Major Energy Users Inc.

Australian Energy Markets Commission

Power of choice –

Giving consumers options in the way they use electricity

Comments on the Directions Paper

Submission by

The Major Energy Users Inc

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Executive Summary

The Major Energy Users Inc (MEU) welcomes the opportunity to provide views on the AEMC Directions Paper on DSP3.

The MEU agrees with the AEMC that there is a need to provide better opportunities for demand side participation (DSP) in the National Electricity Market (NEM). DSP can provide significant benefits to the NEM and the consumers using it, but it needs to be accepted that the NEM Rules are heavily biased towards incentivising supply side activities and because of this incentivising DSP has been neglected.

The MEU considers that the AEMC should examine the psychology in more detail of consumer involvement in the NEM. The MEU is of the view that the best approach to attaining viable DSP is not by enforcement (eg energy efficiency measures) and levies, but by empowering consumers more actively and reducing barriers. Some MEU members have been more active than others in seeking DSP options and this implies that the initiative for action is self driven rather than achieved by edict.

The experiences MEU members have reported regarding their attempts to implement DSP projects to assist in better managing their electricity needs have been frequently made unnecessarily difficult and in many cases non-viable because of the manner in which the market is operated. The only exception to this is where a number of MEU members have implemented pool pass through contracts with retailers and reduce demand when spot prices are high. This has proven to be a successful approach for the firms, but has required considerable cost and staff commitment to implement along with the costs from lost production.

In particular, members have cited that, under conventional retail contracts, the rewards from implementing their DSP proposals have been considerably diluted by requirements of retailers and, in some cases, effectively prevented by pricing approaches of NSPs and by NSPs not providing any benefit from the DSP that is being contemplated. The MEU considers that as a first step, the AEMC should remove these barriers to DSP by ensuring there are clear price signals and that the pricing approaches used by networks do not deter DSP. In this regard, the MEU members point to the high costs they incur for providing backup to their distributed generation projects.

The Directions Paper addresses a number of aspects essentially proposing affirmative action to force the uptake of more DSP. In this regard, most governments in the NEM have introduced programs in an attempt to achieve an outcome of better electricity usage management. The MEU has seen that these programs are heavily funded and cross subsidised, and there has been little

discernable benefit, indicating that these are quite inefficient means of driving DSP.

The MEU has attempted to provide responses to each of the questions posed by the AEMC in the Directions Paper and provided narrative to support the answers provided.

1. Introduction

The Major Energy Users Inc (MEU) welcomes the opportunity to provide views on the AEMC Directions Paper addressing Electricity Network Regulation, specifically addressing the use of benchmarking of monopoly network service providers and the dearth of augmentation of inter-regional connections since the NEM commenced.

1.1 About the MEU

The Major Energy Users Inc (MEU) represents some 20 large energy using companies across the NEM and in Western Australia and the Northern Territory. Member companies are drawn from the following industries:

- Iron and steel
- Cement
- Paper, pulp and cardboard
- Aluminium
- Processed minerals
- Fertilizers and mining explosives
- Tourism accommodation
- Mining

MEU members have a major presence in regional centres throughout Australia, e.g. Western Sydney, Newcastle, Gladstone, Port Kembla, Mount Gambier, Whyalla, Westernport, Geelong, Launceston, Port Pirie, Kwinana, Angaston, Mataranka and Darwin.

The articles of the MEU require it to focus on the cost, quality, reliability and sustainability of energy supplies essential for the continuing operations of the members who have invested $ billions to establish and maintain their facilities.

Because the MEU members in many cases have their major manufacturing operations located in regional centres, the members require the MEU to ensure that its comments also reflect the needs of the many small businesses that depend on the existence of large manufacturing operations, and the many residential electricity consumers that make up the members' workforces and contractors.

1.2 The activities of the MEU members

MEU members are involved predominately in the manufacturing, processing and tourism sectors of the Australian economy and in recent years have been hard hit financially by the increase in the $A and the excessive increase in energy charges (especially the cost of energy networks). Being regionally located, they are exposed to increased energy transport costs.

The effect of all of these drivers has resulted in price pressures with the result that most (if not all) have sought to reduce their input costs. As the cost of energy has risen by much and so rapidly, actions have been taken to address each of the three drivers of the cost of energy – viz, reduce the cost of energy, use less energy and find alternative ways to provide for the energy needs. The latter two are of greatest interest in regard to demand side participation.

The important aspects that have been noted as a result of MEU activity in reducing their costs, have been the use of price signals provided in the market in the processes for identifying lower cost approaches and the fact that the risks in the electricity market are high with the resultant impact on retail prices to accommodate these.

Price signals are provided through two mechanisms, energy price and network service price. Several of the MEU members have retail contracts in place that allow for market pool price passthrough whereby they manage their price risk by reducing demand at times of high spot price, and they have the ability to do the same when there is a high network demand. They receive no network incentive to reduce demand during actual high demand periods.

Other members have vanilla retail contracts where there is no energy or network pricing incentive to reduce demand during high demand periods.

Another group of members have retail contracts in place that allow for an incentive to reduce load at the request (or demand) of the retailer. In this case the request period may or may not be during a period of high demand and, if so, the retailer retains a significant portion of the benefit.

Conversely, when addressing the cost impacts, many of the approaches considered have foundered because of the way networks apply the rules and the absence of cost benefits that should flow from the actions. A classic example of this is network pricing. Networks consider that any support from the network to self generation, must be priced as if the service was used continuously. To overcome this network requirement, the consumer either has to double the amount of generation (and so be independent from the network) or be provided with a suboptimal benefit. Requests for a lower tariff for provision of back up services when the networks are lightly loaded are usually rejected. As a common view, MEU members have reported that demand side participation is actively prevented because of the pricing approaches used by networks.

The MEU sees that pricing signals can, and do, provide a good basis for achieving greater demand side involvement, but these are limited due to the way the pricing signals are left to networks to establish.

2. Context for DSP

The AEMC's Directions Paper provides a high level context and rationale for promoting efficient DSP:

> "Australia's electricity supply sector is undergoing change and is facing a range of challenges. This includes the need for significant new investment (and access to capital) across the supply chain in order to meet projected increases in demand and to implement low cost responses to address climate change policies. In addressing these challenges and other issues that the market is likely to face, it is important to consider the demand side of the electricity market in addition to the supply side." (AEMC, page 6)

The MEU endorses the above AEMC statement, cognisant in particular that:-

- Recent and prospective electricity price increases are driven by network investments and the plethora of clean energy and energy efficiency schemes operating at both Federal and State levels. The MEU has noted that despite general statements being made in relation to the need for network investments to replace ageing assets the bulk of network investment is **not** related to asset replacement, with perhaps less than 20% of capex claimed being dedicated to this end.

- There is no doubt that the way the network prices are developed, provides an incentive to invest as the return to the network is embedded in the weighted average cost of capital (WACC). This, in turn, is applied to the asset value of the network. Thus, to increase the amount of profit, the network has to increase the asset value which is only done by increasing investment. This incentive is enhanced if the WACC awarded is greater than the cost the network incurs in securing its capital for investment.

- The AEMC is currently reviewing a package of network revenue Rules changes from the AER that offer prospects for reducing the currently assessed excessive incentives in network investments that the MEU considers are appropriate

- The price elasticity of demand effects arising from the recent escalation in electricity prices are emerging, with signs of a trending down in consumption, with a much lesser impact on reducing demand

- The strategic responses of (more price-sensitive) industries that are resulting in growth in embedded generation, plant closures and/or relocation of existing and new industrial activities in offshore locations. This closing of manufacturing does impact demand, but because this

demand tends to be "flat" and not "peaky" like residential demand, the resultant impact is that there will be an increase in the "peakiness" of demand.

- With the introduction of the carbon tax in July 2012, the scope for shutting down the various Federal and State-based clean energy schemes

- The scope for a massive rationalisation of the "close to 300 individual energy efficiency measures across different levels of government in Australia" (Australian Government, National Energy Savings Initiative Issues Paper, December 2011, page 10) to remove overlap and duplication, and importantly improve the efficiency and effectiveness of the schemes.

