is an indicator of efficiency. Decision makers must assess the efficiency of utilisation of assets as over or under utilisation can have adverse consequences for consumers

3.2 NEL Principles 2 & 4

In examining the principles more deeply it can be seen that in relation to the regulation of networks:

Principle 2 – where an incentive for capex is to ensure that capex is efficient but:

- A reward is to be paid for being efficient, but there is no penalty for inefficient capex
- Any reward from the incentive needs to be greater than the reward for over-investment, otherwise over-investment occurs
- A penalty needs to ensure there is no inefficient capex and this penalty needs to be greater than the rewards from inefficient capex (i.e. cost over-runs & asset under-utilisation)
- Most regulatory decisions do not have a capex incentive, so this principle is being ignored
- It has to be recognised that there is an inbuilt incentive to increase the RAB as NSP profits are part of the return on assets, which in turn is related to RAB

Principle 4 - The rate of return needs to reflect the risk for each service provided but:

- An NSP provides a number of services but there is only one rate of return applied regardless of the different risks with each service
- Different rates of return could be applied to different services with different risks.

3.3 Assessing specific rule elements with the principles to conclude whether investment is efficient

The section below provides the MEU's views of where specific rule elements are contrary to the NEL principles.

Issue	Contrary to principle
The ex ante approach to capex allows the NSP to use the capex for any purpose and not just the purposes used to set the capex	**2,5,6**
Actual capex must be rolled into the RAB	**1,2**
There is no ex post assessment of past capex to assess its efficiency or even its appropriateness	**1,2,5,6**
There is no action by the regulator assessing utilisation as there is no optimisation allowed	**2,5,6**
To encourage better utilisation of assets, the rules allow an NSP to set its prices based on peak utilisation of the assets, but the regulator allows	**5,6**

NSPs to average demand over a year at the election of the NSP.	
Assets get retired and replaced when they are fully depreciated even if they are still used and useful	**1,2**
NSP is better able to manage risk (eg SENE) but requires a reward for doing so	**4**
The rewards for over investment are greater than the reward from the incentive to invest efficiently	**1,2,5**
There is no penalty for inefficient investment but there are rewards	**1,2**
NSPs can game the propose/respond model (eg capex with revised application after DD is higher than initial application)	**5**
Network support costs are allowed at cost but a change within a period is allowed as a pass through even if capex has been allowed for it	**1,2,4,5**

As the rules currently stand there is no ability on the part of the regulator to ensure that all investment made is efficient. To test this the MEU has contacted its members to see how businesses in a competitive environment manage their capex. Their responses are edifying. They advise the following differences between how a business in a competitive environment addresses the treatment of capital expenditure and assets compared the approach implied by the Electricity Rules. They advise:

- Developing the amount of capex that business can invest each year needs to reflect that in a competitive environment there are limits in its actual raising and what capex a business can afford and remain competitive. This compares to the regulated businesses (especially government owned) of being able to essentially develop their capex wish list without this constraint
- Deciding on what projects the capex will be devoted to, and why, (eg maintaining market share, new products, reducing costs, deferring projects that can be without impacting the business). This compares to the regulated businesses' approach of limited oversight of what is really needed and still remain commercially viable in a market sense
- Developing a business case to underpin the amount of capex every project is limited to. The RIT-T and RIT-D are intended for this purpose, but they are limited in their application to large augmentation projects – reliability of supply and small projects do not have this oversight
- Ensuring the capex used for a project remains within budget and if not why not. The issue of what should be done to manage/accommodate any over-run (eg deferring other projects

to maintain the overall capex limit) is a constraint that has to be managed. This compares to the regulated business, which is not assessed after the event, with the actual capex being rolled into the asset base, even if there is a major overspend which if the actual cost had been known earlier, the project would not have passed a prudency test

- Ensuring the capex is spent wisely such as by maximising competitive tendering and changing the capex parameters so that the budget is maintained. This compares to the regulated business being allowed to use related parties to run capex programs without competitive tendering and not being forced to limit the overall capex to the amount which has been determined as the upper limit
- Adjusting the asset base so that the correct value for each asset is included (ie that each asset is optimised, redundant assets are cleared, and retaining depreciated assets that are still used and useful). This compares to the regulated business, which is not required to assess whether an asset is operating at the level assumed in the capex development or at the level expected by the value of the asset
- Closures of unproductive elements of the asset base and writing off the undepreciated value against profits is essential, This compares the regulated business which is not liable for assets which are unproductive and so retain these in the asset base in order to receive continuing revenue.

