Submission to the Australian Energy Market Commission

Demand Side Participation (DSP) the power of choice (stage 3) – Issues Paper

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The views expressed in this document are those of the EUAA and do not necessarily reflect the views of the Consumer Advocacy Panel or the AEMC.

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EXECUTIVE SUMMARY

The Energy Users' Association of Australia (EUAA) welcomes an opportunity to make this submission to the Australian Energy Markets Commission (AEMC) review of demand side participation (or demand side response (DSR)) in the National Electricity Market (NEM).

The EUAA membership represents a wide spectrum of energy end-users located in all states, with the majority involved in the production and delivery of a comprehensive range of goods and services that are essential to Australia's social and economic wellbeing. This broad range of activities involves an equally diverse range of energy use patterns, ranging from production processes that would impose very substantial costs on the user even if interrupted briefly (such as telecommunications, chemical processing or glass manufacture), through processes that can be interrupted for time periods ranging from minutes to hours, or to the transfer of load to on-site 'back-up' generators.

Price, reliability and quality of supply are of key importance to all EUAA end-use members. This means that EUAA members are likely to respond to "DSP incentives" that result in improvements in any of these three attributes, providing the benefits clearly exceed the costs.

The EUAA's strong relationship with end users is seen as a way of adding value to the AEMC's review. Whilst it is end-users who provide DSP, the EUAA is fully aware that each end-user has their own views, priorities and criteria for making judgements and decisions about DSP. The key point to appreciate is that there will need to be many solutions because there are different customer segments and different drivers and barriers to undertake DSP activities although some elements are common.

Background to this Submission

The EUAA presumes that the AEMC is using the *Issues Paper* consultation process to identify obstacles that might be changed to achieve a different outcome that better aligns with the *Single Market Objective*. That is, any changes would result in a more competitive and more economically efficient outcome that delivers long-term benefits to end-users.

The EUAA believes that the AEMC needs to provide an informed basis for identifying and discussing the critical issues. For example,the current Rules are complex and the impact of any changes is virtually impossible for end-users to assess in quantitative terms.

The EUAA notes that increasing DSP has been accepted as a desirable policy objective by both the Ministerial Council for Energy (MCE),the Parer review and CoAG's Energy Reform Implementation Group (ERIG). Given the public recognition by these three three of the importance of DSP, the EUAA believes that the AEMC should consider their conclusions in relation to the importance of DSP and supplement this review with theoretical and numerical analysis.

Feedback from EUAA Members

The EUAA was able to elicit some useful feedback from members about their experiences with DSP (April 2008 Survey). Of the range of views expressed major points that appear relevant to the AEMC's deliberations included:

- No respondents were prepared to accept full exposure to spot market price volatility on an ongoing basis (by becoming a Registered Market Participant).

- Respondents preferred to exercise DSP within a flexible contract arrangement with a 'cooperative' retailer or with an aggregator such as Energy Response Pty Ltd.

- Where the benefits were clear, and DSP capability available, respondents were prepared to invest in software, systems, procedures and training to facilitate DSP.

- However, there is general recognition that (in the absence of changes to the Rules) the 'incentives' available from DSP arise from a short-term opportunity to reduce energy costs, with no guarantee that investment in DSP capacity will achieve a reasonable return in the longer term.

- One respondent expressed considerable frustration in trying to reach agreement with the local transmission service provider on the installation of 'market meters' for the on-site generators, a process that had been dragging on for more than 6 months. This user was strongly of the view that any Rule changes to promote DSP should focus on increasing incentives for Market Participants to remove 'bottlenecks' (reduce anti-competitive behaviour) or require incentive payments to make DSP work.

- This user also said that they could not operate in a market where they would be exposed to the Market Price Cap (MPC) for any prolonged period of time; and that the AEMC should not consider increasing the MPC as a way to incentivise DSP. If it was increased, it would flow directly into higher energy contract prices that would more than offset any possible benefits from increased take-up of DSP.

- Some respondents reported difficulty in negotiating inclusion of DSP options in retail contracts where the retailer also owned generation capacity; and none reported direct contact from network service providers seeking DSP capacity.

The reluctance by some major retailers to provide a response to the requirements of members reinforced in the minds of respondents the need for the EUAA to develop a standard energy contract for large users. The EUAA has developed such a contract partly with a view to empower end users as providers of DSR without being limited to DSP opportunities that arise at the discretion of the retailer.

Comment on the AEMC's Issues

The EUAA has attempted to add value to the AEMC review by seeking feedback from members about their experiences with DSP. Information obtained from this process, as well as EUAA involvement and feedback from members over the last decade, has been used in framing the responses outlined in this submission. The EUAA has also relied upon its involvement in DSP through member contact, market and regulatory reviews and various projects.

Key messages for the AEMC from these responses are:

- Any changes in "DSP incentives" for network service providers should be in the form of additional obligations to provide information about DSR opportunities that is meaningful to end-users information and obligations to approach large end-users directly about DSP opportunities.

- There is no evidence that any of the current distribution network service provider incentive schemes are effective in enticing DNSPs to take an active role in seeking DSR services from end-users.;

- The desire for large and small consumers to seek predictable retail pricing substantially reduces the benefits that can be derived from further changes to network pricing incentives.

- The Rules should not be amended to raise the threshold for the Regulatory Test. This would reduce the already low interest by NSPs in proactively seeking DSR and increase the difficulty that aggregators such as Energy Response have in recruiting the required larger aggregations of DSP capacity.

- Network planning and augmentation arrangements should be amended to specify minimum mandatory conditions that include an obligation for NSPs to directly approach large end-users, in the local network area where DSP capacity could be utilised~~;~~ and provide information on the commercial benefits from providing DSP.

- Changes to Rules governing the minimum conditions in network connection agreements (and the minimum performance obligations of NSPs) are required as well as an effective dispute settlement process.

- Whilst it is to be hoped that the AER's assumption of the role of 'national' regulator for transmission and distribution will result in improvements in regulatory approaches to network DSP relative to jurisdictional ones, there is little concrete evidence of this so far, although the AER has publicly stated its support.

- The Rules should be amended so that all generator connection costs be treated on a consistent basis, irrespective of size or location (and jurisdiction).

- Greater participation of DSP in the wholesale market could be achieved by amending the Rules to provide direct incentives for end-users to offer capacity through a DSP capacity payment. To avoid tension with the energy only design of the NEM, this could be limited to DSP. Such changes could significantly improve the flexibility of dispatch arrangements by providing clear commercial incentives for end-users to offer DSP capacity well in advance of its required dispatch and would also assist in improving the accuracy of AEMO's demand forecasts. However, such changes would have to be supplemented by a mechanism in the Rules or otherwise to allow education and skills development to occur that would substantially increase DSR capability in the NEM.

