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31st May 2011

Mr John Pierce
Chairman
AEMC
Level 5
201 Elizabeth Street
Sydney NSW 2000

Dear John

**Re: Our comments on the proposed
"Strategic Priorities for Energy Market Development" 2011**

It is with interest that we read the recent Discussion Paper from the AEMC.

We are a company whose primary purpose is *"making the electricity market understandable"* – to assist in ensuring that the ongoing energy market reform process is successful.

Since formation in 2000, our client base has grown to the stage where we serve more than 100 clients around the NEM (and internationally) with shrink-wrapped software that assists in a variety of different ways.

Given our Mission, we appreciate the opportunity to provide our views on where energy market development is headed.

However, given that I fill the role of our *"General Dogsboddy"*, there are never enough hours in the day – and as such these thoughts are being submitted after the due date of 13th May.

Please accept our apologies for the lateness of this submission.

In reading through the Discussion Paper, many thoughts occurred to us. These could be best summarised under four broad heading, as follows:

1) Market reform fatigue

I understand that this term will mean different things to different people – hence let me define our meaning:

Since the NEM began operations (over 12 years ago) we have seen numerous reviews come and go. These have been conducted by a variety of different constituencies, and produced a range of recommendations.

There is a view amongst many we speak with that relatively few of the recommendations made in previous reviews have been fully (or even partially) implemented.

Furthermore, the view is that reasons are sometimes not given (or not clear), as to why some recommendations have not been adopted.

If this was the case at the time the recommendations were handed down, it is even more the case now, when trying to research the outcomes of previous reviews. URLs which might have once worked as a reference to recommendations are no longer effective.

Hence, our sense is that there is an element of scepticism in relation to this and other reform initiatives underway currently.

*Indeed, this submission is the **only submission** we have ever made to review processes such as this one.*

Whilst our general busyness has been a factor – it has also been a general scepticism that positive change will result that has previously dissuaded us from participation.

Hence, whilst “Reform Fatigue” might mean (for some) that there has been too much change – for others (like us) it appears that there have been too many reviews, too much overlap, and not enough real benefit.

Note that we do not believe that the general inertia that the NEM inherits (stemming from a multi-jurisdictional accountability) is necessarily always a bad thing.

We have also had experience in other electricity markets where the lack of checks and balances has allowed for more rapid change, which has not always been for the better.

Note that **we do not believe that the NEM is fundamentally broken** – however this should not stop us from (collectively) investigating ways to make it even better, on a timescale that makes sense.

We do believe that it would be beneficial for stakeholders of Australia's national energy markets to have their faith restored in a reform process that (in the views of some) has



not lived up to its promise in the days since the initial reform efforts led to the creation of the NEM.

One possible way forward:

It seems, to us, that the best way forward would be to adopt several principles in terms of future reviews of market effectiveness:

Suggestion 1 = We would suggest that a permanent record be established at an easily accessible location (such as www.EnergyMarketReform.gov.au) to which at least a summary of each review process is appended, upon completion.

Suggestion 2 = At the end of each review initiative, a summary should be included of the context of the various submissions and explain which have been chosen to be addressed – and (for those not chosen) some reasoning about why not.

Ensuring such a process was followed would enable all stakeholders of Australia's energy market to feel more confident in the benefit of reform efforts, moving forward.

2) Six core enduring challenges

In reading through the three proposed Strategic Priorities in the AEMC paper, **we were not surprised** to see these on the list.

Nor, I would think, were many others who are integrally involved in the NEM.

Furthermore, I would contend that these 3 strategic challenges are merely a subset of **the 6 core and enduring challenges** that have existed for competitive electricity markets across the world for at least 15 years, and possibly since electricity market liberalisation was first introduced internationally.

Whilst the nuances of particular issues under these 6 broad umbrellas might have changed over time as the market has matured, we believe that the 6 core themes remain, and form the bedrock of any significant efforts at ongoing market reform.

I have posted more about what these 6 enduring challenges are on our industry commentary site:

<http://www.wattclarity.com.au/2011/05/6-enduring-challenges-for-competitive-electricity-markets/>

With respect to the AEMC discussion paper, our main point is not that there should be 3, or 5, or 6 strategic priorities. We understand that there can be valid reasons for a shorter list of priorities.