In relation to the WACC the company members commented on the WACCs their businesses applied to their optimised and depreciated assets. They observed that against the considerable benefits the regulated businesses have, they are further incentivised by receiving WACCs against all of the depreciated assets in the 9-11% range, which is comparable to that of competitive business but without the benefits noted above in relation to capex and asset management.

This survey of large businesses[11] operating in a highly competitive environment indicates that the network businesses are more than well rewarded for the provision of their services but their risk profile has so much less risk.

3.4 Incentives for Investment

As noted above, the National Electricity Rules provide some significant incentives for investment. The MEU does not begrudge there being some incentive to invest, as the MEU members recognise that the failure of the

[11] These businesses are of a similar or larger size compared to most regulated network businesses in terms of assets

networks would result in greater costs than an environment where over-investment is slightly supported.

However, the emphasis is on a slightly incentivised environment. But what has been seen from the outcomes of regulatory reviews since the new rules were put in place is that massive increases in capex (investment) have resulted. The MEU attributes this to:

- The propose/respond model of regulation combined with reduced regulatory oversight on actual capex (eg in Vic EDPR and the SA GDPR, revised capex was higher than the initial proposed capex even though the AER cut back the initial proposed capex)
- The incentives allowed in the rules over-incentivise capex and allow little control of assessing efficiency yet economic efficiency is either stated or implied in 4 of the 6 NEL principles
- Despite the presence of RIT-T and RIT-D (which assesses the business case based on forecast capex) actual capex incurred must be accepted as efficient even if the over-run is of such a size that the RIT analysis would not have permitted the investment.
- Ex ante approval of capex does not provide any control over how the capex is to be spent
- Assets can be under-utilised but still consumers have to pay for unused capacity however it is caused (eg from bad planning)

It is therefore small wonder that the network businesses have utilised the benefits of the rules to maximise their investing in the networks and caused the massive increases in costs that have been identified by the independent reviews of Garnaut, Parry/Duffy and IPART all of which have pointed out that the incentives for investment by network businesses are too great (see Box 1).

That this is the case has been exemplified by EnergyAustralia (now Ausgrid) offering to significantly reduce its capex needs (by some $425 million) through “efficiency savings” only a short time after they fought so hard over an extended period to get such a large increase before the AER and the Australian Competition Tribunal.

The MEU considers that there is a real need to investigate and develop rules which provide the sufficient incentives to ensure that under-investment does not occur, but that there is no incentive to over-invest.

In addition, there is an urgent need to ensure consistency between the network rules and the principles developed under the NEL to achieve efficient investments.

But there are even more disconcerting issues. The three reports cited above, but more particularly the Parry/Duffy report (i.e. the NSW Government report) show clearly the extent and depth of government intervention and the distortions caused in the electricity market, which have led to the significant explosion in network investments and hence electricity prices. These concerns are even more alarming, as State governments currently own some 80% of networks in the NEM.

The Parry/Duffy report demonstrates the important issues concerning the behaviour of State-owned networks (and their Treasury owners) involving:

- Governance and accountability
- Disciplines on capital (and operational) programmes
- Incentives for gold plating of investments
- Dividend and tax equivalent payments
- Revenue raising objectives
- Cross subsidies
- Value for money for reliability

The MEU considers that the concerns identified by the investigations into the regulation of aspects of NSW network businesses by the recent three reviews cited earlier, demonstrate an urgent need for the AEMC to investigate these issues which stem from the nexus between State-owned networks and their owners, and to recommend ways of avoiding such interventions that can only distort the electricity market and cause further adverse economic damage to both residential and industrial customers.

In this regard it is important to note that the Rules permit such action. It is simply insufficient to attempt to address the issues raised by Parry/Duffy and IPART as being simply NSW issues. Because state governments own over 80% of the electricity assets in the NEM, leaving the Rules unchanged will permit a state government in the future to replicate what these reports have identified has occurred in NSW because of the laxity in the Rules.

Box 2 below provides some extracts of the report supporting this contention.

Box 2 Applying NSW Public Sector Policies to State Owned Corporations

5.1.5 Impact of overspend of capital expenditure in previous price period

An overspend of capital expenditure in the last pricing period contributed to the increase in the value of the regulatory asset base (RAB) for all businesses (except Integral Energy) for the start of the new regulatory period. The businesses overspent by about $1.4 billion in the previous price period with more than half the overspend occurring in the final year (2008/09) as shown in Figure 5.7.