- If the Rules provided direct incentives for end-users to offer capacity through a DSP capacity payment mechanism, this could include an 'uplift' payment to provide a direct incentive for end-users to make DSP capacity available. Alternatively, depending on the value of the 'uplift payment' a direct incentive could be provided for end-users to undertake investments needed to activate an otherwise 'dormant' increment of DSP capacity.

- There could be merit in examining the feasibility and desirability of creating a DSP category of participant with market participation costs that reflects the size and limited participation of such participants.

1. Introduction

The Energy Users' Association of Australia (EUAA) welcomes an opportunity to make this submission to the Australian Energy Markets Commission (AEMC) review of demand side participation (or demand side response (DSR)) in the National Electricity Market (NEM).

This submission is made in response to the AEMC's *Stage 3: Issues Paper* that was released for comment on August 2011.

The EUAA is a non-profit organisation focused entirely on energy issues. Members determine the EUAA's policy and direction and our activities cover both national and state issues. The EUAA has over 100 members representing a wide spectrum of energy end-users located in all states. In the context of this submission, a number of members have reported that they are involved in DSR and others that they would have some capacity to do so if they understood how to access the opportunity better and the incentives to offer DSR were improved.

The EUAA membership represents a wide spectrum of energy end-users located in all states. It is relevant for the AEMC to note specifically that the overwhelming majority of the EUAA's end-user members are involved in the production and delivery of a comprehensive range of goods and services that are essential to Australia's social and economic wellbeing. Amongst other things, this includes production and delivery of:

- raw and processed industrial materials;
- engineering and construction materials;
- chemical and petrochemical products;
- raw and processed minerals;
- paper, paper products and packaging;
- food processing, storage and retailing;
- commercial, technical and educational services;
- telecommunications;
- retail trades
- transport; and
- water and sewerage.

This broad range of activities involves an equally diverse range of energy use patterns, ranging from production processes that would impose very substantial costs on the user even if interrupted briefly (such as telecommunications, chemical processing or glass manufacture) through processes that can be interrupted for time periods ranging from minutes to hours to the transfer of load to on-site 'back-up' generators.

The AEMC will be aware that price, reliability and quality of supply are key matters of importance to all EUAA end-use members even though, for most, energy is likely to account for less than 5% of their total input costs – noting that for some members, energy may be a very significant input cost. This means that EUAA members are likely to respond

to, or support, "DSP incentives" that result in improvements in any of these three attributes, providing the benefits clearly exceed the costs.

2. Background to this Submission

The EUAA has provided two previous submissions to earlier stages of the AEMC's review.

EUAA urges that the AEMC also consider the contents of our previous submissions and address the matters raised therein as part of its deliberations of responses to the current Issues Paper.

Of particular relevance to both submissions is the fact that the EUAA and its members have been actively involved in promoting the development of DSP in the NEM for some time. This activity has included:

- conduct of Australia's first DSP Trial (2004)which contributed directly to the formation of Energy Response Pty Ltd, Australia's first demand side aggregator in 2006
- a series of follow-up case studies to the trial (2005);
- work to assess the performance of the AEMO contract for reserves in Victoria/South Australia in 2006;
- active participation in the development of a DSP regulatory incentive schemes in NSW and
- regular participation in market and regulatory reviews where DSP has been an issue.

The EUAA also developed a *DSP Action Plan for End Users* to assist end-users generally, policymakers and Governments recognise ways to overcome impediments to DSP, including those of an external nature (such as market and regulatory impediments) and those of internal nature (such as those relating to cultural or organisational factors).

The EUAA notes that none of its members has 'in-house' resources that can be assigned to reviews such as this. In general, members rely on the EUAA to respond to regulators' consultation processes and there are practical challenges in engaging with members because all of the members' representatives have major organisational responsibility focused on energy procurement, energy management or production activities.

The EUAA sought feedback from members since it is end-users who do, and could, provide DSP; and the EUAA is fully aware that each end-user has their own views, priorities and criteria for making judgements and decisions about DSP.

It is the EUAA's firm view that the AEMC has an obligation to provide an informed basis for identifying and discussing the issues being considered. For example, the current Rules are complex and the impact of any changes to the Rules is virtually impossible for end-users to assess in quantitative terms.

The EUAA presumes that the AEMC is using the *Issues Paper* consultation process to identify issues or obstacles that might be changed to achieve a different outcome that better aligns with the *Single Market Objective*. That is, changes that would result in a more competitive and more economically efficient outcome that delivers long-term benefits to consumers of electricity.

We note that there is no quantification of 'market outcomes' in the *Issues Paper* that could provide guidance to end-users on the relative materiality of the many issues referenced therein. Whilst this is perhaps understandable for an *Issues Paper*, it would be useful to the further conduct of this review if the AEMC could undertake such a task.

Furthermore, no EUAA member has the resources to make an informed study of the 1,055 pages of the Rules. None of the members who provided feedback had a detailed understanding of the Rules, nor could they be expected to. Therefore, in the absence of information on the quantitative impact of the current rules and arrangements, there is little prospect of getting informed feedback from major energy users.

Given the public recognition by the MCE, the Parer Review and and the ERIG Review, amongst others, of the importance of DSP, the EUAA firmly supports the expanded breadth of Stage 3 of the AEMC's review.

Feedback from EUAA Members

As noted in our previous submissions, the EUAA is aware that large end-users' retail supply contracts have sometimes contained clauses dealing with DSP. It is also typical that these clauses are 'non-binding' in that the retailer is not obliged to request a DSP service during periods of high spot market price or network constraint. Neither is the end-user obliged to provide DSP capacity if requested by the retailer, but each party can choose to do so if, or when, such a request is made.

Our previous submissions also noted that some of the EUAA's members have sites with some wholesale spot market exposure or contracts with partial exposure to spot prices; but in the main, our members have conventional fixed price electricity contracts with a retailer of their choice.

The EUAA was able to obtain some useful feedback from members about their experiences with DSP(April Survey 2008), although they generally requested that their feedback be provided in a form that did not identify them or the specific location of their operations (April 2008 Survey). Of the range of views expressed major points that appear relevant to the AEMC's deliberations included:

- No members reported that they were prepared to accept full exposure to spot market price volatility on an ongoing basis (by becoming a Registered Market Participant). Instead, each of the respondents preferred to exercise DSR within a flexible contract arrangement with a 'cooperative' retailer or with and aggregator such as Energy Response Pty Ltd. The full range of experiences reported by members can be encompassed within the examples outlined below.
    - One end user had established a long-term relationship with a retailer (in Queensland) based on a period contract allowing the user to exercise an option to accept exposure to spot price volatility for all or a particular part of a site load on a quarterly basis. This allowed the user to utilise spare production and stockpiling capacity in a production process that could be interrupted for periods ranging from minutes to hours, with the goal of minimising the cost of energy. The contract also allowed the user to seek the 'protection' of full retail hedge cover in a forthcoming quarter (by providing the specified notice to the retailer) when production or stockpiling

capacity was constrained or spot price volatility became too severe to manage.

