



Submission to the Australian Energy Market Commission

Review of Demand-Side Participation (DSP) in the National
Electricity Market – Stage 1 NERA Draft Report

May 2008

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EXECUTIVE SUMMARY

The Energy Users' Association of Australia (EUAA) welcomes the opportunity to provide a submission to Australian Energy Markets Commission (AEMC) on issues relating to a review of demand side participation (or demand side response (DSR)) in the National Electricity Market (NEM). The submission focuses on a response to comments and recommendations made by NERA Economic Consultants (NERA) in a 20 February 2008 draft report to the AEMC titled *Review of the role of demand side participation in the National Electricity Market* (the NERA report), as part of Stage 1 of the AEMC's review.

Of particular relevance to this submission is that the EUAA and its members have been actively involved in promoting the development of DSR in the NEM. This activity included conduct of Australia's first DSR Trial in November and December 2002, DSR case studies in five different industries following the Trial, which contributed directly to the formation of Energy Response Pty Ltd, Australia's first demand side aggregator, a series of follow-up case studies to the trial, work to assess the performance of the NEMMCO contract for reserves in Victoria/South Australia in 2006, active participation in the development of DSR regulatory incentive schemes and assessment of the NEMMCO Reserve Trader arrangements, in addition to future work planned relating to DSR and connection agreements.

An ongoing project by the EUAA is the development of a standard contract, which apart from standardising contract terms for ease of use by end users is to strengthen the clauses for users to provide DSR other than via their retailer. This project is important from the perspective of empowering end users to act as providers of DSR without being limited to DSR opportunities that arise at the discretion of the retailer, either as a service offered to Energy Response Pty Ltd or as an individual response to NEMMCO's Reserve Trader tender. Following the launch of the contract late last year, the EUAA expects to specifically examine the contract from the point of view of DSR opportunities.

The EUAA is also developing a *DSR Action Plan for End Users* to assist them, policymakers and Governments recognise ways to overcome impediments to DSR, 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's experience with DSR, and our members feedback about their experiences in activating it means that we are able to make informed comments on the issues covered in the NERA report and the AEMC's review more broadly.

The EUAA's members have participated in the provision of DSR either as individuals responding to DSR opportunities, in collaboration with a DSR aggregator, such as Energy Response Pty Ltd or via devices such as pool price exposure. However, members generally indicate they are rarely requested by their retailers to activate DSR capacity in accordance with the clauses of their retail contracts; and several indicated that they had never been requested to do so, even though they had contracts that contained such clauses.

The AEMC's main purpose for this Stage 1 review is to:

- develop a conceptual framework for the subsequent consideration by the AEMC of the role of demand side participation in the NEM; and

- make recommendations that facilitate demand side participation within the bounds of the National Transmission Planner Review, the Congestion Management Review and the Comprehensive Review of Reliability for consideration by the AEMC.

The EUAA agrees that it would be desirable for the AEMC to ‘...develop a conceptual framework for ... the role of demand side participation in the NEM’. The EUAA considers that the AEMC should develop such a framework by considering all major issues that impact on incentives for end-users to provide DSR before moving to consider which of these issues can be meaningfully addressed in the three concurrent reviews. The key additional points that the AEMC should consider being:

- end users, even large ones, obviously prefer to let retailers manage price volatility risk – therefore, basing a DSR policy on exposing end users to wholesale market or network service ‘marginal cost prices’ is unlikely to yield significant gains;
- retail pricing is never likely to reflect the ‘marginal costs’ of the wholesale spot market or the network sectors because this would act as a powerful (negative) incentive for end-users to seek refuge in alternative ‘flat tariff’ products;
- retailers might contemplate developing tariff products that reflect the ‘marginal costs’ of the contract market (in particular the Cap contract values suggesting energy prices of around \$0.30/kWh) in Critical Peak Pricing products – but this may still ‘discourage’ large end users and cause them to seek refuge in ‘flat tariff’ products;
- retailers appear (from non-activation DSR through retail contract clauses) far from enthusiastic about utilising DSR as a ‘primary’ tool for managing price volatility risk – and appear to prefer risk management using the (relatively opaque) contract ‘markets’ or direct investment in generation.

In view of the above, the EUAA notes that the NERA’s report places substantial emphasis on basic economic theory, by making frequent references to the theoretical benefits that may accrue from better alignment between the prices end-users face and the marginal costs of energy supply and network service provision.