Source: NSW Government, page 33

The AER's 2009 determination for NSW network businesses was made on the basis of transitional national rules that were negotiated by NSW Treasury and the businesses and approved by the Ministerial Council for Energy. The agreed transitional rules meant that the overspend of each of the businesses was not subject to an examination for efficiency or prudency as part of the new determination, as had occurred under the previous state-based regulatory regime. This agreement meant there was no clear incentive for the businesses to constrain expenditure in the lead up to the new pricing period.

EnergyAustralia exceeded its approved capital allowance over the full period by 32% including by 72% in the final year. Its RAB increased from $4.6b to $8.5b from the start of the previous pricing period to the start of the new pricing period in 2009/10. Country Energy overspent by 41% in the final year of the period. In comparison Integral Energy underspent by about 3.5% for the period. TransGrid deferred its capital expenditure which resulted in an underspend over the first 4 years and increased expenditure in 2008/09. It's expenditure exceeded the allowance for the period by about 7%.

All businesses have spent less than their capital expenditure allowance in 2009/10.

Source: NSW Government, page 34

Integral Energy has advised that it has been able to reduce expenditure in the early years of the AER determination by re-phasing its capital program which it believes will relieve some pressure on retail prices in the early years of the current pricing period. TransGrid has also advised it was able to pay additional dividend to the Government through deferring some of its capital expenditure as well as implementing operational efficiencies. It already expects to pay a total of $70m in additional dividends and income tax equivalent payments over the price period as a result of outperforming the efficiency targets set by the AER.

EnergyAustralia advised it is able to reduce capital expenditure over the AER determination period by about $425m or 5% of its total allowed capital program by achieving efficiencies. This saving reduces the forecast interest expense and strengthens the capital ratios in EnergyAustralia's Statement of Corporate Intent commercial targets.

Source: NSW Government page 51

4. The AEMC proposals for strategic directions

The MEU has reviewed the AEMC proposals for strategic directions and provides the following comments on each. The MEU, in the following section 5, provides its views on the strategic directions the AEMC should implement.

4.1 Strategic Priority One: A predictable regulatory and market environment for rewarding economically efficient investment

The MEU notes the AEMC's view:

> "We need to recognise and build on the features of the current regime that promote economically efficient investment. This includes a predictable regulatory environment, price discovery through spot and contract markets and an ability to calibrate risks facing the investment and in some cases to hedge those risks". (AEMC, page 34).

Whilst the MEU cannot disagree with the sentiments of the issue the AEMC has identified, there is already a high degree of predictability for the market participants – but it is much less so for consumers, with the massively rising costs for energy, especially electricity. The MEU considers that the generality of the AEMC statement and its focus on the supply side will provide little benefit to consumers who are the focus of the NEL and NGLObjectives.

The MEU makes the following comments in relation to the AEMC statement:

- There is much evidence reflecting concerns with the recent explosion in network investments, which contain large measures of inefficient investments. There is predictability and an extremely rewarding environment for network providers, but this is provided at a cost to consumers that consumers are finding ever more difficult to manage. The issue that needs to be addressed is more about how to ensure that the costs to provide networks must be efficient.

- The AEMC raises the issue of a need to calibrate the risks faced by investors in the NEM and how these can be hedged. The AEMC must accept that investment by a commercial enterprise will be driven by profit; it is only government that will invest purely to provide a societal benefit. The goal of setting investment incentives must be to identify the point at which only necessary investment will occur and to provide incentives at this point and no further, rather than making the incentives so

overwhelming (such as is the case now) that investment occurs whether it is needed or not.

In relation to generation investment, the Reliability Panel identified that the previous level of the Market Price Cap (MPC) of $10,000/MWh was at a level that new generation was being provided to meet needs. The increase of the MPC to $12,500/MWh indexed to inflation provides an incentive above what was seen as adequate. The incentives provided to network businesses have never been reviewed.

- There is evidence of an increasing ability for the exercise of generator market power to capture economic rents and the rising barriers to new entrants, but the MEU has provided a rule change proposal to address this issue.

- Hedge contracts and liquidity in the wholesale electricity market are reducing but this is a result of market power exercise and re-aggregation of generation and retailing. There has been no attempt to review the impact of re-aggregation of the market.