- The unfortunate and unbalanced limitation of the AER's ability under the Rules, to control network price increases, has allowed greater investment in networks than is necessary. Perversely, this has impacted the growth in demand a little, but consumption more so. It has also resulted in those consumers with the least ability to absorb the increased costs (lowest quintile in residential consumers and energy intensive, trade exposed – EITE – industries) bearing the brunt of the price impact.

1.1 Possible drivers of peak demand growth

The drivers of peak demand growth have been identified as including:

- "temperature
- rate of population growth
- number of persons per household trend
- household income growth; and
- the use of air-conditioning and electrical appliances" (AEMC, page 12)

The MEU agrees that these are probably the greatest drivers of increasing demand, although it is important to note that there has been a massive increase in energy usage as a result of the massive investment in mining and development of energy resources (steaming coal, natural gas and CSG) due to international demand for Australia's mineral resources. Whilst many of these new projects do not impact the NEM (as many of the developments provide their own generation) many projects (especially in Queensland and northern NSW) access their electricity from the NEM, and so increase demand and consumption of electricity.

The MEU also points to changing demographics, especially in terms of the work practices of the residents in each household and the changing approach to the use of leisure time, that need to be assessed when

trying to identify where and what has caused change in the use of energy.

Another major aspect that should be considered is the emergence of the renewable and lower carbon emitting generation. While these do not increase demand as such, they do impose on the NEM a need to expand the network considerably with low utilisation of the assets provided. The resultant short periods of high utilisation cause congestion in the NEM with a need to further invest in networks to relieve the congestion. So it is just not an increase in demand that has created challenges for the NEM, but the way the NEM has to respond to the pressures imposed that has caused such an increase in the costs to consumers.

What is also important, is to note where there are clearly identifiable causes of increases in demand, there have been demand reductions that have occurred. The AEMC should take cognisance of what has caused these, so as to harness the benefit of these outcomes more readily.

For example, a number of large energy users have moved away from retail supply contracts, to operate in the spot market. They have done this because the costs from requiring retailers to manage their risks has become too great, and the consumers are reducing their demand (ie shutting down some (even large parts) of their plants when the spot price goes above set levels of prices for set periods of time. This is a good example of price signals leading to a reduction in demand at critical times. Another example of demand responses to the high prices for electricity has been the increasing use of self generation.

What these examples show, is that strong price signals can result in a response in the levels of demand. However, the drivers identified by the AEMC are, in part, allowed to occur because the consumers affected do not see price signals.

1.2 Potential for DSP across sectors

There is obviously potential for DSP across all sectors. In the case of the industrial sector, as the most price sensitive sector (because of their major energy use), this sector has been the most active in terms of energy efficient use (through accessing the spot market and on-site generation, as well as the prime target for a myriad of energy efficiency schemes via government intervention.

As previously pointed out, there are some 300 individual energy efficiency schemes across Australia. Despite the wide use of these schemes, it is clear that the outcomes have not delivered in any significant way because there has been no discernable reduction in

demand that can be attributed to them. Conversely, the costs of the schemes have been high and have increased the price pressures on EITE industries and the lowest quintile of residential users.

Any potential action for DSP should note the operation of many of these schemes and their targets and avoid overlap or duplication or give regard to having action that provides the most benefit. Enthusiasm for DSP should be tampered by a careful cost-benefit approach. These schemes were a result of the perceived lack of a price on carbon and now that this will occur from 1 July, 2012, it would seem that careful consideration of their retention is needed.

The AEMC should also be aware of the range of government interventions in the electricity market that mask the true cost of electricity to some consumer groups, e.g. the solar feed-in tariff system, directions to government owned businesses to shelter residential customers from the full brunt of climate change levies by cross subsidies from business users.

It is also noted that the AER does not regulate network pricing outcomes, but merely concentrates on ensuring the processes used by the networks comply with some basic overarching structural approaches. As a result, there is no investigation as to whether the pricing approaches by the networks supports, opposes or is neutral with regard to encouraging greater incidence of demand side involvement. Again, there is a good deal of cross subsidisation of residential markets.

For example, there is no doubt that an increase in distributed generation (DG) will provide a net benefit for the network in terms of increased reliability and a reduced need for network investment. However, the approach used by networks to evaluate the benefit of each item of distributed generation, is to examine each element in isolation. This then results in the network determining there is no benefit. As each element is prevented because there is no benefit, the benefit that would result from many such elements being implemented, is prevented. Essentially, as the first DG is always seen as not supporting the network, the multiples that are needed, never occur.

3. Consumer engagement and participation

The AEMC correctly states:-

> "Very large industrial facilities are more likely to have the capacity to manage their electricity consumption. This is because they tend to have the appropriate technologies (i.e. real-time metering), sophisticated energy management systems and skill-sets in house. These factors allow those businesses to either participate in the wholesale market, enter into contracts with a service provider that provides exposure to variations in wholesale electricity spot prices, or engage in DSP where cost effective to do so." (AEMC, page 41)

Even some smaller companies have addressed their concerns by using specialists on a case by case basis. What the AEMC misses in this statement is that the only parties that smaller energy users see in relation to their energy use are retailers. Retailers have a basic incentive to increase the amount of energy used by their clients, as the retailer receives its profit as a percentage of the volume of electricity it sells. The question then arises as to what the AEMC can do to provide greater access to unbiased information and price signals to consumers about reducing energy usage and costs.

Large users also have been building embedded generators in recent years but have experienced difficulties and impediments as follows:

- Little support or benefit from the electricity market
- Little or no support or benefit from retailers
- Negative support and negative benefit from networks
- Imposition of excessive statutory requirements (eg; from the market operator, state regulators) when viewed in light of the relatively small generation proposed – the requirements are the same regardless of the size of the generation proposed and the size of the entity making the proposal

Large energy users have also noted another negative feature regarding the impact of demand – that of cross subsidies. Generally, it should be noted that larger users have flat loads and are not largely responsible for the growth in peak demand in the NEM in recent years. Yet, large users have borne the brunt for the network investment increases in the recent pricing round. For example, in NSW in 2010, large users' charges rose by between 30% and 50%, compared with regulated network cost increase of less than 10%. This highlights the significant degree of cross subsidisation in the NEM.

Residential consumers see a cross subsidy too – from users who carefully manage their demand to those with high occasional demand. All pay for their consumption at much the same rate yet those with a high occasional demand

(eg for air conditioning on a few hot days) impose a much greater need on the networks for investment to manage the occasional high demands.

Large consumers of energy are exposed to strong price signals, which have been demonstrated to result in better management of demand and consumption, This means that imposing price signals on all consumers should result in much better management of demand across all sectors. Combining the stronger price signals with easier access to unbiased advice on how to better manage energy usage has the potential to improve utilisation of the networks and gain better demand side participation.

3.1 Issues with the current market conditions

Whilst we support in principle the general thrust to educate consumers generally and provide funds to facilitate demand side participation, the numerous energy efficiency schemes in operation also seek to provide more information to consumers and to educate consumers. There is a need for better integration of the information and activities and better targeting and focus. In other words, the current AEMC review offers a great opportunity to integrate and rationalise many of these existing schemes that are focused at improving consumer behaviour and taking action. To simply add to the multiplicity of existing schemes will just impose additional costs on the NEM.

3.3.1 Provision of consumers' energy consumption and load profile data

The MEU agrees with the AEMC, in its following statements:-

> "Currently, under the National Electricity Rules consumers can access their current electricity consumption data through a retailer. There are also provisions under the National Energy Customer Framework (NECF) regarding other parameters of information that should be available to consumers. While these arrangements exist, some industry and third party stakeholders engaged in the review indicate that there are currently practical limitations with the existing rules. Specifically, when billing or data information is required from retailers, some consumers experience time delays, or the data that is provided is sometimes aggregated and hence is difficult to decipher. It was also noted that the existing provisions may be preventing DNSPs from providing metering data to consumers. Generally it is considered that these limitations are making it difficult for consumers or third parties to understand consumption profiles or offer appropriate DSP packages in the market.
>
> We consider improvements could be made to the existing rules to clarify and provide guidance on the provision of consumer energy consumption load profiles. This would provide certainty to consumers that they can access their data, engage with third parties and undertake appropriate investment

> decisions. Such information would also assist third parties to develop those innovative products and services.
>
> We note some stakeholders have suggested amendments to the rules such as would have access to AEMO information and oblige distributors to give such providers access to information after consumer consent, or changes to AEMO procedures to allow third parties who have consumer authority to have direct access to meter data. Additional suggestions included a potential central information repository, with multi party access, akin to the approach in the United Kingdom as part of its roll out of smart meters to all consumers by 2019. We also note that the Australian Government's work under the Clean Energy Future Package, to scope the potential for an "energy information hub" to improve information disclosure and that would provide consumers with easier access to their energy information currently held by retailers and distributors. We are seeking stakeholder views on these, and other proposals for improving existing access and information provision of consumption data to consumers." (AEMC, pages 46 and 47).