This particular user had:

- invested in commercial price monitoring software and linked outputs from this software into production control systems;
- undertaken training of management, operations and production staff to integrate DSP into the production process based on specific spot price triggers;
- established 'Decision Rules' based on stockpile levels and production capacity that allowed DSP to be activated progressively and automatically when the 5-minute despatch period price rose above $30/MWh, with all production suspended when the 5-minute despatch price reached $100/MWh (provided adequate inventories were held in the product stockpile); but
- suspended DSP entirely once demand for the product substantially reduced spare production capacity – even though spot price volatility remained well beyond the 'Decision Rule' thresholds.

This particular user had also made commitments to expand production capacity and will reconsider re-activating DSR once new capacity comes on line.

- A member operating 'un-interruptible' continuous production processes, with major sites in all NEM Regions reported that major retailers in the SA and VIC Regions declined to negotiate energy supply contracts with effective DSP clauses. In this case, the major retailers also owned generation assets and presumably saw no commercial value in utilising DSP (while other retailers in the Regions were unable to match the 'competitive' energy prices offered by the generation-owning retailers – possibly because they were unable to access hedge cover at a cost that matched the 'transfer pricing' available to the generation-owing retailers).

  In this case, the user had reached agreement with Energy Response Pty Ltd to provide DSP by transferring load to on-site 'stand-by' generation capacity at a number of sites.[1]

  This user also expressed considerable frustration in trying to reach agreement with Electranet on the installation of 'market meters' for the on-site generators, a process that had been dragging on for more than 6 months.

  This user also considered that DSP would have to take the form of transferring load to on-site generators because short-term interruption to the continuous production processes would be so costly that it would require payments exceeding the Market Price Cap (MPC) to compensate for the cost

[1] While the EUAA member expressed satisfaction with this arrangement, they did point out that their interests might have been best served by being able to compare the Energy Response offer with competing retailers.

This comment and the one above emphasise several points that are relevant to the AEMC's review:

- in one particular circumstance (i.e. interruption of a continuous production process), the MPC is lower than this user's perceived value of lost load;
- at the same time, and under different circumstances at the same site (i.e. having time to transfer load to on-site generation), the MPC would be substantially higher than the same user's perceived value of lost load.

This user was strongly of the view that any Rule changes to promote DSP should focus on increasing incentives for Market Participants to remove 'bottlenecks' (such as Electranet's lack of response to install 'market meters') or require incentive payments to make DSP work, whilst ensuring that end-users retained the ability to contract for DSP outside retail agreements given vertical integration which works against DSP. The user also said that they could not operate in a market where they would be exposed to the MPC for any prolonged period of time; and that the AEMC should not consider increasing the MPC as a way to incentivise DSR. If the MPC was increased, it would flow directly into higher energy contract prices that would more than offset any possible benefits from increasing the take up of DSP.

- None of the respondents said they had time to look at, much less understand what impacts the current Rules, or any changes to the Rules, might have on their interest in, or incentive to provide DSP.
- There were different views expressed about providing DSP to networks.
  - Some users advised they were prepared to provide DSP to networks; and at least one had provided such services through Energy Response Pty Ltd (although none had been approach by retailers or network service providers directly for this purpose).
  - However, another user (who had used substantial volumes of DSP to 'manage energy price exposure') had considered and rejected the option of providing DSP for networks because of concern about 'loss of sovereignty'. That is, the user would not accept an obligation to off-load at the instruction of the network service provider; nor would they accept transfer of direct load control to the network service provider.

The reluctance by some major retailers to provide a response to the requirements of members reinforced the need for the EUAA to develop a standard energy contract for large users. The EUAA has developed such a standard contract in part because it is important from the perspective of empowering end users to act as providers of DSP without being limited to DSP opportunities that arise at the discretion of the retailer. In particular, the EUAA's standard contract allows for the end-user to provide DSP, either as a service offered to a DSP aggregator such as Energy Response Pty Ltd, or as an individual response to DSP opportunities sought by network service providers or AEMO. This was a member driven initiative.

Importantly, the EUAA's work on a standard energy contract and other DSP work seek to ensure that end-users can maximise the value of their DSP options. It also ensures they

can incorporate DSP in their energy procurement strategies. Following the launch of the contract the EUAA observed that several members made attempts to utilise it, either as an alternative to retailer contracts or as a basis for negotiating changes to such contracts. The EUAA is aware that there was significant retailer resistance to such attempts and does not believe that there have been any successful attempts to utilise the EUAA's standard contract. It should be noted that this contract was developed by a committee of EUAA members with many years of collective experience in negotiating electricity retail contracts, that the objective of the contract's development was not to include clauses that were unlikely to be acceptable to retailers, that expert legal advice was provided by Minters and that an exposure draft of the contract was given to all major retailers for feedback, with several changes occurring as a result of this (all changes suggested by the retailers were accepted, except for one).

The EUAA is aware, in feedback from members, that few would make significant investment to enhancing DSP capacity/opportunities beyond investment that is likely to offer significant returns through energy efficiency savings or through specific commitments underwritten by DSP agreements.

There has been a focus by some jurisdictional regulators on stimulating 'incentives' for supply side entities to take an interest in DSP. This has to some extent been carried on by the AER. However, the measures implemented by jurisdictional regulators in the distribution sector in NSW, South Australia and Victoria provide only limited and partial incentives for DNSPs to pursue DSP opportunities where this is more 'efficient' than investing in network solutions. There is also no guarantee as to the continuity of such schemes beyond existing regulatory periods, which conservative network businesses may see as unattractive, especially towards the end of regulatory periods. In contrast, EUAA members generally recognise the 'incentives' available to them from DSP for what they are – an opportunity to reduce energy costs, but with no guarantee that investment in DSP capacity will achieve a reasonable return in the longer term.

3. Comments on the AEMC's Issues

The AEMC *Issues Paper* provides a series of questions to be responded to. The EUAA offers its comments on each of the most relevant matters to us that the AEMC is seeking views on in the table below.

AEMC Issue	*EUAA Response*
1. Chapter 3 outlines our approach to identifying "market and regulatory arrangements that enable the participation of both supply and demand side options in achieving an economically efficient demand/supply balance in the electricity market." Do you agree with our approach?	We agree that there are market and regulatory arrangements that inhibit effective demand and supply side responses in the electricity market. We welcome the broader approach that this Review takes and we comments on the relevant issues in the body of our submission.

