11 August 2006

The Reliability Panel
Australian Energy Market Commission
P.O. Box H166
Australia Square NSW 1215

Summary Key Points:

1. Clarification of the Energy Response (ER) view of increased VoLL. We have had some feedback which indicates that some stakeholders have misunderstood our position with reference to increasing VoLL. Our slide 6 at the presentation on 27 July states "ER is not saying that the level of VoLL should be increased now". However, when a strong and effective DSR is working in the NEM and a there is a much better balance of market power between the supply side and demand side, the market would be in a better position to reconsider the level of VoLL to align it more with the value of unserved energy.
2. It is our view that for more than 99% of the time the system reliability (and security) are very good. While we understand that this is a 'comprehensive review', we think it should be accepted that the focus should be on improving the reliability associated with the less than 1% of the time when circumstances and/or events could create a loss of supply. This less than 1% can of course occur at any time in the year.
3. A key point which we wish to re-emphasise is that Energy Response, and the companies which have provided and backed 125MW of firm Reserve can now supply Demand Side to provide form DSR as Reserve all the time (8760 hours per year). This will release the expensive supply side capacity / infrastructure which is currently supplying the bulk of the reserve to meet growing energy needs. We understand that the EUAA also believe that a solution for more reserve capacity needs to be found from the demand side instead of building more supply side capacity. From our commercial research we are of the view that our there is conservatively more than 1000MW of firm DSR from exiting demand side assets which could provide this service all the time across all NEM regions.
4. There is a significant and increasing amount of unserved energy in the networks at Distribution level and now emerging at Grid level as well. This puts electricity consumers in those network constrained areas at much greater risk of total loss of supply for a single credible contingency. This completely unnecessary where a firm supply of DSR can clip discretionary demand to ensure the N-1 capacity is not exceeded at those times for the small number of hours per year. There is an excellent business case for this for (1) the consumers (lower risk of loss of total supply to their site), (2) the network (no penalties for loss of supply plus additional net profits) and (3) the DSR providers (who get paid for being able to reduce demand when required for a short period). The problem is that the NSPs are all telling us that the regulators do not seem to have any mechanism to support this. This is becoming a critically important matter to be resolved. In addition, it will enable the

network planners to gain confidence that a non-network solution can also improve the efficiency in the use of capex by deferring the timing of the next network capacity upgrade.

5. Energy Response has noticed that demand forecasts now include a growing proportion of wind generation output as negative demand. These charts are used my many engineers, planners and the industry in general to develop their short to long term plans around infrastructure and investment and as such are critical sources of base data. However, perhaps many of those who use these charts do not understand that on very hot days (say the third 43°C day in a row) the wind may be non existent or it could be blowing so hard that wind generators cannot operate. This means that the charts must clearly identify the wind component and reserve short falls should include the negative demand attributable to wind.
6. There are some 8000 constraints in the NEM which are registered by NEMMCO. These constraints are often a cause of high energy prices and inability of generators to get there capacity to market. Our observations are that localised, well organised and firm DSR could offer solutions to many constraints. However, these are not readily known or understood, and in some cases do not seem to have any party willing to resolve them. Energy Response want access to the current data about these constraints to enable us to analyse them and provide solutions.
7. We were asked to provide supporting analysis for some of our claims about DSR. We are willing to do that in confidence as appropriate (some commercially sensitive data cannot be supplied) and will do this based on any specific requests from the AEMC.

Yours sincerely,

Signed

Michael Zammit
Managing Director

Specific summary comments on issues:

AEMC Issues	Energy Response Position
The level of supply reliability expected by consumers (including international comparisons)	Re the level of reliability expected, from an economic perspective, consumers' VCR varies enormously and can be anywhere from $150 to $100,000 per MWh depending upon frequency, duration, what load is affected, what notice of impending interruption is given etc. etc.
The appropriate forward mix of base load, intermediate and peaking plant	The optimum mix should be a range of different types of each category of must run, base, intermediate, peaking and voluntary DSR. In particular, it is critical that the DSR option is considered in the reliability assessment but a market mechanism/s must be established to create sufficient value for DSR providers to make this work
The impact of spot price volatility on market customers and generator investors	Let the contract markets (including DSR) provide the means for managing pool price volatility, and if there are problems with the contract market (once there is an active demand side participation in the market), then fix them rather than artificially suppressing pool price with a cap
Revenue adequacy for existing and new generators (including the attractiveness of investing in the NEM from the perspective of the global capital markets)	Analyses by Newgen, Henney et al, MMA and ROAM are all referred to by various submissions and presentations, all arguing generator revenue inadequacy for a reliability constrained NEM. We are not convinced that this would still be the case if DSR played a significant role in clearing the market, and any AEMC analysis should take this into account. Energy Responses view is that with a well organised process such as ours and a bit more support from the market as discussed here, there will be some 3000MW of DSR available to the market within a few years.

AEMC Issues	Energy Response Position
The effect of increasing levels of intermittent (wind) generation on reliability and how this can be appropriately managed	NEMMCO now appears to be considering wind as fully available in its MTPASA. This is distorting the indications because the probability of the wind being available at the time there is the least reserve available is low. Either as happens in SA there will be next to no wind, eg, in SA, or such strong winds that the wind generators will shut down. Wind generation is being seen as negative load in this arrangement but is not firm and should be disregarded as firm reserve capacity. Firm DSR is reliable as reserve and needs to be considered as part of the mix of reserve available to the market. However, all reserve must be paid for at its value in the market and to the end consumer. DSR is in effect a negative load also (whether it comes from customer load reduction, shifting load use in time or from customer embedded generators which offset demand).
The optimal levels for the market settings (VoLL, CPT and administered prices) within the current market design	See our comments on VoLL in Point 1 above
The impact on reliability outcomes from introducing a 30 minute ancillary reserve service, reserve generation or a form of capacity pool payment	All other things being equal, adding an additional feature to the market like this should have a positive effect on reliability unless it is very poorly conceived and implemented. If this is to be implemented it must be absolutely fair to both conventional supply side solutions as well as demand side solutions.

AEMC Issues	Energy Response Position
The need for, and form of, the intervention mechanism	There is a strong national, government and political requirement for reliability which considerably exceeds any market driven level. However, there can be no guarantee that the market will always deliver, even if all the price signals are as economically efficient as one could possibly make them in an ideal world. Therefore, some form of intervention mechanism should probably be an ongoing feature of the market. One way of ensuring that sufficient Reserve will always be available is to fund it separately. This could then source the Reserves from the most economic mix of supply side and demand side. This would then be the only reliability driven intervention mechanism. A variation on the above could be to supplement the dedicated reserve plant with very high incrementally priced DSR that would never be curtailed voluntarily for market price reasons, even at VoLL prices. This would attract a much lower standing charge than the dedicated reserve plant but it would have an extremely high dispatch price.
The role and importance of an active demand side response	An active demand side response is an essential (in fact imperative in our opinion) ingredient for the energy only market to work properly and provide generators with revenue adequacy – see earlier comments on this. Therefore it's not something that is "nice to have"; rather it is extremely important to the effective functioning of the market without the constant threat of market intervention in one form or another.
Ways to improve the methodology used by NEMMCO to determine reserve margins	There needs to be clear distinction between planning reserve margins looking out over months and years into the future on one hand, and short term operational reserve requirements for the next dispatch day. One is a trigger for Reserve Trader intervention whereas the other determines the various categories and quantities of reserve that may need to be purchased by NEMMCO via the co-optimised dispatch process. The key issue seems to be that the actual reserve is not transparent and separately priced.