Our view is that these underlying challenges are enduring, and that they should be the grounding point for any periodic review of market reform.

One possible way forward:

To us, it would seem that the process of regular review or market performance could (itself) be refined in order to deliver a more effective, efficient and sustainable process.

Suggestion 3 = It would be worth considering whether these core challenges become a standard part of electricity market reform discussions (perhaps at the MCE and elsewhere) in order to ensure that there was consistency of attention over the years.

It would still be possible in strategic planning processes (such as the one being conducted by AEMC) for the various stakeholders to choose to focus their attention in any particular area – however the reference back to the framework of the enduring challenges would help to ground any given improvement effort.

In adopting this approach, each reform initiative could more effectively build on what had come beforehand – rather than providing a platform for the same concerns to be recycled.

3) Objective performance measures

No matter whether we're talking about the AEMC's proposed set of 3 strategic challenges, or a broader set of enduring challenges, it seems important (to us) that some objective measure of a success would (if defined up front) provide a more transparent and understandable measure of what our starting point is (i.e. how far away from target), and also the measure of success of any reform initiative undertaken.

One possible way forward:

Suggestion 4 = To promote the transparency of the reform process, and to increase its consistency and effectiveness over time, it would be worth identifying what objective performance measures could be established, monitored and reported on the strategic priority areas for the AEMC.

4) Specific comments on the 3 proposed challenges

The Discussion Paper proposes that there are three strategic priorities for the AEMC.

#1 Incentivising Sufficient New Generation Investment

The discussion paper notes several factors that are currently seen to be impacting on the ability and willingness of market participants to deliver sufficient generation capacity to meet changing requirements in the NEM.

Of these, two are particularly notable:

- 1) The continuing uncertainty about a carbon price, and what that means in terms of which generation technology will be best suited, in future, to meet demand – plus how the transitional arrangements affect the balance sheet strength of incumbent generators, and hence their ability to deliver this new capacity.
- 2) The growing disconnect between peak demand growth and growing average demand.
- 3) Not noted in the discussion paper were previously mentioned concerns about the overhang of government ownership and/or control of generation assets in NSW and QLD.

This will have been ameliorated to some extent by the recent privatisation in NSW and the pending re-aggregation of Gencos in QLD, coupled with restrictions on the building of new capacity.

However, it would be worth considering if this remains an issue.

- 4) Other factors will become apparent as more detailed consideration is given to this issue.

Of interest to us, in particular, is the objective measure that can be used to identify, and then trend, whether there is sufficient generation investment.

Not that it appears likely that it will happen, but (hypothetically) if we were to wait for supplies to run short and for brownouts to occur, this would obviously be too late.

We need an objective measure that would provide advanced notice of the risk of this occurring.

One possible measure might be a “years till new capacity is required”.



In the electricity Statement of Opportunities, AEMO and NEMMCO have been providing a view of the number of years in the future prior to new capacity being required, for reliability reasons

Is it possible to trend the numbers published in the SOO to understand if there is any meaningful change in this window for new development?

Another possible measure is the volume of capacity in the generation development pipeline:

We are currently updating our "Power Supply Schematic" Market Map after a 6 year break, so we do not have current data yet.

However, when we last completed the exercise back in 2005 we found at least 50,000MW of generation projects in some stage of planning across the NEM.

Of this there was about 10,000MW of wind projects.

Hence, at that time, there was certainly not a lack of interest in the development of generation capacity in the NEM. Nor did it appear that there were substantial barriers to entry from new participants (as there were many new entrants involved in these projects, at least at that stage).

To the extent that we have assessed the current situation, it does not appear that the amount of capacity in the development pipeline has deteriorated to any great degree.

From this list of prospective development projects, it is another question as to whether we see sufficient projects being developed through to completion.

One issue that could be worth revisiting would be the effect of the separation between 5 minute dispatch and 30-minute settlement.

We have heard from some of our clients (both peaking generators and customers providing DSR) that this does complicate their operational decisions.

We know that this issue was studied in the early years of the NEM, but **wonder whether it would be worth revisiting**, in the light of market developments such as:

- 1) Peakier demand
- 2) Increased incidence of intermittent generation
- 3) Increased adoption of demand-side response.