2. How should the benefits of DSP be measured? Can they be accurately quantified.	The benefits of DSP can't be accurately quantified because it has monetary and non-monetary aspects. Further, the benefits also extend beyond the individual supplier of DSP. For example, an effective level of DSP has the potential to reduce the need for rapid network augmentation and can have benefits that extend to consumers or the market overall. The EUAA urges AEMC to revisits the estimated benefits from our DSR trial (2004) &/or those modelled in the Parer Report. Further, it is worth mentioning that at the time these were done, the benefits were measured more in terms of DSR in response to high prices in the energy market. Since them network capex has soared and we would expect that DSR in response to network congestion and inefficient investment in networks has also grown. Also, the MPC has increased to $12,500/MWh which should make DSR in response to high energy prices somewhat more valuable also.
3. What are appropriate discount rates to apply to DSP investments for the various parties across the supply chain?	The appropriate discount rate to use is the rate determined (i.e. cost of capital or hurdle rate) by investors in DSP.
4. Are there other issues which we should consider in our assessment process and criteria?	No comments
5. What are considered the drivers behind why consumers may choose to change their electricity consumption patterns? Please provide examples or evidence where appropriate.	Consumers respond when they see opportunities to gain a financial reward, via a direct payment for the electricity they did not consume at an agreed time, or a reduced tariff or a participation payment. Consumers may also benefit through improved energy efficiency and service delivery, provided the benefits of these are clearly quantified. Consumers may also respond due to environmental benefits (real or perceived), although examples such as the relatively modest take up of green energy suggests that this is less of an influence. Commercial customers tend to be primarily driven by reducing costs or compliance, although there are some that may undertake DSP activities for the brand benefits, perhaps where this is also associated with a perceived socially beneficial outcome (eg environmental improvements, efficiencies in resource use). The key point to appreciate is that there will need to be many solutions because there are different customer segments and different drivers and barriers to undertake DSP activities. The EUAA emphasised the importance and the need for a cost/benefit analysis of various DSP options and for a focus on commercial drivers where business users are concerned.
6. Chapter 4 lists some plausible DSP options that are currently used or could be used by consumers. Are there any other plausible DSP options currently used by consumers that have not been identified? Please provide description of measures and examples, where available.	Our comments are set out in Q7, Q8 and Q9.

7. Are there any DSP options that are currently available to consumers, but are not commonly used? If so, what are they, and why are they not commonly used (i.e. what are the barriers to their uptake)? Please provide examples and evidence if available	Residential customers – an area that is being looked at by a small number of DNSPs is appliance control, especially control on residential air conditioners. There has been a long history in Queensland and New South Wales for control of electric hot water services and this technology could be further developed and extended into other high demand/energy appliances such as air conditioning, pool pumps, dishwashers and clothes driers. Some appliance manufacturers already have undertaken developments in this segment (e.g variable speed pool pumps) in consultation with DNSPs. However, with the right incentives or market demand it is possible that more could be done. Commercial and Industrial (C&I) customers – a beneficial DSP action that C&I customers could take advantage of is energy storage for air conditioning systems in conjunction with improved energy efficiency of air conditioning chillers. Air conditioning comprises a large portion of the electricity load in commercial buildings. The latest air conditioning chillers are nearly 50% more efficient than units that are 15 to 20 years old and the use of thermal storage could be used to shift this load into off-peak times where customers can take advantage of lower electricity prices is possible, especially in new buildings or as replacement units. Ergon Energy has an excellent case study of a project done with James Cook University and is looking at a number of commercial customers to use this solution. Another area for commercial buildings is lighting and the conversion from fluorescent and halogen downlights to LED technology. While this lighting is quite expensive at this time, it can make economic sense for large commercial buildings especially where they have 24 hour operations (e.g hospitals). The case study by Simplot at the CCEE is also instructive(The EUAA can provide this data to interested parties). We note that some network businesses have been deploying some basic forms of demand side response for a long time. Off peak water and space heating, load shedding in response to emergencies, back-up generators etc are all forms of DSP regularly used by these network businesses.
8. Are there other DSP options that are not currently available to consumers, but could be available if currently available technologies, processes or information were employed (or employed more effectively) in the electricity (or a related) market?	Battery storage is an emerging area that holds potential for large and small consumers alike, however, it is still very expensive and only has application in very remote areas where the alternatives are diesel fuel generation or intermittent renewable such as solar PV and wind. If battery technology evolves for electric vehicles there may be scope for these vehicles to become active components of DSP. Time of use smart meters will motivate certain people to adjust and economize on their electricity consumption. The NEM's energy only market design enables retailers to provide large and medium-sized customer loads with clear pricing signals, facilitating some level of retailer or customer response during supply shortages. However, as discussed earlier in this submission, the customers have to be prepared to take on the risk by opting to expose their load (or part of it) to the exigencies of the spot market. For this is successful they need to have an ability to 'hedge' their position (eg through financial instruments like CFDs or else to be able to shed some load/turn on some on-site generation). Relative to overall customer load, this ability is quite limited (eg to sites where there is some on site generation – usually with a capacity greater than the site load, or flexibility in being able to turn something off, like a cool store with thermal inertia or a machine that is part of a batch processing system. Even where this is the case, experience shows that many customers are unwilling to do so for a variety of reason (eg, see some of our earlier comments). Improved communication and technological developments (like smart grids) may potentially produce significant advances in this area. Smaller customer loads are often metered over a period of time, and charged on the basis of a deemed load profile, providing little incentive to respond to high-price periods. Over the next decade, technologies like interval metering, smart grids, and smart appliances are likely to raise customer awareness about consumption decisions and responsiveness to price signals, potentially providing incentives for changed consumption patterns. However, to be fully 'unlocked'