The EUAA suggests that the AEMC needs to focus on how to stimulate interest amongst end users for providing DSR and how to ensure that end users have access to sufficient commercial incentive to do so from within the ‘shield’ of fully hedged retail supply contracts. It is the EUAA’s view that this needs to be taken into account as the AEMC considers Rule changes in the three specified areas of interest, while recognising that Rule changes in these areas are not likely to lead to a significant increase in the positive incentives for end users to offer DSR capacity (EUAA responses to NERA’s recommendations are outlined in [Section 4](#)).

This submission suggests several issues that should be considered by the AEMC as it contemplates the basis for a conceptual framework for consideration of options that seek to promote the role of DSP in the NEM; and secondly provides brief comments on NERA’s draft recommendations – notwithstanding the limitations noted above.

1. Introduction

The Energy Users' Association of Australia (EUAA) welcomes the opportunity to provide a submission to Australian Energy Markets Commission (AEMC) on issues relating to a review of demand side participation (or demand side response (DSR)) in the National Electricity Market (NEM). The submission focuses on a response to comments and recommendations made by NERA Economic Consultants (NERA) in a 20 February 2008 draft report to the AEMC titled *Review of the role of demand side participation in the National Electricity Market* (the NERA report).

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 membership represents a wide spectrum of end-users located in all states. The EUAA has 100 members, which are predominantly large business users of energy with activities across all states and many sectors of the economy. A number of them are either practicing DSR or have some capacity to do so.

Of particular relevance to this submission is the fact that the EUAA and its members have been actively involved in promoting the development of DSR in the NEM. This activity included conduct of Australia's first DSR Trial in November and December 2002, which contributed directly to the formation of Energy Response Pty Ltd, Australia's first demand side aggregator, a series of follow-up case studies to the trial, work to assess the performance of the NEMMCO contract for reserves in Victoria/South Australia in 2006, active participation in the development of DSR regulatory incentive schemes in NSW and South Australia and assessment of the NEMMCO Reserve Trader arrangements.¹

The EUAA is also developing a *DSR Action Plan for End Users* to assist them, policymakers and Governments recognise ways to overcome impediments to DSR, 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).

Some EUAA members operate at sites connected directly to the electricity transmission network; but most members operate at sites that connect to distribution networks. Some of the EUAA's members have sites with wholesale spot market exposure or contracts with partial exposure to spot prices, but in the main, have conventional fixed price electricity contracts with their retailer.

The overwhelming majority of members' retail contracts include non-binding² clauses that deal with provision of DSR services. An ongoing project by the EUAA is the development

¹ The EUAA also made a submission to the Ministerial Council on Energy Steering Committee of Officials Review of *National Frameworks for Distribution Networks: Network Planning and Connection Arrangements*. That submission contains comments on aspects of DSR that are relevant to matters being considered by the AEMC. A copy of the submission will be provided to the AEMC separately.

² The EUAA has not conducted a formal survey of members on this issue due to the short timeframe available to respond to the AEMC's consultation notice. The EUAA will be consulting with end users on their experiences in using DSR during the AEMC's Stage 2 of the review, and will provide findings of the consultation with the AEMC.

However, the EUAA is aware that generally end users have a clause dealing with DSR in their retail supply contracts. These clauses are 'non-binding' in that the retailer is not obliged to request a DSR service during periods of high spot market price or network constraint; and neither is the end-user obliged to

of a standard contract, which is important from the perspective of empowering end users to act as providers of DSR without being limited to DSR opportunities that arise at the discretion of the retailer, either as a service offered to a DSR aggregator, such as Energy Response Pty Ltd, or as an individual response to DSR opportunities. Importantly, the EUAA's work on a standard electricity contract has a view to ensure that end users do not sell themselves short in terms of DSR options and incorporate DSR in their energy procurement. Following the launch of the contract late last year, the EUAA expects to specifically examine the contract from the point of view of DSR opportunities.

The EUAA can confirm that some members have participated in the provision of DSR either as individuals responding to NEMMCO's Reserve Trader tender, in collaboration with a DSR aggregation service, or via devices such as pool price exposure. However, members generally indicate they are rarely requested by their retailers to activate DSR capacity in accordance with the clauses of their retail contracts; and several have indicated that they had never been requested to do so,³ even though they had contracts that contained such clauses.

The EUAA's experience with DSR means that we are able to make informed comments on the issues covered in the NERA report based on the actual DSR experience of our members.