There is no doubt that the provision of more and timely data can assist in providing guidance to change current practices in order to achieve greater utilisation of existing assets (generation and networks) but a deeper understanding of the drivers of why energy is used at particular times, is essential.

In its previous submission, the MEU provided the AEMC with an attachment which looked at the impact of interval meters on household consumption. Included in that was a survey as to likely changes in electricity usage. Generally, the responses to the survey indicated that there would be little consideration not to use electricity for air conditioning if it was hot, and that pool pumps would be used if the backyard pool needed attention.

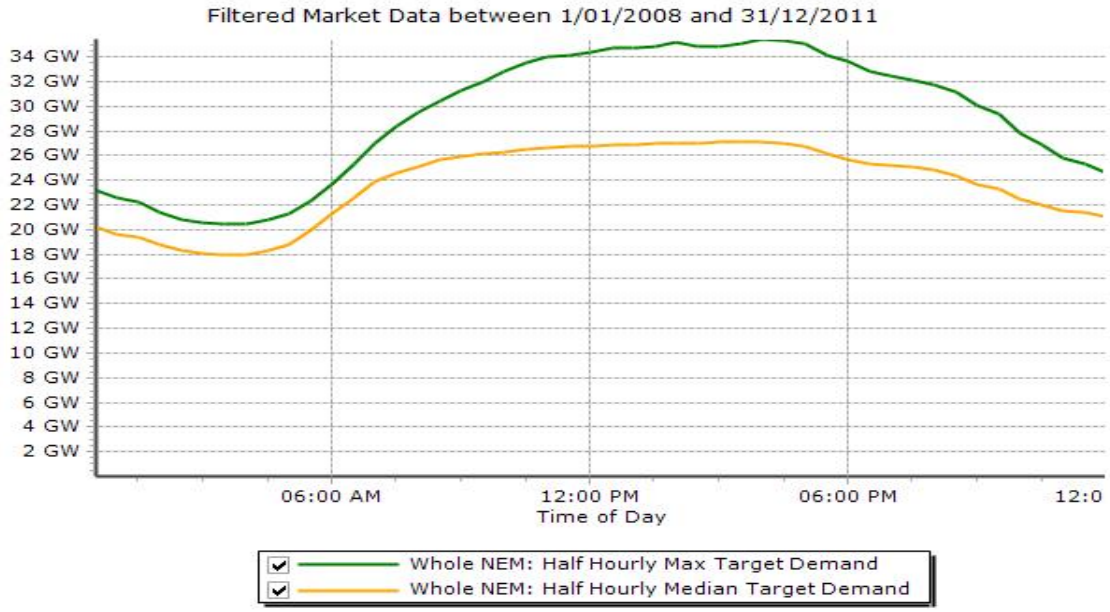
This means that it is not just the knowledge about the likely costs of not changing, but the incentive must be there to drive the change sought.

3.3.2 Costs of consumption decisions

There is no doubt that the provision of better data, provided in a timely manner, can provide consumers with the information to enable load shifting from high peak usage times to times of lower demand and can provide a benefit.

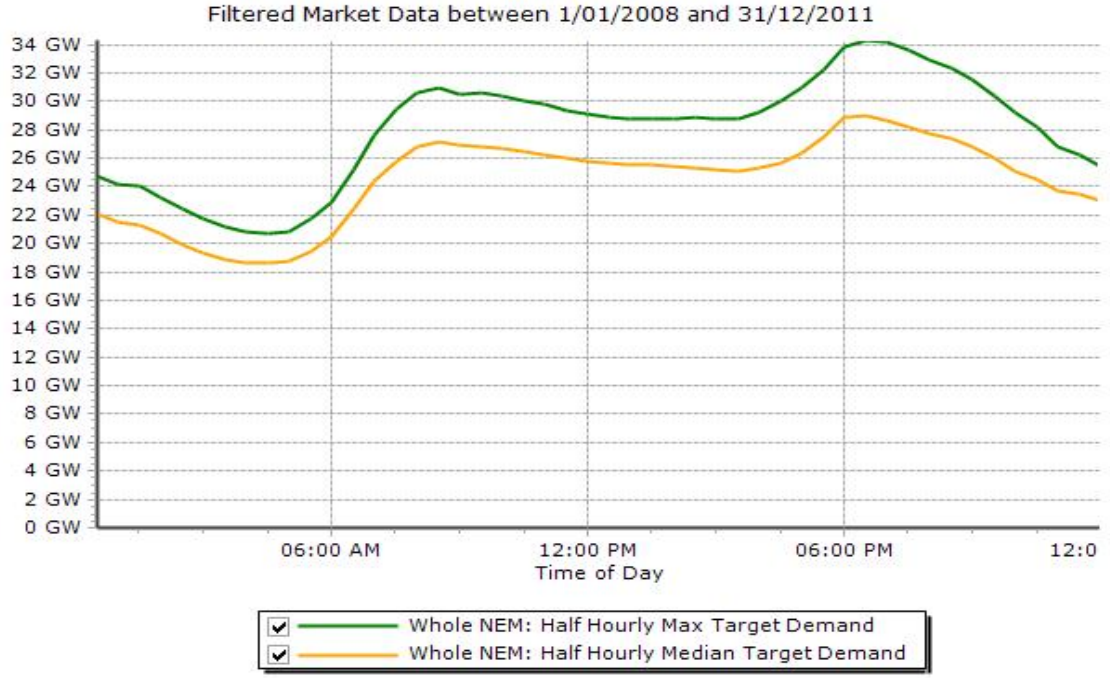
The spot market shows that consumption exhibits quite different profiles between the four summer months (December to March) to the four winter months (May to August) as can be seen from the following charts.

Work days, summer months



Source: NEM Review

Work days, winter months



Source: NEM Review

What these show is twofold:

1. That load shifting needs to vary from season to season, so a single answer might not apply across all seasons. Further, whilst the spot market data provides an indication that load shifting can reduce the

peaks in demands seen, it must be recognised that the networks also impose periods of peak and off peak times[1] but the networks periods are fixed and generally have off peak times of 11 pm to 7 am week days and all weekend.

Network costs comprise up to 50% of the total electricity bill (more for smaller users and less for larger users) yet the provision of regional demands to encourage load shifting will do little for the bulk of the electricity costs as there is no benefit granted from the networks for small shifts in usage which will flatten regional demands.

2. That the greater need might not be so much to shift load across a day rather than to reduce the peak demand closer to the median daily demand. For example, the maximum summer demand is nearly 30% above the median summer demand, yet the median summer demand shows little variation over the daylight hours. In contrast, the variation in the winter months shows that the median demand varies +/- 10% during the daylight hours but the main incidence of maximum demand occurs for a short period at 6-7 pm where it is nearly 20% above the median demand.

This raises the question whether it is a desire to reduce the peaks that are observable across the median day (which is essentially load shifting) or to reduce the peaks that occur between a median day and the peak demand days. The MEU considers that in answering this basic question, the activities that are sought will be identified and so the preferred solutions developed.

The theory of load shifting is sound, but only if there is someone to change the times when the demand is utilised. For example, the greater participation in the work place by residential users, the less the opportunity to load shift. This greater participation has caused some shift already where more household tasks are carried out late in the evening and at weekends.

In the case of industry, most energy is used during normal work operations, so for change to occur, requires significant changes to conventional work place practices.

Obviously more information to alter consumer behaviour is, in principle, useful. But there must be a cost-benefit approach adopted, bearing in mind that there is already a vast amount of information provided under the 300 individual energy efficiency schemes. The AEMC should first establish where it can add value in this area, and whether there is scope for policy makers (under AEMC leadership) to rationalise, and bring focus to, the array of information currently provided to consumers.