- Government intervention in the electricity market can be described as:
    - Predatory, in terms of capturing dividends and tax-equivalent payments from State-owned utilities
    - Duplicative, in that the two layers of government compete in the introduction of myriad climate change policies
    - Distortive, in that government interventions distort economically efficient pricing e.g. instructions that the NSW Climate Change levy that is passed through to consumers is done on a basis of 1/3rd to households and 2/3^{rds} to business
    - Costly, in that direct and indirect costs are never imposed based on cost benefit analyses and frequent changes in government programmes result in higher transaction costs and uncertainty.

The MEU recognises that government intervention is not an issue that the AEMC can resolve, but it has the ability to provide governments with “fearless” advice as to the outcomes that will result from such interventions. However, in considering the past performance of the AEMC (eg the impacts of climate change policies) it could have pointed out the significant downsides of the impact of the policies on energy markets, rather than

proposing features[12] that subsequent review by the AEMC has shown to be flawed. So, the evidence is not promising.

Further, the AEMC can implement changes to the Rules that make it less attractive to state government owners to use their networks as sources of increased cash flow from dividends and tax-equivalent payments.

Overall, the MEU considers that the NEM and the gas markets are already providing a predictable and stable regulatory environment for the supply side entities, whether government or privately owned. What is not being provided is a predictable and stable environment for consumers, especially in electricity, who are seeing massive increases in costs (driven in large part by unbalanced investment rules and myriad government policies and programmes), with these costs far outrunning any general indicator of inflation.

The most recent reviews by Garnaut, Parry/Duffy and IPART are all indicating that the environment for supply side entities has become too attractive and encouraging of investment so that supply side entities are able and willing to provide investment that is not necessary in every case. But the issue of applying policies reflecting competitive business in private ownership (as more fully discussed in section 3) on State-owned regulated network businesses, needs investigation as these policies have been shown to have distorted energy markets and resulted in inefficient investments, thereby undermining the economic regulatory regime

4.2 Strategic Priority Two: Building the capability and capturing the value of flexible demand

This matter is more about attempting to get greater demand side involvement in the market to offset the generally accepted view that demand is essentially inelastic, especially for electricity supplies.

There are already a number of large electricity users that shed demand in response to the price signals provided by the spot market. A number of consumers have evinced interest in self generation but found that network pricing signals make such investment commercially non-viable.

There a number of small energy users that have shifted demand to times of lower wholesale prices but the network pricing signals limit the benefits of such approaches.

[12] Such as IRTUoS and SENE

There are many users of electricity that cause the demand to spike (eg refrigerative air conditioners on hot days) but network pricing signals and retailer pricing approaches mute the signals to these consumers.

The MEU considers that:

- Better price signals must be provided to consumers that cause peak demands. Currently, recovery of network investments expenditures are based on peak demand, but tariffs are too frequently charged on the basis of consumption
- Barriers to demand participation need to be addressed as a matter of urgency. The consumers who do operate in the spot market have identified that the costs for operating in this fashion are significant and therefore smaller electricity users would probably not receive sufficient benefit from operating in the spot market to make these set up and continuing costs, worthwhile.
- The networks' pricing approach makes self generation too expensive for most end users to implement and as self generation (effectively removing a consumer from the electricity market) is a significant demand side response which provides major benefits to the electricity market, there must be a solution to ensure that network pricing structures do not prevent self generation when it would otherwise be feasible.

These issues and observations are well known and do not need a detailed review to identify them. It would be much more preferable to focus on network pricing rather than examine a much wider scope of issues. It is grossly insufficient (and inefficient) to avoid such investigations on the basis that the AER is undertaking an "internal examination" of the network investment rules, as it is, perforce, a truncated review, and unlikely to cover all of the issues raised that need attention, some of which are included in this submission.

4.3 Strategic Priority Three: Ensuring the transmission framework delivers efficient and timely investment

The MEU agrees with the statement:

> "A large amount of new generation investment will be required to meet forecast increases in peak demand and respond to climate change policies. It is very important that we are confident the transmission framework can connect new generation and minimise overall system costs". (AEMC, page 45).

The MEU reiterates its concerns that the AEMC has not given sufficient attention to the fact that inefficient investments have been incentivised by both the Transmission and Distribution Rules and there has been a

massive expansion of both transmission and distribution networks costs under the current arrangements. The risk to consumers is that the network investment must be efficient and that the causer of the need for the investment pays for the network augmentations.