The EUAA is aware that members face significant challenges convincing their own organisations that DSR opportunities should be pursued;⁴ and many experience frustration in dealing with retailers and network service providers (NSPs) if they seek to explore DSR opportunities. For example, no members reported contact by either their retailers or an aggregator in the extreme spot price events in Victoria or South Australia in mid-March;⁵ and none has been directly approached by a distribution network service provider (or TSNP) seeking DSR network support.

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

In the EUAA's view, this is not surprising. There has been a focus by some jurisdictional regulators on stimulating 'incentives' for supply side entities to take an interest in DSR.⁶

provide DSR capacity if requested by the retailer, but can choose to do so if, or when, such a request is made.

³ The EUAA has not canvassed retailers to determine why they rarely, if ever, activate a DSR clause in a retail supply contract. However, the EUAA presumes this is because retailers have access to (what they consider to be) simpler avenues to manage demand and price volatility risk, through bilateral contracting with generators, participation in the OTC contract market and wholesale market spot trading.

⁴ The reluctance of some member organisations to pursue DSR opportunities would appear to hinge on the (not unreasonable) perception that such a course of action creates risks that the organisation chooses to avoid (through a retail contract).

⁵ The volatile prices (above \$5,000/MWh) in South Australia in March 2008 were unprecedented in the historical spot price history in the NEM, as there were 26 half hourly trading intervals where prices were at, or close to the market cap of \$10,000/MWh. The EUAA is also aware that significant opportunity to curtail demand by large energy users was available on 16 January 2007, when high demand and transmission unavailability caused by bush fires caused high prices and an involuntary loss of load for several hours in Victoria, but was never activated.

⁶ It is of some concern to the EUAA that the AEMC (and NERA) appear to focus primarily on how to increase incentives for supply side entities to pursue DSR. While there may be a sound case for action in

However, the measures implemented by jurisdictional regulators in the distribution sector in NSW, South Australia and Victoria amount to little more than a ‘bribe’ for DNSPs to pursue opportunities to make commitments to DSR where this is more ‘efficient’ than investing in network solutions. In contrast, EUAA members generally recognise the ‘incentives’ available to them from DSR for what they are – opportunistic and short-term, with no worthwhile prospect (much less guarantee) that investment in DSR capacity is likely to achieve a reasonable return in the longer term.

1.1. Commentary on NERA’s Approach for Stage 1

A key question for the AEMC is whether the recommendations made by NERA will assist in addressing any of the issues identified by EUAA members. In the EUAA’s view, this is problematic. NERA’s report places substantial emphasis on basic economic theory, by making frequent references to the theoretical benefits that may accrue from better alignment between the prices end-users face and the marginal costs of energy supply and network service provision. For example, NERA refers to ‘marginal cost pricing’ as being:

For electricity use to be efficient, customers should face the marginal network and generation costs of providing electricity services to them. This allows customers to make judgements about whether and how much electricity to consume given the value obtained relative to its cost. This means that marginal cost pricing of network services and wholesale energy can be expected to give rise to optimal demand side participation.⁷

The EUAA fully understands and accepts the theoretical efficiency benefit supposedly derived from ‘marginal cost pricing’. However, the EUAA also recognises that it is reasonable for the overwhelming majority of end-users to ‘seek refuge’ from exposure to the ‘marginal costs’ of electricity supply. An example can be used to illustrate this: the circumstances that arose when Victoria hit a new record in electricity demand of around 9,750MW on Monday 17 March.

The wholesale market spot price on that day remained above \$1,000/MWh for a good part of the time from 14:30 through 17:00 and hit \$10,000/MWh for one 5-minute ‘dispatch interval’ about 16:30.⁸ This resulted in the 30-minute settlement price (or RRP) reaching \$1,398.70/MWh at 15:00, climbing to \$7,810.96/MWh at 16:00 and remaining above that level until 16:30 before dropping back to \$97.97/MWh at 17:30. That is, the 30-minute settlement price remained above \$1,400/MWh for 2 hours and exceeded \$7,000/MWh for one hour. By comparison, households using a reverse-cycle air conditioner (RCAC); which was the dominant cause of the simultaneous peak demand in all of the NEM Regions at that time on that day, would have paid about:

- \$0.20/kWh on a typical retail ‘flat Peak tariff’; or \$0.40/hour to stay cool using an ‘average-sized’ RCAC – at a total cost of around 80 cents for the 2-hour period;

this area, there is also an equal – or possibly greater – need to stimulate end-users’ interest in providing DSR capacity.