	this would require moves away from regulated tariffs, the application of price incentives to change consumptions patterns and customer willingness to respond.
9. What are considered the relevant market conditions to facilitate and promote consumer take up of cost effective DSP?	The market conditions that may facilitate consumer take up of cost effective DSP include: • access to information on the benefits of DSP and on how to implement an effective DSP; • access to technology and complementary inputs; and • economic benefits from DSP that are perceived to be significant. Simply put, price, reliability and quality of supply are of key importance to all EUAA end-use members. EUAA members with a capacity to do so are likely to respond to "DSP incentives" that result in improvements in any of these three attributes, providing the benefits clearly exceed the costs. Where the net benefits were clear, and DSP capability available, EUAA respondents are prepared to invest in software, systems, procedures and training to facilitate DSP. EUAA is of the view that investment in DSP capacity would increase if there were some accompanying rule changes or other changes that can be used to facilitate DSR in the NEM. • Network planning and augmentation arrangements could be amended to specify minimum mandatory conditions or an obligation for NSPs to directly approach large end-users, in the local network area where DSR capacity could be utilised and provide information on the commercial benefits from providing DSP. • Sharper regulatory incentives on network businesses to encourage them to give more active consideration to DSP. At the moment, the AER provides some (fairly blunt and quite limited) incentives for demand management to networks during its regulatory resets but seems unable or reluctant to move beyond this. • Greater participation of DSP in the wholesale market could be achieved by amending the Rules to provide direct incentives for end-users to offer capacity through a DSR capacity payment. To limit tension with the energy only design of the NEM, this could be limited to DSR. Such changes could significantly improve the flexibility of dispatch arrangements by providing clearer and sharper commercial incentives for end-users to offer DSR capacity well in advance of its required dispatch. • A mechanism in the Rules (or otherwise) to allow education and skills development to occur could facilitate and increase DSP capability in the NEM. • Clearer rules to ensure fair and transparent comparison between Capex build option and demand side options. • Lack of consistency across jurisdictions which can limit the ability for end users with operations in more than one jurisdiction and DSP businesses to participate effectively. • Lack of transparency in the current planning arrangements which limits the consideration and inclusion of DSP. • The Rules should not be amended to raise the threshold for the Regulatory Test. This would reduce the already low interest by NSPs in proactively seeking DSR and increase the difficulty that aggregators such as Energy Response have in recruiting the required larger aggregations of DSP capacity. • The Rules should be amended so that all generator connection costs be treated on a consistent basis, irrespective of size or location (and jurisdiction).

	• There could be merit in examining the feasibility and desirability of creating a DSP category of participant with market participation costs that reflects the size and limited participation of such participants It must be emphasized that EUAA does not recommend rule changes unconditionally. Rather our position is to recommend rule changes that have been subjected to rigorous cost benefit analysis. Only then can we be sure that changes are a net improvement, i.e. welfare enhancing. We would therefore urge the AEMC to undertake more detailed assessments of the above (and other potential) changes that could give rise to greater uptake of DSR.
10. Are there any specific market conditions which may need to be in place to enable third parties to facilitate consumer decision making and capture the value of flexible demand? Please provide examples and evidence as appropriate.	In relation to embedded generation, we argue for standardization in connection requirements. The reason is to prevent high connection cost and excessive requirements imposed by network businesses being barriers to entry. We consider that an effective, low cost dispute resolution authority is one way to ensure connection standards balance the needs of distributed generators proponents and network businesses. We note that the NEM already provides for a dispute resolution advisor and it may be appropriate to use this process with suitably oriented powers? Another option is to establish a panel set up under the AEMC similar to the Reliability Panel. This might be more cost effective and just as useful provided it was not dominated by NSPs.
11. What market conditions (technologies, processes, tariff structures, information etc) are needed, that are not currently employed in the electricity market, to make other DSP options available to consumers?	Some retailers do contract DSR (load curtailment) from large users. However our understanding is that this opportunity is generally only used when retailers are unhedged whereas most are covered against price spikes with financial market hedges or their own generators. As mentioned earlier, the predominance of 'gentailers' in the NEM has further blunted the incentives for retailers to utilise DSR. One way to deal with this would be to ensure that future attempts to increase vertical integration in retailing must specifically consider the impact on DSR. Another option would be to overcome the additional barrier that now exists by ensuring that DSR options are given a 'leg up', eg a capacity payment. In relation to tariff structures, our earlier comments suggest that regulated retail tariffs, network tariffs and existing retail contract prices do not reward DSR. Hence, changes in these areas could be considered as a way to 'unlock' latent DSR. However, in our view, this would be best achieved by a combination of 'carrots and sticks' which rewarded actions that promote DSR and penalise those that do not, especially reflecting principles such as cost reflectivity and user pays. In terms of technologies, we have referred elsewhere in this submission to a range of technologies that can be used to stimulate DSR, including smart meters, smart appliances/equipment, more efficient processes, and the like. However, often these alone will not be sufficient with price and other incentives as well as organisational/cultural support also playing a key part. The results of our DSR trial referred to earlier, suggest that access to information and education, especially for end users, is an important component of the take up of DSR.
12. Do you consider retail tariffs currently reflect the costs to a retailer of supplying consumers with electricity?	This is very dependent on the level of retail and generator competition. Where robust competition is absent, it is unlikely that retail tariffs reflect the efficient costs of supplying consumers with electricity. There is certainly some evidence that retail electricity prices in parts of the NEM are not as competitive as they should be, either because of a lack of sufficient retail competition, a lack of competition between generators or a combination of both. The much higher degree of vertical integration between retailers and generators in the NEM is, in our view, also a source of more limited competition and barrier to new entry, though this may not be universally the case. The results of the EUAA's DSR trial showed that its use can provide additional competition to the market by providing a additional 'independent' virtual peak generating capacity to 'lop off' high prices. It is also worth noting that the continued existence of regulated retail tariffs in the NEM can be a further impediment of competition. Regarding regulated retail