A specifically identified issue is that governments are retaining the right to determine network reliability levels. Governments are setting these levels in isolation of the costs that result from the standards being set. Further, there is no attempt to relate supply reliability in an holistic way as each element of the supply chain is assessed for reliability individually – that is, generation reliability, transmission reliability and distribution reliability are all assessed individually and there has been no attempt to look at reliability overall **as seen by the consumer**. This means that there is the potential for one element to be made extremely reliable at great expense, but due to the unreliability levels in another element of the supply chain, the expense incurred in another element does not deliver any net benefit to the consumer.

To date there have not been examples of where new generation has not been able to connect to the shared transmission network and the AEMC SENE project specifically addressed this need in relation to small generation plants. The outcome of the SENE project has identified that the current rules are adequate.

Whilst there is a need to ensure that required new generation can connect to the shared network at the lowest cost and not cause greater congestion in the shared network, the AEMC does need to ensure that locational signals for new generation are strengthened (rather than reduced as the initial SENE concept provided) so that there is a balance between the increased cost to a generator to locate for the optimum system benefit, recognising both its needs as well as the cost to reinforce the shared network to overcome congestion caused by inefficient generator location.

It would be better if this AEMC priority were specifically focused on strengthening the signals for optimum generator location.

Timely and efficient transmission network investment must be driven by achieving the most efficient outcome for consumers assessed on an holistic basis. To look at transmission investment as a separate element in the supply chain will lead to inefficient outcomes for consumers.

For example, the AEMC SENE project identified that it might be more economically efficient for the electricity system for a less technically efficient wind farm to be located close to the shared network than to

provide a large extension to connect highly technically efficient wind farms remote to the shared network.

In a like manner, it might be more efficient to augment a point of congestion in the shared network, than to build new generation. A case in point would be where augmenting an interconnector might be more efficient than building new generation in a region which sees frequent high spot prices which would imply a need for more generation.

The only way of determining the most efficient outcome for consumers is by addressing the supply chain as a whole rather than as a series of elements.

The MEU considers that this strategic direction would need to be significantly refined so that rather than addressing transmission investment as a separate entity, the entire supply chain is addressed as a complete entity for the benefits to consumers to be seen at the point of connection between consumer and electricity supply.

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5. The MEU three priorities for the AEMC strategic directions

The AEMC has identified three strategic priorities and the MEU accepts that they have some merit, but the MEU sees that it is important that it iterates the strategic priorities that it considers the AEMC should address.

5.1 Network revenues and pricing

Three independent reports (see earlier) have identified that there is a major problem with the network revenue and pricing models – these are all directed at chapters 6 and 6A of the Rules. Other aspects of these reports (such as the inchoate and competing renewable energy requirements set by governments) are probably outside the purview of the AEMC to address.

The MEU considers that the AEMC must address the reasons why the Rules are now considered by these reports to be so biased in favour of the networks. The MEU is aware that the AER is intending to provide some rule change proposals to address some of the major aspects of why the outcomes seen since the development of the 2006 and 2007 changes to chapters 6 and 6A have arisen, but there remains an underlying issue as to the way the network revenue and pricing rules are providing barriers to other market aspects such as demand side responsiveness and reducing competition in the competitive elements of the electricity supply chain.

The electricity (and gas) rules should be crafted to emulate what competitive businesses are constrained to do by the competition they face. For example, in the case of investment a business operating in a competitive market has a constraint on how much capital it can raise and its decisions on where the funds will be dedicated to either retaining or increasing market share. It also has to find ways of reducing operating costs to either retain or increase market share. Under the current rules there are no imposed constraints on capex or opex as a result of market pressures – to the contrary there is an assumption that consumers will pay whatever the final cost. This attitude especially applies to government owned businesses which seem to have essentially an unlimited ability to borrow for investment and when they do, their lower WACC provides an enhanced dividend to their government owners.

At the same time as there have been major investment incentives for network augmentation there has been a total lack of investment in interconnection between regions. As noted in section 5.2 below, interconnection between regions increases competition between generators and therefore would increase retail competition as a result. It is therefore bewildering as to why all the massive network investment so far has been directed to intra-connection and none at all to inter-connection.