⁷ p. 6, *Review of the role of demand side participation in the National Electricity Market – Draft Report to the Australian Energy Markets Commission, NERA Economic Consulting, 20 February 2008.*

⁸ Similar pricing outcomes occurred in the SA Region, while peak demand for the day occurred (at lower dispatch prices) in the NSW, QLD and TAS Regions.

- \$0.06 to \$0.07/kWh⁹ for the energy component of the ‘typical’ flat retail tariff or \$0.12-13/hour for an ‘average’ RCAC unit – or a total cost of around 25 cents for the 2-hour period.

If that same household faced the ‘marginal cost’ of energy based on the wholesale market spot price, the total cost of using an ‘average’ 2kW RCAC would have been around \$20 for the 2-hour period; illustrating that the ‘marginal cost of delivered electricity’ can be some 25 times higher¹⁰ than the average cost of energy in a typical householder’s account (and possibly up to 25% higher again for large end-users) during periods when DSR would be most ‘efficient’. Arguably, the ‘marginal cost’ of providing network services to any users in ‘constrained networks’ would also have approached similar magnitudes.

NERA’s report comments on DSR by large end users, with reference to the wholesale market and price signals. For example, NERA says:

... [T]he market dispatch rules also allow for large load to bid demand side reductions directly into the market. This allows the dispatch model to factor load changes directly into the dispatch outcomes. We understand however that there is little incentive for a large load customer to do this, since there is no opportunity to be paid for any reductions in load that arise (other than the avoided cost of its own reduced load).

For large end-use customers the rules allow wholesale price signals to be presented directly to customers. This has led to improvements in demand side participation amongst large load customers, as they seek to manage their electricity costs. Despite this flexibility, many eligible customers choose not to manage wholesale prices directly by becoming a market participant. For these customers, the costs associated with managing wholesale price volatility directly presumably outweigh any potential input cost reduction benefits.¹¹ (Emphasis added)

The EUAA provides the following comments with respect to the above:

- Rules 2.3.4 and 3.8.7 allow any *Market Customer* (including an end-user) to identify market load, request that NEMMCO register the load increments as scheduled load and then bid the load in increments of dispatch capacity at discrete prices (that can be anything up to VoLL).
- The list of Registered Participants posted on the NEMMCO Website includes 46 *Market Customers*. Of these, only two are end-users (Sun Metals Corporation Pty Ltd, a subsidiary of a Korean zinc processor; and Tomago Aluminium Company Pty Ltd). All other 44 *Market Participants* are supply side entities (retailers, generators or NSPs).
- The list of generators and scheduled load posted on the NEMMCO Website lists only 7 items of *Market Scheduled* load totalling 1,320MW (compared to 248 items of *Market Scheduled* generation totalling 42,207.6MW); and each item of *Market*

⁹ See: p. 24, *Impact of Prices and Profit Margins on Energy Retail Competition in Victoria* – Final Report to the AEMC, CRA International, 8 November 2007.

¹⁰ The ‘marginal cost’ during the highest priced 5-minute dispatch interval would have been some 150 times higher than the average energy cost in the householder’s bill.

¹¹ p. 10, NERA.

Scheduled load is controlled by a *Registered Market Participant* which is a (hydroelectric) generator. There is not one item of end-user controlled load that is listed by NEMMCO as either a *Market Scheduled* or *Non-Scheduled* item.¹²

That is, amongst the ‘many eligible’ customers (referred to by NERA), there are only two (amongst many thousands of large industrial and commercial customers) that have taken ‘advantage’¹³ of the equal treatment permitted by the Rules.