	prices, the setting of these is almost certainly not truly reflective of the prices that would emerge in a competitive market. On the one hand, these may also reflect certain political or other pressures that seek to keep price increases low. On the other, the use of so-called 'head room' in tariffs to encourage new entrant retailers into jurisdictions may have achieved this purpose to an extent, but the head room provided has also placed a 'ceiling' on prices. With the exception of some NSPs who provide larger users with 'cost reflective network tariffs', network prices are also far from cost reflective, still contain elements of cross subsidy and lack transparency. Retailers pass on these tariffs and the inefficiencies within them to end users.
13. Are any changes needed to retail price regulation to facilitate and promote take up of DSP?	First, many EUAA members have limited ability to offer flexible production or hedge their position against short term volatility on the electricity market and so prefer stable and predictable prices in their contract. This is understandable but one impact of this preference is reduced price signals – up and down. For Queensland a change being introduced is to make safety net retail tariffs more cost reflective. The structure of residential electricity tariffs in Queensland has remained largely unchanged for many years and no longer has any resemblance to the underlying retail and network costs that the tariff is supposed to represent. The Queensland Government has clearly recognized this and has recently announced some changes that will introduce a degree of inclining black tariffs associated with energy use. This is a welcome start but needs to be taken further if the problem that it is seeking to address is to be effectively dealt with. In addition, if there were to be changes to retail tariffs the network components should be reflected in the charge structure so that customers see the price signals from their actions of either reducing demand or energy consumption.
14. Do the charges to retailers for use of transmission networks reflect the value of that use?	The EUAA submits that the transmission networks are not always efficient and have some perverse regulatory incentives not to minimize costs. This inefficiency is passed down to retailers and ultimately to end users. Although these comments were directed specifically at distribution networks and regulation, the rules covering transmission are very similar and they could equally be applied there.
15. Do the charges to retailers for use of distribution networks reflect the value of that use?	A key issue with DSNP charges is the balance between fixed and variable charge components. DNSPs provide electricity transport capacity (kVA) and there should be a move away from using kilowatts as the variable component. However, DNSPs have preferred to increase the proportion of fixed charges in their prices rather than the variable as it gives greater revenue certainty. Regulators should ensure that a reasonable proportion of DNSP charges are kept as variable charges based on capacity demand (kVA) rather than energy demand (kW) so that customers have a financial incentive to reduce their demand. Another issue with DNSP charges is that the use of postage stamping and average loss factors results in a significant reduction in the price signal that could be delivered to customers.
16. Do all consumer groups, including vulnerable consumers benefit from having cost reflective prices in place? If not, are any special provisions required to protect certain classes of consumers?	This is a complex issue. Generally speaking, the market and (in the longer term) all consumers will benefit from a more efficient market that stems from more cost reflective prices. With growing demand and consumption, the size of these benefits should not be underestimated. However, in the shorter term, consumers who use a lot of electricity relative to their peers, or who are not willing to change their patterns of use, could well end up paying higher prices. From an overall economic point of view this is not necessarily a bad thing. Vulnerable consumers would also derive benefits from a more efficient market and also have some ability to respond to price signals but may have to pay higher prices which they may have difficulty affording, especially at a time of already rapidly rising electricity prices and other cost of living pressures. However, there are mechanisms already in place, that could be sharpened, or others that could be brought into play to alleviate these impacts. For example, concession policies at Federal and State levels, rebates or community service

	obligations.
17. To what extent do consumers understand how they can reduce their electricity bill? What information do consumers need in order to increase their understanding of how they can reduce and manage their electricity consumption and hence bills?	Different consumers faced different constraints. The economically disadvantaged sometimes cannot afford to reduce their energy consumption substantially and/or have limited incentive to do so (eg living with inefficient applicances, in rental accommodation). Poor education, lack of knowledge and language problems can also play a part. On the other hand the very well off often do not need to because electricity is a too small a proportion of their expenditure and income. We consider that the middle income earners have the most incentives, knowledge and ability to reduce their energy consumption.
18. What issues are associated with provision of existing information in the market? Are there arrangements that could improve delivery of such information? If so, how and by whom?	Generally, information about DSR is limited in its availability. In our experience, Governments are more focused on climate change and energy efficiency issues. Private providers have limited incentives to overcome information barriers unless they can capture the benefits of the costs of doing so. It seems to us, based on the experience of our members and our past involvement in these issues, that governments have a role to play in overcoming these barriers if DSR is to increase its role in the NEM and is seen to have social benefits.
19. Could better information be provided to consumers regarding the actual consumption of individual appliances and pieces of equipment? If so, what information could be provided and in what form?	Time of use smart meters will help. Linking of appliances to these meters or other smart devices such as mobile phones, subject to cost, is also of potential benefit. One issue to be resolved is who is best placed to pay for them and be responsible for providing them? It seems to us that smart meters as currently being provided in the NEM, especially in Victoria, is expensive and has been needlessly put in the hands of a distributor monopoly. There is some information available supporting the use of energy use and emission ratings on appliances as having played a relatively low costs and beneficial role in giving consumers information about appliances they buy. There is perhaps scope for such an approach to also be used to provide information about appliances and equipment that is useful in managing energy use?
20. Are retailer and distributor business models supportive of DSP?	It is worth noting that retailers and network providers have a fundamental incentive to sell and 'transport' electricity. The regulatory framework provides incentives to suppliers to overinvestment in the network. In other words, the private returns from maximising network capex and adding to your RAB often outweigh the benefits from DRP. Retailers are in the business of managing wholesale market risk. Retailers can manage this risk by hedging in the financial markets but many have opted for building large gas fired peaking plants instead. Retailers have not taken up the opportunities offered by DSP and have generally seen it as not consistent with the business model. From an industry structure point of view, it is possible that the disaggregation of the electricity industry has become an impediment to DSP, although it has obviously had other very significant benefits. Disaggregation has meant that no one party can capture all of the benefits from DSP thus making it harder to justify economically and commercially. Taking as a given that re-aggregation, at least along complete vertical and horizontal lines is not desirable, the only way to over come this is either to put up with the inefficiencies that this brings to the market or act to deal directly with the problem within the structure of the existing market, eg use means to overcome the fact that the commercial realities of the existing market do not equate to the social benefits of DSR. Our DSR trial showed this to be a problem and recommended some solutions.

21. What incentives are likely to encourage research and development of other parties to promote efficient DSP?	There is no evidence that any DNSP undertakes significant R&D on DSR. Nor is there any evidence that large end-users, many of whom operate multiples sites in many (or all) NEM Regions, derive benefit from the current DSR incentives. It is to be hoped that the assumption by the AER of the national network regulatory role – transmission and distribution – improves this situation and they have commented many time of a desire to see more use made of DSR, although to date AER determinations have not made significant inroads into sharpening the regulatory incentives for network DSR.. The DNSP's are regulated monopolies and respond to regulatory incentives. Given this, not surprisingly they have shown they are unlikely to do anything that is not mandated by regulators, and unless they see an opportunity to improve returns. Therefore, if the AEMC forms the view that DNSPs should be undertaking R&D, they should either support amending the Rules to either make this mandatory or to provide greater commercial incentives for them to do so or they should support R&D on DSR through some other mechanism, eg public grants, tax concessions of through funding to some body such as CSIRO. We note that the CSIRO has undertaken some research into DSR in the past but we are unaware how active they currently are in this area?
22. Are there any regulatory, cultural or organisational barriers that affect take up of DSP opportunities?	Based on our experience, there can be strong organisational and cultural barriers within DNSPs that prevent the take up of DSP opportunities. As discussed under our response to Question 33, there is a strong bias towards construction of capital works and the regulatory framework provides strong incentives that reinforce this bias. In addition, DNSPs have very conservative engineering cultures which results in a view that DSP activities are less reliable (because they aren't a capital works item) which means that they are given little consideration when planning to meet load growth. However, DSP is one of the first things that a DNSP will use when faced with an emergency loss of capacity (e.g embedded generation, voluntary load reduction from large customers). It is also possible that DNSPs are weaker in the areas of customer service and marketing that are required to promote and deliver DSP services to customers. While retailers have stronger customer service and marketing capabilities than DNSPs they have a strong incentive to sell electricity rather than not sell it. As retailers are profit oriented, where they are able to make more profits from selling DSP they would. For example, there is some evidence of the profit motive (boosted by generous government subsidies) is present in the willingness of retailers to sell solar hot water services and solar PV systems. Whilst these devices do reduce a customer's electricity consumption and could therefore be seen as DSP-related activities, they are not subsidised for this reason, but rather because of government climate change responses. The take up of other DSP options does depend on its economic feasibility. It is claimed by networks that DSP provides lower levels of reliability than network solutions or that DSP may be less responsive to rapid changes in the supply-demand balance than other supply side options. The evidence regarding this is, however, rather weak and almost never involves a robust cost-benefit assessment.
23. What form of commercial contracts/clauses is required for facilitating and promoting efficient DSP?	The EUAA's work in developing a standard retail electricity contract, informed by members' experiences, suggests that contracts need to have specifc clauses in them to ensure the use of DSP. This includes coverage of matters such as: • The terms and conditions under which DSP will be used (price or event triggers, opt-out conditions or 'firmness') and what happens if it is not used bu\t the customer is willing to provide it (eg to a third party). • What price will be paid for the DSP and the way in which the benefits of being able to access it will be shared. • 'Property rights' to the load (which in reality 'belongs' to the customer) and any agreement to assign this to retailers/networks. • Use of the DSP for multiple purposes, eg energy market, network support,