Whilst the headlines are all about the cost of electricity supplies, there has been little analysis of the pricing used by networks and the impacts that the pricing has on the competitiveness of the electricity sector and the ability of consumers to contribute to responding to the market by the price signals provided. It is quite clear that demand side responsiveness is severely curtailed by the lack of strong network price signals, let alone by the network investment rules that overly incentivise network investments.

It is recognised that over 80% of electricity network assets are government owned. Despite this all network revenue resets assume that all networks are privately owned and operate under private sector discipline. What consumers have seen is government owned networks are just as aggressive as their privately owned counterparts in increasing the revenues they are allowed by the AER, frequently seeking higher revenues through appeals to the Australian Competition Tribunal (ACT). It has become patently obvious that a number of government owned businesses have sought higher capex allowances than they need and that the WACCs they operate with are significantly lower than the WACCs they have been allowed by the AER and the ACT. Because of the excessive profitability of the government owned networks, their owners (Treasuries) have sought increased dividends and tax equivalent payments from the network businesses.

That this is the case, raises the question as to whether the current rules are being used as a vehicle for governments to impose additional indirect (hidden) taxation on electricity consumers.

The AEMC should as a strategic priority look to see why such high capex programs are being implemented when, according to independent reviewers, the costs of these are resulting in excessive network price rises. Further, the AEMC should examine whether government owned networks should be treated as if they are privately owned and therefore allow much higher profits be returned to their government owners than is necessary.

5.2 Re-aggregation concentration and competition

The underlying principle of the disaggregation of the vertically integrated energy supply authorities was that there be competition in those elements where competition can apply (such as generation and retailing) and that for those monopoly elements, the providers should be subject to regulation which imposes the form of competition by comparison with others.

As noted in section 1 above, after early gains in increasing competition in generation and retailing in some regions, the current state of competition in the NEM is little better in relation to generation when seen on a NEM wide basis, but on a regional basis almost all regions are highly concentrated. It is even worse in the case of retailing, where the NEM is even more concentrated than it was prior to deregulation, although retailing is a little less concentrated than it was when assessed on a regional basis, even though it is still classified as highly concentrated.

The AEMC has carried out analyses on retail competition in three regions – Victoria, South Australia and ACT. It has concluded that in SA and Victoria retailing is competitive and should be unregulated. The SA government disagreed with the AEMC regarding the SA energy market for a number of reasons of which one was that the SA wholesale electricity market was not considered to be competitive. In all the assessments made by the AEMC, there was little high level quantitative analysis (eg analysing HHI) to provide any guidance to support the AEMC conclusions.

The issue of reducing competition needs to be examined in detail as there has been no attempt to identify if there are underlying barriers to entry (eg for new generation, increase retailing by having greater liquidity in primary and secondary markets) yet ERIG in its report stated

> "ERIG concludes that disaggregation of significant retail and generation portfolios, followed by privatisation, is the most effective solution to most of these problems and would increase the overall efficiency of Australia's energy sectors." (ERIG page 8)

Whilst it is acknowledged that this observation was more focused on NSW retailing and generation, the generality of the observation still holds. With the sale of the NSW retailers to TRUenergy and Origin Energy, the number of retailers in the different NEM regions has reduced. Now Origin Energy and AGL Energy are larger "gentailers" than most of the previous vertically integrated government owned entities.

There has been a general view that competition has increased yet high level analyses (such as by reference to the Herfindahl Hirschman Indices) do not support this general assumption. Direct observation seems to support the HHI calculations and conclusions as to the degree of NEM concentrations of generation and retailing.

With the rise of the gentailers, we have seen the movement out of the markets by independent and renewable generation and retailers. From firsthand experience of seeking tenders for electricity contracts even smaller industrial and commercial electricity users are seeing fewer retailers in tender panels. Even the emergence of speciality electricity providers targeting residential consumers, still has not resulted in large numbers of residential customers reducing what the “Big Three” hold. On the volume of electricity sold the “Big Three” are the dominant providers, followed by some generators with retailing businesses.

The rise of the gentailers has two effects – one is that the dominance they have allows them to increase retail margins and the second is they can retain the risk margin between generator and retailer that second tier retailers must include to manage risk.

One element that has allowed the high concentration of generators in a region to persist, is that the ability to transfer large amounts of power between regions has been constrained by the total lack of any augmentation of inter-regional connection. The congestion that occurs because the networks are not sized for the maximum flows that would result in generators in a region, being able to set the regional prices too often. Because of the way regional generators can act when “islanding” of a region occurs, this increases risks for second tier retailers. As the level of risk increases, so then do these second tier retailers depart the market leaving the regional market to those gentailers that can use their generation to manage the risk of “islanding” and the associated increased volatility of pricing.