The reason for this lack of enthusiasm by large end-users to become *Market Participants* offering *Scheduled Load* is quite clear. As NEMMCO notes on its Participant Registration Webpage:

- *Registering as a participant in the NEM is a complex process. It requires input and approvals from various government and industry bodies, and can be a time consuming exercise.*
- *The following processes are external to NEMMCO's registration process but need to be considered if intending to register in the NEM, so applicants should:*
 - *Familiarise themselves with the National Electricity Rules (Rules).¹⁴ Registered participants are bound by the Rules through registration with NEMMCO.*
 - *Contact the relevant jurisdictional regulator for information about their requirements on issues such as: generating licences, retail licences, permission to build a power station, jurisdiction specific issues such as network billing. The licensing and development approvals can be time consuming and must be completed before NEMMCO can finalise a registration.*
 - *Contact the relevant Network Service Provider regarding issues such as: connection requirements, generation project fault level impacts and performance standards, and loss factors.*
 - *Contact Austraclear to apply for membership. Austraclear is the system used for settlements transactions.*
 - *Consider the necessity to engage in hedge contracts or other risk management arrangements. More information on these may be available from the Australian Securities and Investments Commission, the Australian Stock Exchange Futures or the Australian Financial Markets Association.*

¹² There are also 102 items of *Market Non-Scheduled* or *Non-Market Non-Scheduled* generation plant totalling 2,066.33MW; of which only 3 items (totalling 106.8MW) are controlled directly by end-users (the others presumably either owned outright or operated by supply side entities under contract with end-users). In addition, NEMMCO lists 15 items of small generating plant owned and controlled by end-users but exempted from Registration under the Rules (because export capacity is less than 30MW) along with 120 items of ‘exempt’ generation plant (of unspecified capacity) operated by supply entities as Intermediaries.

¹³ The vast majority of end-users who are small businesses or households are not eligible to become *Market Participants*.

¹⁴ The latest version of the Rules is 1,055 pages in length.

The ‘rules’ of network regulation are also biased in favour of NSPs, some examples of which are:

- the opportunity to recover the total of forecast efficient costs - including 100% of capital costs - (and more if sales volumes exceed forecasts, or costs are below forecast);
- the use by regulators of ‘efficiency incentives’ for NSPs to do things that should occur on an ‘efficient’ basis,¹⁵ whereas
- DSR providers (who are, inevitably, end-users) have to ‘share’ the value they create with others even when they act efficiently, which can significantly reduce the commercial benefit derived from offering DSR – and which virtually eliminates any incentive to make specific investments in DSR capability.

To avoid doubt, the EUAA suggests that the AEMC should go beyond the consideration of NERA’s recommendations, based as they are on fundamental economic theory and address what can be done within the Rules to:

- increase awareness amongst end-users of the potential they may have for DSR actions, the ways in which it can be integrated with on-going business operations, the benefits it can provide and the various means of exercising DSR in the NEM. Providing opportunities to trial DSR and training in DSR actions, providing scope to identify and address barriers to it and disseminating information to purchasers of DSR such as retailers, aggregators, network businesses, generators and NEMMCO (increasing the awareness of supply-side entities as recommended by NERA) is also important. Governments can play a significant role in using their load (which is substantial) as demonstration sites or case studies to show the value of DSR;¹⁶ and
- make access to DSR provision as simple, and as straight forward, as practicable – including a requirement for NSPs and NEMMCO to simplify documentation and procedures used to procure DSR capability from end-users. For example, NEMMCO’s *proforma* contract in its most recent Reserve Trader tender was some 90 pages in length and constructed using arcane legal language. In contrast, Energy Response developed a 7 page agreement for procuring the DSR capacity

¹⁵ Specific examples, none of which has (so far) made a material impact on ever-increasing peak demand; and none of which delivers additional financial benefit to DSR providers, are:

- the (effectively un-costed) *D-Factor* implemented by IPART for NSW DSNPs that allows the NSPs to double their returns on ‘already efficient DSR investment’ (see: Section 8, pp. 89-108, *NSW Electricity Distribution Pricing 2004/05 to 2008/09 - Final Report*, IPART, June 2004);
- the \$20.4 million ‘pre-payment’ to ETSA Utilities by ESCoSA to conduct a demand management research and development program aimed at introducing demand management strategies within South Australia from 2010 (see: <http://www.etsautilities.com.au> “Demand Management”); and
- the notional allowance of \$0.6m over 5 years for each Victorian DNSP to trial demand management initiatives during the 2006-10 regulatory period (see: p. 496, *Electricity Distribution Price Review 2006-10 - Final Decision Volume 1, Statement of Purpose and Reasons*, ESC, October 2005).

¹⁶ Further information about impediments to DSR at the customer awareness and at other levels, are discussed in Charles Rivers Associates and Gallagher and Associates, *Electricity Demand Side Management Study – Review of Issues and Options for Government*, Report to VENCORP, 7 Sept 2001 (see <http://www.efa.com.au/Library/CRADMRptforVENCORP.pdf>)

it successfully offered to NEMMCO. The Energy Response contract covered all the matters included in NEMMCO's *proforma* agreement and was constructed in simple English, presented simply; thereby avoiding the "need" for most end-users to have the document "vetted" by legal advisors.