[1] NSW also has periods called shoulder periods between the peak and off peak periods

4. Efficient operation of price signals

4.1 Why are efficient price signals important?

Large energy users generally have flat loads and are largely not responsible for the high peaks in demand, whether in winter or in the summer months. Large energy users, because of their flat loads and continuous demand, tend to have retail contracts that provide simple tariffs which essentially eliminate the price signals linked to consumption during peak periods. In contrast, large energy users that are exposed to the wholesale market tend to have arrangements for curtailment with their retailers, when spot prices reach certain price thresholds.

However, those users with variable demands (such as residential users) tend to have simple tariffs which do not provide signals to reduce demand at times of high regional demand. This then raises the question as to whether retailers will ever offer tariffs which signal demand reduction. Whilst retailers have provided large users with tariffs tailored to their previous 12 month demand shape, to do this for the many residential customers raise the issue as to whether there will be a one size fits all residential consumer as essentially occurs when there is no interval metering

As noted above, regulated network charges, do not tend to reflect actual peak demand periods as seen in the NEM market. That is to say, most consumers are not exposed to price signals or cost reflective tariffs during the predetermined network peak periods. The AER claims that the NER does not empower the regulator to enforce this, whilst the retailers and network businesses are not incentivised to set cost reflective tariffs, notwithstanding exhortations about the need for such actions.

Unless cost reflective tariffs are implemented, investments in technology or innovations will not provide the outcomes sought by those imposing the costs.

The studies that the MEU provided to the AEMC in its recent response on this issue, also show that positive incentives are more successful than negative incentives[2]. The AEMC is encouraged to seek professional advice from demographers and psychologists as to what form of incentive will best deliver the outcome sought.

4.2 Retailer and retail costs

The MEU notes the AEMC's description of the retail markets as follows:

[2] A positive incentive is one where the consumer is offered an additional known payment for complying with a process that will reduce its demand, whereas a negative incentive is one which states that there will be a penalty (value unknown) if the consumer does not reduce its demand.

> "In order to minimise costs of purchasing electricity, retailers (and other purchasers of wholesale electricity) have an incentive to minimise the volumes of wholesale electricity that they purchase at peak prices. Since electricity cannot currently be economically stored, they can only do this if their customers reduce their consumption at the times that peak prices occur. In theory, the most efficient consumption decisions should be brought about by exposing consumers to the costs of supplying them with electricity at all times. This would mean that electricity is supplied to all consumers who are willing to pay the cost of producing it at any given time, but nobody would pay more than the value they place on consuming electricity at that time.
>
> The majority of consumers are likely to prefer not to face the volatility of prices that vary every half-hour, and would prefer to pay a premium for a flatter pricing structure. Retailers can hedge themselves against excessive variation in prices through contracting arrangements with generators or third parties. While this means the signals of half-hourly price variations are not directly felt by most market participants, efficient decisions should still be signalled, as the magnitude of the price spikes will affect the terms of the contracts between sellers and purchasers of electricity." (AEMC, page 68)

The AEMC has correctly identified that consumers would prefer to be insulated from market price volatility and pay a premium for this to occur. It is only when this premium is too great, do consumers question the validity of this approach. The less the share of the delivered price related to the cost of energy, the less this premium for excluding volatility will deliver the preferred outcome. Adding to this, if tariffs are set in such a way as to further eliminate these signals (eg all customers of the same class paying the same tariff), the more the premium for volatility is masked.

This masking effect reaches its apex with residential consumers where consumers without refrigerative air conditioning are cross subsidising those with it because the impact of the occasional high demand is totally masked by the structures used for both retail and network tariffs.

The MEU has also noted a new effect in the electricity market with retailers tending to re-aggregate with generators in order to minimise risks at the wholesale level; this has caused the retail market dynamics to change quite markedly.

For example, in South Australia, where AGL/TIPS is the dominant generator and dominant retailer a vast array of business strategies, have been seen. Here, the dominance of AGL in both sectors, allows it to manage its costs and risks in a way not available to any other retailer in the region. Firstly, other retailers are now required to access wholesale market hedges from its competitor. Secondly, when regional demand reaches a particular level (the

AER has calculated this to be ~2500 MW) AGL has the ability to set the wholesale spot price and so set the cost of risk management seen by other retailers, but where AGL has the ability to transfer the cost of the premium within its own organisation from retail to wholesale and vice versa. Thirdly, by owning so much generation, AGL has the ability to reduce its risk premium well below the costs seen by its competitors

The outcome for the SA regional market has been a significant lessening of competition and a large increase in retail prices.

As part of its strategy, AGL Retail has implemented lower prices for large consumers on the basis that they will reduce consumption on demand of AGL. Whilst this has the appearance of attempting to provide demand management by a retailer, this approach has not been seen to any extent in any other regional market, raising the question as to why this is occurring just in the SA region.

What the AEMC commentary fails to recognise is that retailers are incentivised to:

1. Encourage consumers to use more energy as this increases the profits retailers make; and

2. Encourage consumers to continue to want retailers to manage their risk as this provides retailers with a second avenue to increase their profits[3].

4.3 How do current tariffs compare to cost reflective tariffs?

4.3.1 Wholesale

The AEMC's assumption that prices in each region are an efficient price for that region is simply wrong. It is an artificial framework and totally ignores the strategic behaviour of dominant firms in an increasingly concentrated electricity supply market. In this regard, the strategic behaviour of dominant 'gentailer' disproves any assumption concerning incentives on retailers to ration demand during peak periods by setting cost-reflective prices.

To make such an assumption means that incorrect deductions are likely to be made and plans implemented that will not address the core problem. The MEU considers the AEMC should not make its assessments based on this assumption.

[3] Where retailers (such as AGL) are both generators and retailers ("gentailers") there is the opportunity for the retailer to use its generation to reduce the cost of the risk in the market.

4.3.2 Network

The MEU agrees that

> "…some NSPs are signalling to some extent the changes in their costs over the day and over the year." (AEMC, page 70)

It is, however, not clear how effective they are in influencing consumer behaviour. It would be of interest if the PWC study had investigated this.

The MEU has noted that most retailers tend to use the network tariffs time frames as the basis of their simple tariffs. But it is clear that this is merely consistency driven by the approach used by networks. The retailer tariffs would look considerably different to those used by the networks if they were based on the spot pricing, as indicated in the section 3.2.2 above.

The network tariffs are based on those developed and used by the vertically integrated government owned supply businesses and therefore do not reflect the changes that have occurred since disaggregation.

The costs that a network incurs in operating its networks are primarily related to demand (and the network is sized to reflect peak demands). However, the bulk of the network revenue is derived from charges for consumption, as this was more convenient as meters measured consumption. Meter technology has changed and networks could charge for the peak demand each consumer incurs if new meter technology was integrated[4].

Even though network costs are driven by demand, retail supplies are more driven by consumption at critical times. There is, therefore, a disconnect between the way networks should structure their tariffs to reflect the core drivers of their costs, from the way retailers should structure their tariffs to recover retail costs.

This recognises the essential differences between the cost drivers of each of the supply chain elements. Persisting with a common approach to tariffs for both network and retail costs will detract from achieving the best benefits from exposing consumers to the price signals that impact their usage of electricity.

There is also a need to reflect the actuality that most distribution networks are permitted to apply price cap regulation. Under price cap regulation, networks are incentivised to increase demand and consumption of electricity as this increases their revenue, and a fall in demand and consumption reduces their

[4] This does not mean the roll out of interval metering per se, but providing meters that can measure peak demand.

revenue. So profitability of networks under price cap regulation is a stumbling block to achieving sound DSP responses.

4.3.3. Potential for price signals to promote efficient consumer DSP

Whilst the MEU agrees that:

> "Critical peak price and dynamic peak price tariffs appear to provoke the largest response, with peak demand reductions of up to 30 to 40 per cent observed" (AEMC, page 72)

there needs to be recognition a single tariff approach for both retail and network charging is attempting to provide outcomes for two quite different drivers. Just because there is a peak price signal in the spot market, does not indicate there is a need for a consumer response for a network problem and vice versa.

Large consumers actually see two quite distinct tariffs – one for networks based on their demand and one for their retailer based on their consumption and the time that this occurs. Until different signals are provided to react to the different needs of networks and retailers, any approach to DSP will be hamstrung.