	reserve support). • Coverage of rights to access the customer's energy use data. • If DSP is not part of the retail agreement, a clause that allows the customer to offer it to third parties. It is our experience that many of the above have become sticking points to the negotiation of successful DSP arrangements. Whilst these area are not generally the domain of policy, regulation or the rules, it could be argued that supporting the development of such clauses and information about them and transacting for DSR are.
24. Are there specific issues associated with investment in infrastructure needed for consumers to take up DSP opportunities?	
25. Do you consider that the issue of split or misaligned incentives has prevented efficient investment in DSP from taking place?	In the present market, for a variety of reasons, the commercial incentives for suppliers to embrace DSP are likely to be small. This is borne out by the very limited take up of DSP in the NEM over the past 10 years. Another well known example of 'split incentive' occurs in the household and commercial sectors for rental properties where landlords have limited incentives to install equipment that can conserve or help manage energy use.
26. What are potential measures for addressing any issues associated with split or misaligned incentives?	At a general level, it requires policies directed at designing mechanisms to align the incentives of suppliers and end users or consumers who are willing to express stronger preferences. In practice, some of these issues may be difficult to deal with as responses could 'cut across the grain' of exchange between economic agents, have unintended consequences or simply impose costs without any real benefit. For example, attempts to regulate energy standards for appliances or other equipment to be installed in rented premises might force up rents or result in a lesser supply of such properties. Similarly, mandating smart meters for all sites and providing a monopoly on their provision and ownership could end up costing for more than it should or resulting in a lack of innovation in use.
27. Are there specific issues concerning ease of access to capital for consumers and other parties?	Access to capital is important to consumers and large energy users. Clearly lack of access to capital or access at high cost would hinder investment in DSP.
28. What are the significant energy market challenges in optimising the value of technology and system capability to facilitate an efficient level of DSP?	Investments in new technologies to facilitate an efficient level of DSP ought to be assessed on their economic merits. As expected, there are challenges as well as opportunities. As detailed in the report by NERA Economic Consulting there are various forms of reliablity-based demand response programs, in particular direct load control (DLC) and interruptible load (IL) are used effectively in California: *Direct load control* Direct load control is used by network service providers to directly control the energy use of specific appliances at an end user premises at pre-determined times or based upon 'critical peak' events. Consumers who have subscribed to the program receive incentives, such as rate discounts or credit to their accounts. *Interruptible load* Interruptible load requires customers to subscribe, as with DLC, for a rate discount or account credit, to a program where their load is curtailed, by a pre-specified amount, during, for example, peak network periods. IL is targetted more at large users who cannot respond to reduced load with only a short period of

	notice. Both these programs can be effective ways for small consumers to participate in the energy market, particularly when accompanied by consumer protections, and the Californian market has had success with these programs as both voluntary and mandatory measures that reduce energy consumption. We encourage the AEMC to examine the opportunity for similar programs in Australia. A regulator must also ensure the achievement of demand management targets for network services providers is efficient and least cost. We would also welcome further consideration of financial incentives and penalties as a means of ensuring demand management targets are reached, as has been implemented in California.
29. Do current technology, metering and control devices support DSP? If not, why not, and what are considered some of the issues?	The availability of technology such as interval meters can potentially make a significant difference to the amount of DSR that can be garnered. Enabling technology are important to getting the highest degree of demand response, and therefore, demand-side bidding. Enabling technology that allows for automatic shut down of air conditioning equipment when the consumer is not at home, for instance, allows for time-of-day and real-time demand response programs. This is particularly important in the absence of a day-ahead market. To the degree that customers are not contestable and price signals cannot be passed to consumers, demand response will likely be less than if competitors can offer programs that reflect market prices. Subsidies and uplift payments to encourage demand response may result in greater demand-side bidding, but can involve problems of measurement and verification along with equity issues of who pays for the uplift payments. Generally, however, it would be beneficial to have customers who are not providing demand response to pay for it on 'user pays' basis. Subsidies and uplift payments may not be necessary in conditions under which price signals can be passed to consumers and consumers have the ability to react to them although they may still play a worthwhile role if price signals call forth only a muted response by providing a sharper incentive. It is noted that any non-network solution implemented to defer network augmentation or replacement would need to be more cost-effective than the network solution to even be considered.
30. How can issues relating to weak and/or split incentives be addressed to ensure that the benefits of smart grid technologies are aligned and felt across the electricity supply chain, including by consumers?	No comment
31. In maximising the value of technologies, such as smart grids for DSP, what are the issues relating to consumer protection and privacy?	We support the adoption of cost effective technologies that empowers consumers. We understand that Smart grids have the potential to create opportunities for consumers to change energy consumption at short notice, in response to a variety of signals including electricity price. We welcome the Government's the Smart Grid Smart City initiative, which aims to support the development of large-scale smart grid testing. This initiative aims to gather information about the costs and benefits of smart grids which will help inform government, electricity providers, technology suppliers and consumers.
32. To what extent do parties have appropriate incentives to put in place the systems, technologies, information flows etc that facilitate efficient	As noted above, we submit that retailers do not have a natural incentive to promote DSP as they make their profits from selling energy. Unless it is more profitable for retailers to not sell energy they will have no incentive to promote DSP. Legislated programs that force retailers to provide DSP for compliance purposes will struggle to be successful as retailers will always view these programs as they view all compliance programs, as a cost to their business that needs to be complied with at minimal cost.