2. Background to submission

As noted above, this submission responds to the issues covered by NERA's February 2008 draft report to the AEMC. The report sets out NERA's response to the limited scope set by the AEMC for Stage 1 of this review, which is focused entirely on what the AEMC may be able to do within the Rules as part of other (and concurrent) reviews, *viz*:

- National Transmission Planner Review;
- Congestion Management Review; and
- Comprehensive Review of Reliability.

The AEMC summarises the remaining stages of the review as:

- *Stage 2 – will review the Rules more broadly in order to identify where there may be barriers to the efficient integration of the demand-side in the NEM and develop proposals for Rule changes to reduce or remove them where efficiency would be improved; and*
- *Stage 3 – in recognition of ongoing reforms in the sector, this stage will seek to identify any additional, or remaining, barriers to efficient DSP in the NEM and develop proposals for Rule changes to reduce or remove them where efficiency would be improved.*

As NERA states, the AEMC's main purpose for this Stage 1 review is to:

- develop a conceptual framework for the subsequent consideration by the AEMC of the role of demand side participation in the NEM; and
- make recommendations that facilitate demand side participation within the bounds of the National Transmission Planner Review, the Congestion Management Review and the Comprehensive Review of Reliability for consideration by the AEMC.¹⁷

The EUAA agrees that it would be desirable for the AEMC *to develop a conceptual framework for the subsequent consideration ... of the role of demand side participation in the NEM*. NERA notes that *(m)any important questions relating to demand side participation will therefore be considered as part of subsequent stages of the Commission's Review*¹⁸ and identifies the following matters that are beyond the scope of its report:

- impediments to end-use customers accessing tariff products that reflect wholesale market prices directly;

¹⁷ *Ibid.*

¹⁸ *Ibid.*

- the transactions costs associated with managing wholesale market prices directly, particularly for large end-use customers;
- the awareness of large end-use customers' of the potential to manage wholesale market costs directly;
- connection arrangements for distributed generation;
- the incentives for retailers to offer time-of-use or critical peak pricing tariff products to end-use customers;
- the incentives for retailers to manage wholesale price risks via demand side options;¹⁹ and
- the potential for biases against demand side participation within the incentives created through transmission network service cost and price regulation.²⁰

The EUAA considers that the AEMC should *develop a conceptual framework for the subsequent consideration ... of the role of demand side participation in the NEM* by considering all major issues that impact on incentives for end-users to provide DSR before moving to consider which of these issues can be meaningfully addressed in the three concurrent reviews.

The balance of this submission, firstly suggests several issues that should be considered by the AEMC as it contemplates the basis for a conceptual framework for consideration of options that seek to promote the role of DSP in the NEM; and secondly provides brief comments on NERA's draft recommendations – notwithstanding the limitations noted above.

3. A basis for a conceptual DSR framework

As noted above, NERA says at the outset that the AEMC's main purpose from Stage 1 is to *develop a conceptual framework for the subsequent consideration by the AEMC of the role of demand side participation in the NEM*. But the focus of the NERA report is almost entirely the wholesale spot market (which it excludes from the scope of the AEMC's interests for Stage 1) and transmission – with a passing reference to:

- opportunities for DSR in the ancillary service markets, which the EUAA acknowledge do exist, but would (we expect) be of little interest to end-users because of the need for virtually instantaneous and fully automated response required in the FCAS markets;²¹
- distribution; without any acknowledgement that this accounts for a significant larger proportion of the total cost of energy supply for most end-users than does

¹⁹ pp. 13-14, NERA.

²⁰ p. 16, NERA.

²¹ This issue of 'control' of DSR capacity is critical to large end users, all of whom use energy as a value adding input to a productive process. While some, possibly many, could be enticed to offer DSR capacity, they are less likely to agree to do so in circumstances where they 'surrender' control of DSR dispatch to a fully automated process over which they have no real control.

transmission – including large end users – and, therefore would appear to have more potential as a ‘stimulant’ for DSR;

- how the retail market impacts on incentives for DSR, with:
 - end-users overwhelmingly preferring to have retailers manage ‘marginal cost’ price risks; and
 - retailers preferring to manage risk through:
 - (a) bilateral or OTC contracts; or
 - (b) direct investment in generation (i.e. hedge contracting and direct investment are very significant ‘competitors’ for DSR from a retailer’s perspective).