As noted above, both retailers and networks under price cap regulation are incentivised to increase demand and consumption. This immediately raises the point that neither of them is actively seeking demand side participation, and they both have an incentive to prevent it.

To a lesser extent, networks on revenue cap regulation are also not incentivised to encourage demand side participation. This is because increases in demand provide their arguments with the regulator to invest. As noted earlier, the building block approach to regulation embeds profits in the WACC and an increase in asset base increases profits.

There are a number of experiences that large consumers have had in relation to demand side participation which provide a clear indication of the way DSP has been marginalised.

1. There are aggregators of load which combine offers from consumers to reduce demand at times of high regional price, and where there is potential for shortages of supply to occur. The NEM rules prevent these aggregators offering this demand reduction into the market. This means that one option for providing sensible DSP at times of high demand or when blackouts would otherwise be imposed, is prevented.

2. Retailers have approached some large consumers of energy with the concept of sharing the benefits of demand reduction at times of need. The consumer is the party that incurs the bulk of the cost, but retailers

have advised that they require a large proportion (exceeding 50%) of the benefit coming form the reduction, in order for them to make it attractive to be involved in the process. With small rewards and significant costs, most large consumers do not take up this option.

In assessing the potential for price signalling to lead to better DSP, there needs to be much deeper investigation into what is being sought within each element of the supply chain, and how to achieve the best outcome. The MEU is convinced that as a result of first hand experience, a single price signal cannot address shortcomings across both retail and network involvement in DSP, and great care is needed to overcome the embedded incentives for retail and networks not to want to support DSP.

4.3.4. Prices must be made more cost-reflective

As noted above, the structures of tariffs do not reflect the way electricity is used. Retail costs are more driven by consumption and its timing and networks by the peak demand each consumer imposes on the networks. Network peak/off peak times do not match the times of peak demands on the spot market.

Until this dichotomy is resolved, by having different bases for the tariffs, price signalling will be marginalised as a tool for DSP.

The approaches to setting tariff structures established with the goals of averaging costs (postage stamping) and customers of the same class having the same network tariffs (regardless of location) provide considerable impediment to DSP.

For DSP to work effectively, the consumer needs to see the actual costs that it will avoid if it provides a DSP solution. If the avoided costs are understated because of averaging, then efficient DSP will not occur as the benefits are not provided to the DSP provider. Equally, if the benefits are overstated because of averaging, then inefficient DSP will result.

5. Supply chain interactions

5.1 Nature of DSP

The MEU notes the AEMC's assessment that there are two broad categories of DSP, divided into:-

> "Contracted DSP promotes consumer participation through a direct compensation payment or incentive. The consumer agrees to alter their electricity use under certain defined circumstances in return for an explicit payment. DSP resources which can supply capacity, ancillary services and energy reduction with a high degree of certainty tend to be covered by such payments. Examples include network support agreements and direct load control.
>
> Non-contracted (price responsive) DSP links prices in retail and wholesale markets, with retail consumers receiving a price signal reflecting the costs of supply and delivery. When high energy prices are correlated with reliability problems or local network constraints, actions taken by consumers to reduce load can have a positive impact on reliability in addition to reducing overall costs. Such DSP can be achieved without prior knowledge by the system operator, retailer or network business."(AEMC, page 97)

The MEU considers there is a third category as well, involving embedded generation which encompasses both options. Here, the consumer operates its own generation for some of the time, limiting its usage of the NEM. This can be either for short periods of time (when emergency generation is used) or for considerable periods of the year (when the bulk of supply is provided by self generation). In both cases the consumer uses the NEM to provide services for either short periods of time or long periods of time which are contracted services, although within these contracts are requirements that demand does not exceed a certain amount or when the demand is limited at critical times.

This third option introduces a need to ensure that full value is provided to the DSP provider by its decision to limit its demand on the NEM to times when the NEM is under stress from either a network or a regional viewpoint.

What is most important from a DSP view of the NEM is that there should be an ability to negotiate with a retailer and/or network to agree a discounted rate for using the network when there is available capacity but to reduce demand when there is a shortage of capacity. This is analogous to the concept of accessing interruptible capacity of a gas pipeline.

Unfortunately, both retailers and networks (but especially networks) appear to have a negative view on such arrangements. MEU members have reported an intransigence from networks in negotiating such flexible approaches, possibly

because they see that it results in a loss of profit (under a price cap approach) or a loss of allowed revenue (under a revenue cap approach) Whatever the reason, the costs involved in providing back up from the market at times of low demand are the same as when the market is under stress. This one aspect of price signalling has resulted in many potentially efficient self generation projects never proceeding.

The MEU considers that the rules need to be structured so that back up services provided to self generators need to reflect a benefit if the back up is provided at times when the market has under utilised resources available for the back up service.

However, the main problem with the supply chain interaction is that there are different drivers for each element of the supply chain, and there is no one single price signal that will provide the overarching outcome to allow greater DSP. As noted above, cost reflective pricing for networks will assist in improving DSP outcomes, but this will have little effect on the way generators and retailers will act in regard to their drivers, which are more related to consumption and its timing.

There is no “one size fits all” solution for setting the drivers for better signals to encourage better DSP and this differentiation has to be addressed in different ways.

6. Wholesale and ancillary services markets

The AEMC points to a number of suggestions to make DSP more attractive from the viewpoint of the wholesale market perspective. It provides a summary view that:

> "A number of stakeholders raised significant amendments to the current wholesale arrangements as a means to better facilitate DSP. Such options range from introducing an uplift payment, increasing the market price cap, paying DSP resources at their bid prices, and introducing a day-ahead market or capacity markets. (AEMC page 117)"

The AEMC then goes on to state that they consider that such approaches might not be the most effective way of addressing the problem. The MEU agrees that the changes proposed would introduce considerable reform but not necessarily enhance the uptake of DSP.

The only exception the MEU would make to this observation is in regard to a change to a capacity market[5]. The MEU considers that a move to a capacity market has considerable merit, and it would assist in increasing DSP. That a capacity market can enhance DSP is beyond doubt, as activities by consumers in the Western Australian WEM have demonstrated. However, the MEU equally considers that its value in assisting DSP is not sufficient reason alone for making the change.

The MEU is of the view (made clear in preceding sections) that DSP is all about making consumers able to participate, rather than introduce significant change to the NEM. The value of price signals is not doubted, but it is the ability of consumers to see value in them **and** to be able to use them effectively that will drive DSP.

For example, the amount of DSP has not increased to any discernable level as the market price cap has increased. In practice, increasing the value of the market price cap should have resulted in more DSP (if, indeed, this is a driver for DSP) but few consumers have been able or prepared to benefit from the increase. The MEU considers that this is because of the relative inability of consumers to access the benefits (compared to the costs and risks) that would flow from being exposed to the market price cap. A number of companies do operate with full exposure to the spot price, but use their ability to reduce demand quickly to limit their exposure to the risk.

[5] Although that the MEU has previously advised that it considers that a capacity market mechanism might be an appropriate change but for reasons other than DSP encouragement.

The MEU does consider that aggregators of load should be allowed to operate in the market as this provides consumers with a lower cost approach to benefiting from demand reduction when the spot price is high.

It is however important to note that most consumers are loath to be exposed to the spot market (whether in total or through demand reduction only when the spot price is high) because of the high market and financial institutions costs involved in being a market participant. To limit the cost and risk, most operate through retailers and would do so through aggregators if this was allowed under the rules.

The MEU supports the planned direction of the AEMC to consider:

- "additional obligations on market participants to provide information to AEMO regarding DSP resource capability in order to assist in demand forecasts;
- ways to better facilitate the role of aggregators and the ways in which they may directly access the wholesale market.; and
- other potential improvements to existing processes to better facilitate DSP into the wholesale market, including the effectiveness of the financial contract market." (AEMC Page 117)

7 Networks

7.1 Networks' Role in DSP

The MEU believes that networks have a central role in DSP. How effective a role played critically depends on the incentives available, and the AEMC is correct, up to a point, that:-

> "A question for this review is how to ensure that network businesses are properly incentivised to facilitate DSP" (AEMC, page 137).

The MEU, however, would strongly urge that the issues surrounding this question be carefully assessed. In the MEU's view, the whole system of economic regulation, can and does, over-incentivise networks to make network investments and this disincentivises DSP.