In this way networks also have impacted the degree of competition in the NEM through their approaches to investment.

Overall, the MEU considers that the increasing degree of concentration of retailing and generation and the rise of gentailers should be addressed as this has the potential to reduce and even eliminate the high degree of competition that was envisaged at the time of deregulation and, if allowed to continue unabated, in allowing the incumbents to use their ability to extract rents that will cause the price of electricity to rise to even less attractive heights.

5.3 Consumer ability to absorb price increases

In today's climate, electricity is an essential service. Without electricity supplies, there will be almost no ability of any consumer (industrial, commercial or residential) to operate efficiently for extended periods. Because of this there is an underlying view that consumers will pay whatever the electricity (and gas) market will impose.

Already manufacturing activity is reducing due to the combined pressures of rising input costs, a high $A, and increased competition from overseas. Allowing uncontrolled increases in power prices will exacerbate this trend of declining manufacturing activity. Manufacturing has been the reason much of the development of the electricity (and gas) supply systems were made commercially viable, and even now, manufacturing businesses provide the bulk of the revenue needed by all parts of the electricity supply chain, especially generation and transmission.

For example in Tasmania, the five largest users of electricity[13] consume about 60% of the electricity consumed in the region and are the main contributors to the transmission network revenue. If these five businesses close, the cost of the generators and transmission that are paid for by the five, will fall onto a much smaller consumer base, causing massive increases in costs for all the remaining users[14].

Many large users of electricity are advising they are seeing increases of 40-50% increases year on year for elements of their electricity bills (especially for networks and renewable energy imposts). There is a limit as to how much these large users of electricity can accommodate until they become commercially unviable and close[15].

The news media have been expounding on the difficulties many residential consumers are having in paying for their supplies of electricity and on the perceived causes of the significantly increasing prices of residential power

There is needed a recognition that consumers have limited ability to absorb continually increasing costs in power supplies. The massive current rate of increase in electricity prices is not sustainable and there needs to be identification as to what a reasonable price for electricity should be. There should be analysis to identify the causes of why the price is being driven so high and if there is an alternative approach which will result in lower prices.

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[13] Comalco, Nyrstar, Norske Skog, TEMCo and perhaps Grange Resources,
[14] Whilst not as extreme as in Tasmania, a similar pattern applies in other regions
[15] For example of the 10 big users of power in SA in 2001, two have closed entirely, others have closed part of their activities and only one is looking to increase demand

The MEU has identified that there are a number of elements in the price of delivered electricity that are causing higher than necessary prices. These include:

- Generators using their market power to drive prices unnecessarily high
- Networks being over-incentivised to invest unnecessarily
- The market rules permitting increasing concentration of generation and retailing and vertical reintegration
- Ad hoc and duplicating renewable energy incentives and costs, to which is to be added a price on carbon
- Ineffective pricing signals to drive preferable outcomes
- Reliability standards are being set without reference to the costs of providing the level of reliability and elements of the supply chain are being assessed for reliability in isolation of the impact on the overall reliability seen by consumers at the point of usage.

The purpose of a shared electricity system is that there is increased efficiency when many users share the capacity of the system so that all benefit from the effects of increasing the scale of the system. This means there is a point at which the maximum efficiency is attained, and this is where the cost of electricity for all is minimised.

If this point is exceeded, then those users on the margin will cease to use the shared system and so force other users to increase their contributions.

There has been no attempt to identify where the limit on electricity users' ability to afford the costs being placed on them from the combination of all these imposts being applied on the electricity supply system.

If such a cost can be identified then this will provide the ability of

- A regulator to provide global constraints of what is permissible to include in a network reset and for reliability of supply.
- Policy makers to set policies such that the limit is not exceeded.
- The rule makers with a target around which to set rules.

Currently there is no assessment made by any party which can influence the price for electricity, as to whether a proposed change can be absorbed by consumers.

The three reviews by Garnaut, Parry/Duffy and IPART all essentially come back to the issue that the current increases in electricity prices

are beyond the ability of consumers to pay for them, so it is incumbent on the AEMC to identify what can be changed so that an ability to pay and absorb price increases becomes an inherent part of the processes which lead to price increases in the first place.

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