In the absence of consideration of these three points, it is not clear to the EUAA how the AEMC is going to use NERA’s report to inform *develop(ment of) a conceptual framework for the subsequent consideration by the AEMC of the role of demand side participation in the NEM*.

Accordingly, the EUAA recommends that the AEMC ‘supplement’ the views expressed in the NERA report as it contemplates development of a (policy) framework for DSR. The key additional points that the AEMC should consider being:

- end users, even large ones, obviously prefer to let retailers manage price volatility risk – therefore, basing a DSR policy on exposing end users to wholesale market or network service ‘marginal cost prices’ is unlikely to yield significant gains;
- retail pricing is never likely to reflect the ‘marginal costs’ of the wholesale spot market or the network sectors because this would act as a powerful (negative) incentive for end-users to seek refuge in alternative ‘flat tariff’ products;
- retailers might contemplate developing tariff products that reflect the ‘marginal costs’ of the contract market (in particular the Cap contract values suggesting energy prices of around \$0.30/kWh) in Critical Peak Pricing products – but this may still ‘discourage’ large end users and cause them to seek refuge in ‘flat tariff’ products;
- retailers appear (from non-activation DSR through retail contract clauses) far from enthusiastic about utilising DSR as a ‘primary’ tool for managing price volatility risk – and appear to prefer risk management using the (relatively opaque) contract ‘markets’ or direct investment in generation.

That is, the EUAA is suggesting that the AEMC needs to focus on how to stimulate interest amongst end users for providing DSR and how to ensure that end users have access to sufficient commercial incentive to do so from within the ‘shield’ of fully hedged retail supply contracts. It is the EUAA’s view that this needs to be taken into account as the AEMC considers Rule changes in the three specified areas of interest, while recognising that Rule changes in these areas are not likely to lead to a significant increase in the positive incentives for end users to offer DSR capacity.

4. Comment on NERA’s draft recommendations

The NERA report provides a series of draft recommendations relevant to each of the three areas specified by the AEMC. The EUAA offers a brief comment on each of the recommendations in the table below.

<i>NERA Recommendation</i>	<i>EUAA Response</i>
NERA’s fundamental premise	
<p>Further intervention is only required where current arrangements inhibit the presentation to customers of appropriate wholesale or network price signals, that would otherwise be expected to result in optimal choices on DSP.</p>	<p>There is no evidence from the retail market that end-users will accept presentation of ‘marginal cost’ pricing signals, whether from the wholesale spot market or the network sectors.</p> <p>However, some end-users have demonstrated willingness to take advantage of ‘marginal cost’ DSR opportunities while being protected from ‘marginal cost’ risks through fully hedged retail contracts.</p> <p>In addition, it is clear that more can, and needs to be, done to ‘stimulate’ end-user interest in DSR; and it is clear that large end-users will only respond to DSR opportunities if commercial incentives are sufficient. For example, this is clearly evident from the EUAA Trial of a DSR Aggregation Facility and the subsequent DSR Case Studies.</p>
<p>Where this is not feasible, the incentives on NSP’s to consider DSP as an alternative to network investments should be unbiased.</p>	<p>The EUAA agrees that network investment decisions should be ‘unbiased’. But jurisdictional regulators have acknowledged that DNSPs need ‘additional incentives’ to make ‘efficient’ investments in DSR. These jurisdictional schemes acknowledge that DNSP investment decisions are already biased.</p> <p>The EUAA has no fundamental objection to providing limited ‘additional incentives’ for NSPs to invest in DSR where this delivers overall benefits to end-users. However, there is a need to ensure that ‘additional incentives’ are also delivered to end-users who are DSR providers and not just retained by the NSP. Benefit sharing is a key principle for end users to have the incentive to take up DSR.</p>
National Transmission Planner Review	
<p>NSPs should seek information from demand side proponents on an annual basis on potential non-network solutions to emerging network constraints in order to facilitate greater DSP.</p>	<p>The EUAA has no fundamental objection to this recommendation. However, any requests for information should be targeted to involve only end-users who are connected to parts of networks that are forecast to be constrained.</p> <p>In addition, any request for information should be accompanied by an explanation of the opportunities available to end-users and simple instructions on how to access these opportunities. This should include a preliminary indication of the commercial value that would be gained by providing DSR capacity; and the time period over which the opportunity exists.</p> <p>The AEMC also needs to address how to ‘incentivise’ NSPs in those jurisdictions where NSP</p>