For example, the current AER network revenue rule change package, clearly demonstrate that the Rules have been unbalanced, and have greatly incentivised network investments causing over investment and, of course, significantly increased network revenues and profitability.

The building block approach in economic regulation (WACC x Capex = Revenues (including profits) has a built-in incentive to networks to gain profitability via network investments. And when the Rules are unbalanced and provide high levels of incentives for capital investment, DSP is thwarted, discouraged, or requires such high levels of incentives that it becomes unclear that net benefits are actually achievable.

7.2 Issues with current market conditions

The MEU notes the AEMC observation:-

> Profit Incentives for Distribution Network Businesses and Demand Side Participation,
>
> "In conjunction with this directions paper, we have released a supplementary paper which discusses the various ways in which distribution network businesses can make a profit under the existing rules and then evaluates how this affects the incentives on these businesses to pursue DSP options. That paper sets out the factors with the current arrangements which could prevent the distribution business from investing in and using efficient DSP projects. In summary:
>
> - There could be a bias towards capital expenditure in favour of operating expenditure, both in terms of the potential to make profit and certainty about cost recovery. Therefore, other factors being equal, operating expenditure on

> DSP may be at a disadvantage compared to capital expenditure. This does not necessarily act as a barrier to all forms of DSP, given the developments in DSP technology will means that an increasing proportion of DSP projects will require capital investment. However it means that network businesses are likely to favour their own DSP options, which can be treated as capital expenditure, Networks instead of purchasing solutions from DSP service providers, which is likely to be treated as operating expenditure" (AEMC, pages 138 and 139)

This assessment reflects the views provided in a report published by the Total Environment Centre "Does Current Electricity Network Regulation Actively Minimise Demand Side Responsiveness in the NEM?" [6]. This report clearly supports the views provided above by the AEMC.

The MEU agrees that the current regulatory approach does minimise DSP by incentivising networks to invest in assets rather than use all available means to provide the service

7.3 Inclusion of demand management into the network planning process

The MEU notes:

> "The AEMC is currently conducting a rule change on the National Framework for Electricity Distribution Network Planning and Expansion. That rule change is assessing the appropriate range of information which the DNSPs must publish in an annual planning report and the development of a Regulatory Investment Test for Distribution (RIT-D) for assessing various options to address a system limitations. The proposed framework also has a requirement for the businesses to develop a Demand Side Engagement Strategy. The Demand Side Engagement Strategy would involve distribution businesses publishing a demand side engagement facilitation process document, establishing and maintaining a database of non-network case studies and proposals, and establishing and maintaining a Demand Side Engagement Register. This recommended framework is in recognition of the importance of proactive engagement by both DNSPs and demand-side providers to develop potential solutions to system limitations." (AEMC, page 142)

The MEU is of the view that any additional information that is required will assist in improving the regulation of networks. Notwithstanding this supportive view, the MEU also considers that there is a real need to reduce the barriers to DSP. Just mandating additional reviews and analysis will not provide the outcome sought.

The main reason (other than there is a financial incentive not to do so) for DNSPs (and TNSPs) from not using DSP more as a replacement for providing assets, is that NSPs argue that DSP is not as reliable as network assets. For

[6] Available at http://www.advocacypanel.com.au/documents/Applic280.pdf

example, using a DSP approach to network support (eg through generation) does not guarantee that the service will be provided to the same level of reliability as providing network assets, as there is a view that there will be ~95% availability of the generation compared to the 98-99% availability of network assets. Because of this disparity, NSPs allege that the network support option is too unreliable for the needs of the network and therefore discount the use of network support as an option.

Unless this aspect can be overcome, DSP provision of network support will be effectively eliminated. The requirement for additional information and analysis will not overcome this fundamental issue.

7.4 Engagement with consumers

The MEU agrees with the importance of network business engaging with consumers.

MEU members have reported that because they are large energy consumers, they have regular and relatively easy access to senior staff with network businesses. However, this access is predicated on the consumer having a good understanding of the issues and being able to debate the issues as needed. Networks are aware that such large energy consumers are also prepared to take their concerns to the regulator and to governments if they are unsatisfied with the responses from the networks, although depending on the issues, there is no level playing field in all instances.

This style of access is not readily transferable to a large number of small energy consumers, so to increase the ability of all consumers to their networks will require a different format.

8. Retailers

The AEMC commences the section with the statement:

> "Retailers' principal role in the market is to act as an agent for consumers in contracting for energy services and packaging them to meet consumers' requirements. As the key interface between consumers and the rest of the supply chain, the retailer's contract with consumers can offer both the means for consumers to participate in DSP where they wish to, and a route by which consumers can be compensated for those DSP actions (for example through the price structure and conditions of the contract, or side payments for specified actions). (AEMC pages 149,150)

Whilst the MEU agrees with the sentiment behind this observation, it is more pragmatic than the AEMC about the retailer role. The MEU sees that the retailer provides consumers with a service to exempt the consumer from having to be a market participant (with all the associated costs) and to manage the risks that the market causes. The consumer also sees that the retailer, by aggregating the consumer's load with other loads, can provide a lower cost service than the consumer could achieve on its own. For providing this service, the retailer expects to make a profit.

The difference between the AEMC view of the retail service and that of the MEU view is profound when examining the role of DSP and retailer involvement.

The MEU has made comment about the ability, preparedness and cost sharing approaches of retailers to assist in the greater development of DSP in preceding sections. Large energy consumers have experienced considerable difficulty in developing viable DSP options with retailers for a number of reasons and some of these have been detailed above.

The MEU recognises that retailers' desire to maximise their profit and they will balance the profitability of increased consumption against the profitability of DSP options. Equally, consumers need to get a better outcome by providing a DSP option. Thus, a DSP option has to:

- Provide the retailer with a better profit than by not doing the DSP option; and

- Provide the consumer with recovery of the costs involved and to provide a better financial outcome from providing the DSP than by not doing so

Unless both of these outcomes are achieved, the DSP option will not occur. When put this way, it puts a totally different complexion on the achievement of DSP.

The AEMC posits that retailers can assist enhance DSP:

- "in design of retail tariff structures in order to provide signals to consumers on the value of DSP (including how the retailer decides to pass through network charges);
- offering contracts, products and services that enable DSP if demanded by consumers; and
- to act as a gateway for enabling consumer engagement in and awareness of DSP (for example through providing information as part of its billing process or marketing campaigns)" (AEMC page 150)

Whilst this is all true, retailers are unlikely to be altruistic in providing these – they will want the best commercial outcome for themselves. As noted earlier, the experience large consumers have had with retailers regarding DSP indicates that the MEU assessment is correct.

In the early years of the NEM (and NEM1 before it) retailers did attempt to provide some form of DSP through complex multi-part tariffs reflecting peak, shoulder and off peak pricing, with differing rates for winter, summer and mid season – these all are forms of price signals for gaining DSP. These multi-part tariffs were hardly used and morphed into the two part tariffs that are the basic approach used now. The fact that these multi-part tariffs were discontinued was a result of consumer action – consumers wanted simplicity. The MEU considers that this was a lesson for retailers seeking to drive consumers in a direction they did not want to go.

The MEU has been a consistent supporter of the Reserve Trader concept, as this provides a managed approach to providing DSP. The Reliability Panel has decided that the reserve Trader function is no longer needed and that the interest in the concept was muted. One of the main benefits of the Reserve Trader function was that it could provide known outcomes for providing a service. Reserve Trader was an opportunity for retailers and consumers to join together in a way that recognised the three points noted by the AEMC and referenced above.

The fact that Reserve Trader was so poorly supported (according to the Reliability Panel) by retailer/consumers indicates that the high aspirations the AEMC has assumed would apply, have not been seen in practice.

The MEU sees the need for retailer involvement in the provision of DSP but, based on the experience of MEU members over many years, the MEU does not see that retailers will be a major driving force in encouraging DSP. The MEU considers that retailers will be more likely to respond to consumer action than lead it.

9. Distributed generation (DG)

The MEU has commented above on the issue of DG and the barrier that DG proponents face in regard to the provision of back up. Suffice to repeat, the MEU considers that there needs to be a network tariff that permits embedded generation to access the network at times when there is adequate spare capacity, and for the costs of doing so to be reduced. MEU members have advised that the major barrier to installing DG is the cost of the back up when the generation plant is out of service for maintenance.