DSP?	The regulatory framework that DNSPs operate under provides strong incentives/rewards to build capital works which provide little incentive to undertake DSP. In addition DNSPs that use weighted average price caps have even less incentive to offer DSP as it reduces energy flows and hence revenue flows whereas DNSPs operating under a revenue cap do not have the revenue reduction disincentive. Recent moves by the AER to introduce DM Incentive Schemes are a step in the right direction however the inherent bias to build capital means that DSP will struggle to develop and will be viewed as nothing more than a compliance program. Our members, being mainly larger commercial and industrial energy users, tend not to be covered by consumer protection measures. In terms of privacy issues, our members tend to guard their energy use data and are sensitive to who has access to it. The development of smart grids needs to ensure that the data availability and use concerns of consumers are respected. EUAA members would also have concerns around the control of load and equipment that smart grids might entail. On the other hand, they could provide energy users with more control over their use of energy but on the other they may also risk vesting greater control in the hands of utilities. Care and attention to these issues is important. We note that the Government's Smart Grid Smart City initiative aims to support the development of large-scale smart grid testing. This initiative aims to gather information about the costs and benefits of smart grids which will help inform government, electricity providers, technology suppliers and consumers.
33. Are there aspects of the NEM or the Rules which prevent parties taking actions that would otherwise allow for more efficient levels of DSP?	Our submissions to the previous two stages of this review have addressed issues to do with the Rules and the ability to utilise DSP. In brief, change processes will need to address (in order to encourage demand side participation) at least the following areas: • Market participation requirements • Metering requirements • Scheduling • Market clearing process • Treatment of deviations • Settlements process
34. Are there market failures which mean regulation is needed in some areas to ensure appropriate market conditions are in place?	It is unclear whether there is a market failure or a regulatory failure but what is clear is that there is no evidence that DNSP have any incentive to take an active role in seeking DSR services from large end-users. At best, the DNSPs respond to the current 'balance of incentives' by including information about DSR opportunities in Network Planning Reports that are either inaccessible to end-users, or if accessible, are highly technical. In some jurisdictions (e.g. NSW), the DNSPs are required to call for expressions of interest from prospective DSR providers. But there is no evidence that any DNSP would do more than what is specified as a mandatory condition in the arrangements. This suggests that the 'balance of incentives', however constructed by regulators, is not sufficient to encourage the DNSPs to be proactive in seeking DSR capacity. This suggests a need for regulatory incentives to promote an optimal amount of DSR. What these incentives should be and to what extent they should be provided is a complicated matter but one that the AEMC should carefully consider in terms of the balance of costs and benefits.

35. What energy efficiency policies and schemes should be considered as part of this Review, i.e. as impacting on, or seeking to integrate with the NEM?	Please see our comments in Q37. Please see our comments on our submission to the Prime Ministerial Task group on Energy Efficiency; this was informed by a working group of members with wide experience in DSP and energy efficiency policies.
36. To what extent can energy efficiency policies and schemes be adopted as options for enhancing the efficiency of DSP in the NEM? What are the strengths and limitations of energy efficiency policies as a DSP option compared to other options?	Please see our comments on our submission to the Prime Ministerial Task group on Energy Efficiency; this was informed by a working group of members with wide experience in DSP and energy efficiency policies.
37. To what extent do existing retailer obligation schemes facilitate efficient choices by consumers in their electricity use? Are there aspects of those schemes that facilitate efficient consumption choices more than others? If so, please explain.	The key for retailer obligation schemes to be successful would be to make selling the DSP product more profitable than the electricity they would have otherwise sold. There are a number of such schemes at Federal and State levels, some of which impact on EUAA members and additional ones or extensions to existing ones are under consideration (eg the Victorian VEET scheme). Regarding the retailer obligation schemes, the effectiveness of these can be seriously questioned. It is known that they impose costs on retailers and that these costs are then passed on to consumers. The benefits are far less tangible. Energy service providers gain from additional demand for their services but there is little evidence that they achieve much in the way of value for money. We are unaware of any hard evidence that they have significantly influenced energy consumption or contributed to cost effective abatement. Their ability to alter consumption habits and consumer tastes is even less obvious. As far as DSP is concerned, we are not aware of any aspect of these schemes that has added to the scope for additional DSP in the NEM so far. Examples of such schemes include the ESI scheme in NSW and VEET scheme in Victoria. A state-by-state application of such schemes also adds to costs and regulatory burdens, especially for firms that operate in more than one state. As mentioned above, the Victorian Government is about to extend its VEET scheme to also cover larger commercial and industrial users. We can see little to be gained by doing this but one certain impact would be to impose additional regulatory burdens and costs on these users – many of whom are already covered by the EREP scheme. There is also talk of a national 'white certificates' scheme. Whist such as scheme was recommended by the Prime Ministerial Task group on Energy Efficiency, this was against the backdrop of a shelving of the CPRS and the Task Group specifically said that it should only be in place until a national carbon price was implemented. It is noteworthy that the NSW Government previously had in place a Demand Management Fund, the primary purpose of which was to support private and public initiatives that reduced peak demand, saved energy or reduced greenhouse gas emissions. It aimed to allocate some $400m in funding over its life to energy (and water) saving initiatives. This was one of the few government initiatives that we are aware of that specifically supported demand management as such. In our experience, the scheme suffered from being diluted into multiple objectives, from poorly specified goals and measurement of these, from administrative burdens and from a gradual dilution of its demand management purpose (it eventually because the Climate Change Fund with a focus on community and government projects ostensibly aimed at abatement and water

	saving). There are other schemes, such as the Federal EEO scheme and the Victorian EREP scheme that do not apply to retailers but impose obligations of various kinds on larger energy users such as EUAA members. These appear to have had some benefits in companies in encouraging identification of and a greater uptake of initiatives to save energy. There is also some evidence that they have played a part in gaining greater attention for energy at the highest level of the firms involved, although other factors such as the rapidly rising electricity prices of recent years have also had a role. On the other hand, firms can also see these requirements as obligations and only do what they have to rather than embrace the concept because it makes commercial sense of because they wish to be 'good corporate citizens'. The fact that such schemes exists at both Federal and State levels and impose effectively duplicate obligations on affected users is also a shortcoming. Where such schemes impose an obligation to report (but not act) they can impose costs without any offsetting benefits. Where they also contain an obligation to act, they can impose additional risks to do with being confronted with an obligation to take action but not necessarily having the capital to do so or diverting scarce capital into energy saving initiatives that have lower pay backs than other projects. As with the retailer obligation schemes, there appears to be little evidence that these schemes have encouraged greater DSP.