	<p>show little interest in actively seeking non-network solutions.</p>
<ul style="list-style-type: none"> • That the NTP be required to develop a methodology for the explicit inclusion of DSP in the expected load forecasts published on an annual basis in the National Transmission Network Development Plan, by transmission exit point; • Where informational market failures are considered to be material, a framework be developed for the NTP to identify and evaluate non-network options to identified network constraints, with the information being provided to NSPs for consideration within subsequent regulatory investment tests; and • The NTP be given the responsibility to develop measures of transmission transfer capability and where feasible, publish transfer capability at each transmission exit point. • Consider whether the reliability standard should also be determined by connection point. • The Reliability Panel should consider the implications for DSP of the specification of the reliability standard as part of its current review of the transmission network reliability standard. 	<p>The EUAA has no fundamental objection to these recommendations because it recognises there are opportunities to provide DSR services to the transmission sector, although this is likely to be more effective as a DSR aggregation service – rather than a service provided by an individual transmission connected end user.</p> <p>However, there are questions as to:</p> <ul style="list-style-type: none"> • the practicality of collecting reliable planning information from a diverse range of end-users; • the practicality of focussing on incentives for TNSPs to access DSR when: <ul style="list-style-type: none"> ○ far more substantial investment value occurs (in total) in the distribution sector; and ○ end-users have more ‘intimate’ contact with their distribution network. • the practicality of collecting sufficiently robust information from end users to allow development of connection point reliability standards (given that end-users have other priorities that relate to operation of their ‘core business activities’).
<p>The regulatory investment test should:</p> <ul style="list-style-type: none"> • ensure that the timeframe over which DSP options are required to be presented as alternatives to a network solution is sufficient to allow these options to be considered viable; • clearly define how ‘wider national benefits’ should be interpreted for non-network options; • use risk-adjusted costs and benefits to take into account differences in risk between alternative options; and • define an option-value benefit associated with an investment that defers a proposed network investment. 	<p>The EUAA has no fundamental objection to these recommendations but notes that such ‘administrative changes’ are unlikely to lead to significant improvement in the incentives for end-users to offer DSR capacity. Therefore, the material impact of such changes is likely to be negligible.</p>
<p>Congestion Management Review</p>	
<p>Request NEMMCO to consider how technical requirements may be modified to better facilitate DSP as a means of providing NCAS as part of its current review of NCAS.</p> <p>Clarify the roles and responsibilities for the provision of NCAS between NEMMCO and TNSPs to ensure that DSP is facilitated.</p>	<p>The EUAA has no fundamental objection to these recommendations but notes that such ‘administrative changes’ are unlikely to lead to significant improvement in the incentives for end-users to offer DSR capacity. Therefore, the material impact of such changes is likely to be negligible.</p>

Comprehensive Review of Reliability	
<p>DSP would be enhanced through improving the methodology for incorporating DSP in the approach to determining the minimum reserve level.</p> <p>Retailers should be required to provide information on contracted demand response on a confidential basis to NEMMCO.</p>	<p>The EUAA sees little value in either of these recommendations. In the absence of pervasive awareness of DSR opportunities amongst end-users, DSP will remain limited and difficult to forecast.</p> <p>In addition, feedback from EUAA members confirms that retailers generally rarely, if ever, call on end-users to activate DSR capacity under the terms of retail contracts.</p> <p>On the other hand, the EUAA notes that end-users made a substantial contribution to the last NEMMCO Reserve Trader tender, both individually and through the DSR aggregation services offered by Energy Response.</p> <p>The EUAA believes that NERA is wrong to summarily reject the need to modify and improve current Reserve Trader arrangements. The EUAA supports the recommendation of the final report of the AEMC CRR to examine the operation of Reserve Trader, to consider both demand-side and generation responses, and further consider operational improvements available to NEMMCO in relationship to both the contracting and funding arrangements for the 'reserve trader'. The EUAA considers that NEMMCO should publish price guidance and clearing price from Reserve Trader to improve the transparency of market signals.</p> <p>As a minimum, the AEMC should require NEMMCO to substantially simplify the documentation of its tender process, particularly the <i>proforma</i> contract agreement.</p>