The other major issue that consumers have identified in relation to DG, is that networks recognise that multiple DG plants embedded in their networks will provide network support and minimise the need for augmentation of the network.

However, networks assess the value to the network of each individual DG project in isolation. Following this approach, no DG project can meet the network requirements for reliability and therefore no DG project gets recognition of its value to the network. Because the first project is not considered to provide value, the project does not proceed. This means that DG is prevented from providing a value because of a variant of the Catch 22 scenario – “it isn’t there because it won’t happen”

For DG to be granted a network support benefit, there has to be multiple DG plants embedded in the network. This means that the first DG plants have to be allowed a benefit so they can be built. More DG plants will follow and when there are a number of them in a network, the benefit they provide will be realised.

Once the principle of allowing DG to be assumed to provide a benefit, the issues identified by the AEMC can assist in reducing the other barriers to entry. The MEU supports the AEMC in seeking to reduce these other barriers (such as lack of information and connection issues and charges) and refining the approaches to allow greater flexibility.

10. Responses to specific AEMC questions

The MEU has not responded to every question at this time. This does not mean that the MEU does not have a view regarding the question but that its view is reflected in the commentary in sections 1 and 2

Chapter	#	AEMC question	MEU response
4	**1**	**What should be the arrangements for consumers (or third parties acting on their behalf) to access their energy data?**	There should be no impediment to consumers accessing data from their retailer or their DNSP. This data should be available on demand. There should be the facility for consumers to assign this right to a third party if it so desires. There should be no cost to the consumer for the provision of this data
	2	**Do you consider that there could be a role for an information service provider in the market as a mechanism to provide consumption data to consumers?**	This adds an extra party for carrying out a task that the consumer's retailer or its DNSP should do as part of the cost of the service provided. The MEU does not oppose this option, but does not see the purpose it serves when the data is already held by the retailer and DNSP for billing purposes.
	3	**Should amendments be made to the current NER clause 7.7 (a) to facilitate consumer access to consumption information? If so, how?**	It is noted that the DNSP first accesses the data and passes this to AEMO (in some cases) and the consumer's retailer. All of these parties should be allowed to provide the information to the consumer or its agent.
	4	**What information provisions could be put in place to improve awareness of the costs of consumption and the use of particular appliances/equipment, so that the benefits of taking up different DSP options can be realised?**	As stated above, rationalise and provide focus to the array of information currently provided to consumers under the plethora of energy efficiency schemes, including those currently provided by retailers and manufacturers of appliances and equipment. What value can the AEMC add?

5	**5**	**Should network charges vary by time of use?**	Network charges are related to the value of the assets used and therefore are in theory independent of time of use. However, the time the assets are used impacts on the need for augmentation, so there is a need to signal to consumers, times when the network is most loaded in order to change consumer habits. An appropriate tariff is needed to provide a signal as to when the network is heavily loaded
	6	**Should NSPs charge on a volume or capacity basis?**	Capacity (demand) is the driver of network costs, so tariffs should reflect this
	7	**What changes are needed to market conditions to facilitate more cost-reflective network pricing?**	Amend the Rules and empower/direct the AER to ensure network prices are based on demand (capacity)
	8	**Do retailers have the right incentives to pass through appropriate wholesale costs and network charges to consumers?**	No. They are incentivised to maximise their profits. They have the ability to combine all elements of the supply chain in any way that suits them. Large consumers are able to see network charges separately but small consumers just see a bundled tariff as this is the basis for retail price caps which provide the basis for comparison for small consumers
	9	**Do retailers have an incentive to minimise the costs of their customers' consumption?**	No, they are incentivised to maximise consumption as they get a profit margin based on consumption. There is a misconception that retailers act for consumers. This is completely erroneous – retailers act for themselves
	10	**Would a tariff with a fixed, variable and network LRMC element as described in section 5.8 closely reflect the costs of supplying electricity?**	Networks costs are related to peak demand, retail costs are related to consumption. This means that the signals have to be different for each supply chain element. To combine the two into a single tariff with both components has the potential to create confusion The MEU considers that the signals for the two elements should be separated to make the signal clear to consumers as what is being achieved by the signal
	11	**What are the restrictions on retailers offering such a tariff?**	Retailers can offer whatever tariff structure they want How they offer their services is unregulated) but they have to recognise they can only

			offer what the customer wants or is prepared to use. Networks can be mandated to offer their tariffs in a particular way.
	12	**Can efficient levels of DSP be achieved without cost-reflective prices? What considerations are needed to achieve this?**	Cost reflective prices are important and unless the benefits provided reflect reality, the DSP benefits cannot be properly quantified and an inefficient outcome is likely to occur. But there are other barriers, as pointed out above.
	13	**What other market conditions need to change to enable cost-reflective prices? Will the benefits from improving the cost reflectivity of price signals outweigh the costs of the actions to improve them?**	The less the price is cost reflective, the less efficient the DSP result will be (if it occurs at all). This question therefore poses whether the benefits from improved DSP outweigh the costs of providing accurate information that efficient DSP requires. The MEU has provided details to other barriers to entry of DSP that can be more readily addressed
	14	**Are changes to the current regulatory arrangements required to provide stronger incentives on NSPs and/or retailers to align price with cost?**	Yes, but it will be difficult to mandate these incentives on retailers
6	**15**	**Are there any practical additional mechanisms that could help alleviate the barriers to consumer investing in DSP technology?**	Yes. The MEU has provided examples of what can be done in the narrative above. Options include • Allowing aggregators to act in the NEM. • Recognising that networks don't want DSP in preference to network solutions. • Eliminating high charges for the use of networks at times of low demand by embedded generation
	16	**What should be the role of intermediaries such as ESCOs in addressing the barriers to efficient consumer investment and what factors could be impeding the development of these parties?**	The use of ESCos is already occurring and adding considerable value to consumers. Many large consumers currently use ESCos to assist in their activities. The issue for ESCos is how to be linked up with consumers that want to be active in DSP and other activities

	17	**What amendments to the metering arrangements in the NEM are required to facilitate commercial investment in metering technology which supports time sensitive tariffs?**	The MEU has no view on this other than to observe that "technology picking" is a fraught exercise
	18	**Are the current arrangements sufficient to facilitate a consumer's decision to install their own meter as a revenue meter? If not, what changes to the current arrangements are required?**	The issue that must be addressed is that the only meter that can be used for billing purposes must be acceptable to the NSP and the retailer. It would be inefficient for a separate meter be provided by the consumer with another meter provided for billing. The issue is really one of efficient features being provided that the consumer can access which the NSP or retailer does not consider are necessary in the meters they provide
	19	**Are any amendments to the arrangements required to encourage either the network businesses or retailers in invest in metering capability in order to support DSP options?**	Meters need to be two way measuring both import and export of power which might be provided by DSP. Measurement of the time DSP is provided is also essential to ensure the consumer gets the maximum value from its DSP
	20	**Are there aspects to the arrangements regarding the integration of DSP technologies into energy networks that requires further consideration under this review?**	
7	**21**	**Can you provide a practical example of a DSP option which could deliver a net benefit to the market and also to the various parts of a supply chain. What are the reasons for such opportunities not**	Embedded generation coupled with a large consumer provides such value. The generation operates at times when the network is heavily loaded and/or when the market is near capacity. The consumer reduces demand at such times to provide the maximum benefit to the market. When the Markey is lightly loaded, the embedded generator

		being captured today?	doers not operate maximising the import of power providing the market as a whole to keep base load generation working at efficient levels. Unfortunately the way network charges are levied prevents this sort of coupled consumer/embedded generator from being commercially attractive. Another option is to provide a critical demand network pricing signal – where users are incentivised to reduce demand during critical high network demand periods through network incentives
	22	**How do the current market arrangements promote co-ordination across the supply chain to promote efficient DSP? What potential improvements should be considered?**	They don't as the drivers are totally different for each sector of the supply chain. Signals should be structured to best reflect the benefits DSP makes for each element of the supply chain
	23	**Do you consider that there is inconsistency between how the wholesale and market sectors value DSP impacts? If so, is this a material problem to be addressed?**	Yes and yes.
	24	**Can market mechanisms be improved to facilitate supply chain interactions for efficient DSP? If so, what options should be considered by this review and what considerations should be taken into account?**	See response in the narrative and answer to question 21
	25	**Would fully cost-reflective price signals enable the supply chain to act in a co-ordinated manner towards efficient DSP opportunities or would additional**	No. See narrative and answers to earlier questions. Drivers are different for each element and therefore the signals for each driver have to be unique to each

		amendments be needed?	
	26	**Would applying a network tariff scheme, similar to Orion's approach, be effective in the NEM?**	The Orion approach is to address network needs, and is similar to the approach suggested by the MEU – that network tariffs be more related to demand than consumption. Signals to provide DSP when the network is heavily loaded provide rewards to those that are prepared to reduce demand when this provides a benefit to Orion. As noted in the narrative, using averaging and postage stamping prevents the benefits of DSP being garnered by those providing the DSP
	27	**What are your views on possible approaches to achieving co-ordination across the market participants in the supply chain?**	As the drivers are different for each element of the supply chain, what benefits one element does not necessarily benefit another element. Therefore the price signals need to reflect the benefit each element will achieve from DSP through cost reflective pricing for each element
	28	**What should be the approach to quantify the value of DSP options?**	Separating the benefits for each element and making these clear. Limiting the barriers to entry would have to occur first.
	29	**Should standardised, common methods to forecast the impacts of DSP be developed? Is there a need for common approaches between network and operational planning?**	Probably no. Each DSP option is likely to be different because of the impact on each element of the supply chain in the location where each DSP option is being assessed.
	30	**If the required co-ordination across the supply chain cannot be achieved, should a market participant be assign with the responsibility to procure DSP options? If so, what issues need to be considered in the design of such an approach?**	No. DSP is triggered by consumers that are aware of the opportunities. The benefits of the proposed DSP need to be clearly identified for each element of the supply chain through price signals
8	**31**	**Should there be additional obligations on market participants to provide information**	yes

		to AEMO regarding DSP capability?	
	32	**Are there issues relating to the costs and processes for becoming a registered participant in the NEM that require to be considered further in this review? If so, why?**	Yes. The costs and risks are too high for most DSP options. That this is the case can be seen by those consumers who take spot market risk – they are not market participants (for very good reasons) and use a retailer as an intermediary and pay a transaction fee to the retailer
	33	**What issues should be considered regarding the role of aggregators in the NEM? Should there be a new category of market participant for aggregators?**	The MEU sees that aggregators of demand have an important role to play in that they can respond to market signals that there is a shortage of supply. Unfortunately aggregators of demand are not permitted to offer this demand to the spot market. Aggregators of consumption already exist and operate successfully in the market, and act as an intermediary between retailers and a group of consumers
	34	**How effective are current financial contracts markets at providing a hedge against price risk for DSP options?**	
	35	**Given the discussion regarding the appropriate payment to DSP resources in the NEM, are there any other issues that should be considered by the Commission in regard to this matter? Are there any potential improvements to existing processes and other means to better facilitate DSP into the wholesale market that require consideration?**	See narrative above
9	**36**	**Do you consider that the current regulatory arrangements could prevent**	Yes, see narrative above

		network businesses from pursuing efficient DSP projects which could contribute to achieving a more economically efficient demand/supply balance in the electricity market?	
	37	**What options for reforming the current regulatory arrangements should be explored under the next stage of the review?**	The MEU has offered suggestions in the narrative above
	38	**Do the current arrangements need to clarify distribution network businesses' involvement in distributed generation and if so, how?**	Yes. Much improvement is required. See narrative above
	39	**How should network businesses estimate the potential demand impacts associated with DSP? Should there be consistency in approach across the business and should arrangements provide guidance on how to do such estimation?**	The needs of networks vary across networks, implying that the benefit of DSP will vary across a network and between different networks. A constant approach is preferred as this prevents the NSPs from using its monopoly powers to prevent the incidence of DSP
	40	**What should be the framework for recognising the impacts of DSP in the forecasting methodologies used during the regulatory revenue determination process?**	
	41	**Is it appropriate for network businesses to be exempt from the service standard incentive scheme during the initial**	

		development phase of DSP projects? What factors need to be taken into consideration in designing such an exemption?	
	42	**Should network businesses play a greater role in informing consumers about the potential benefits from DSP and various DSP products? If so, how should they do so?**	Yes. DSP will assist the market and therefore benefit all consumers. As a monopoly service provider, an NSP has the responsibility to consumers to assist them in achieving better outcomes.
10	**43**	**Do you consider that settlement profiles which more accurately reflect actual consumption patterns improve incentives on retailers and/or consumers to offer/provide DSP?**	No. Retailers are incentivised to increase consumption which is the antithesis of DSP. The vast majority of consumers are ignorant of what they can do in relation to DSP and what the benefits are. This means that just the provision of data is unlikely to assist most consumers
	44	**What are the specific aspects of state based retail price regulations that restrict retailers from offering innovative tariffs or products? What amendments to the regulations could better enable retailers and other parties to facilitate DSP?**	State based retail price caps provide a basis for comparison of retail prices. Retailers are still free to offer innovative tariffs that cost less than the retail price caps. The development of the retail price caps allows “head room” above expected costs so there is flexibility within the retail price caps to allow innovation See the narrative above for ideas on making DSP more accessible. The MEU considers that network pricing prevents many DSP options from proceeding
	45	**Should retail price regulation provide some certainty for retailers in their ability to recover any costs associated with facilitating DSP?**	As noted in the narrative above, experience with retailers indicates that they want a significant share of the benefits of DSP and the balance remaining seldom covers the costs involved for the provider
	46	**Should retailers play a greater role in**	Yes, but the question remains as to how to achieve this because

		informing consumers about the potential benefits from DSP and various DSP products? If so, how should they do so?	retailers are not incentivised to do so. Further, as retailers do not have to divulge their costs (unlike NSPs) there is no certainty that the calculations made for reimbursing retailers will be accurate. This has the potential for providing retailers with another source of revenue
11	**47**	**What incentives should be provided to DNSPs to ensure that they support DG projects? Is there merit in the proposal for DG proponents to pay DNSPs a fee-for-service to connect a DG installation? If so, how should this proposal be applied?**	As noted in the narrative above, network pricing needs to enable DSP rather than prevent it. DG will be prevented as long as NSPs assess each DG project in isolation – see narrative section 9
	48	**What are the appropriate metering and settlement arrangements to facilitate the ability of consumers and DG projects to sell their demand response to any party?**	
	49	**Are amendments to the current market arrangements required to facilitate DSP contracts which enable the DSP provider to sell its services to any party? If so, what amendments are appropriate?**	At the moment, DSP contracts must be sold by a consumer to a market participant. This prevents the aggregators of demand providing their service directly to AEMO. Under the Reserve Trader, AEMO could contract directly with any party to provide the service. This indicates that the concepts of the Reserve Trader could be used to allow aggregators to contract directly with AEMO
	50	**Should there be supplementary provisions to the arrangements governing feed in tariff payments to encourage such consumers who have micro generation units to maximise their export at times that enable deferment of network augmentation? If so, what are possible**	Yes.

		options to achieve this?	
12	**51**	**What do you consider is the role for regulatory energy efficiency policies and measures in the context of facilitating uptake of cost effective DSP in the electricity market?**	Increasing energy efficiency is a DSP response to the market. Many of the energy efficiency programs are inefficient and require cross subsidisation to provide the funds for them. Levying consumers with the cost of these programs and then giving them something "free" does not drive consumers to be involved with DSP DSP is about the consumer implementing actions on it own behalf because they see a benefit rather than being forced to do something. If the consumer can see a clear benefit, then it is most likely to take action. This means that the policies must be about enabling consumers to take action with the rewards covering the costs and providing the incentive.
	52	**In your view, do consumers consider energy efficiency measures separately to DSP, or do they consider all actions as part of managing consumption and hence controlling electricity costs?**	Consumers do not see the mandated energy efficiency initiatives as DSP as they do not see the costs of the program nor are they involved in the decision to seek the change.
	53	**What are the elements for a best practice model or approach for energy efficiency policy to facilitate efficient investment in, and use of, DSP in the electricity market?**	The decision to implement DSP must come from the consumer as this means they take "ownership" of the DSP. The benefits they get from their DSP must more than offset the costs they see. This means that clear signals must be provided and barriers to implementation must be eliminated.