#2 Facilitating Demand-Side Participation

We noted that the AEMC has listed *"Building the capacity and capturing the value of flexible demand"* as Strategic Priority 2.

In reading the discussion paper, we were struck with the potential for this assessment to dovetail into, or perhaps conflict with, Stage 3 of the AEMC's own review of Demand Side Response, which is noted here:

<http://www.aemc.gov.au/Market-Reviews/Open/Stage-3-Demand-Side-Participation-Review-Facilitating-consumer-choices-and-energy-efficiency.html>

We also understand that the Department of Resources Energy and Tourism have also contracted in some assistance in the development of an information resource that is being built to lower the informational barrier to entry for energy users who can provide benefits to the market in flexible consumption profiles.

We are very keen to see that the various initiatives underway *are complementary and do not conflict* – and this would also be our concern with respect to the outcome of this process.

It's important to recognise that ***there is already a significant amount of Demand Side Response active in the NEM*** at times of peak prices.

For various commercial reasons, this level of DSR is not always reported to AEMO or other bodies when surveys are completed.

Our company is playing a role in assisting large industrial energy users to secure significant benefits in the NEM, by facilitating their Demand Side Response (DSR) in the NEM – through the provision of our deSide® software product, which is further described on the product portal here:

<http://www.deSide.info>

Our client names are confidential, but we estimate that aggregate demand across all sites utilising deSide to respond to price spikes (in some form or other) would be **approaching 700MW of largely base-load, heavy industrial demand** across all five NEM regions and across a variety of industries.

With a peak NEM-wide demand of approximately 35,500MW, our total of 700MW equates to approximately 2% of peak demand. We're sure that there are also other energy users providing flexible response that we don't currently supply to.

However even just these numbers are in the same ball park as other jurisdictions – for instance we understand California has about 3000MW of active DSR, which over a peak demand of 55,000MW equates to 5.5%

We have a larger set of energy users as clients who have optional curtailability provisions built into their retail contracts – incorporating some form of benefit



sharing, but no explicit penalties if they cannot (or do not) curtail at times of spot prices.

There is anecdotal evidence to suggest that the extent to which retailers call on options such as these when short capacity in a time of price spikes has declined over time.

Whilst this may be due to vertical re-aggregation on the part of the retailer, it's also plausible that this would have resulted from a retailer's growing experience that such response has low firmness in some instances.

We also know of other companies who are also helping to facilitate DSR in the market in various ways.

We have experienced that the understanding of, and willingness to consider, more innovative means of procuring electricity on the part of large industrial energy users has steadily increased since the start of the NEM.

We understand that the transition to a more flexible consumption pattern is not easy for some energy users – and, in some cases, may not be possible at all.

In summary, we would like to make a point that there already is an opportunity for the provision of demand side response that a number of companies are using, across a range of industries – for their considerable benefit.

That's not to say that this number cannot (or should not) be grown further. We are actively pursuing this growth, as are others.

We would just like to make the point that this is another area where **the market is not fundamentally broken.**

Where we see challenges in further growing the amount of DSR across the market, we see this as (rather) a natural outcome of a lack of awareness and understanding on the part of many energy users, and as a reflection of the inherent difficulties some have in providing flexibility in a way that is aligned with the underlying physical supply/demand imbalances.

Looking forward, we are keenly interested in the potential that the **roll-out of smart meters** (or, failing that, at least interval meters) to residential customers will have for the provision of transparent dynamic pricing (or other initiatives) to activate greater flexibility in terms of consumption patterns.



#3 Transmission Development and Pricing

We noted that the AEMC has listed *"Ensuring the transmission framework delivers efficient and timely investment"* as Strategic Priority 3.

It's clear that there are several challenges in terms of transmission development, and pricing:

1) Equity between generators, in terms of connection

It is our understanding that generation assets that were installed prior to the development of the NEM (in the previous vertically-integrated world) were not required to pay the cost of their connection to the transmission grid.

In a historical sense, the transmission grid was sometimes built with the purpose of connecting stations located on fuel deposits, but away from centres of demand. These older stations now benefit from this connection.

In the new competitive market environment, new station developments are required to (explicitly) pay the cost of connection to the transmission grid.

We believe that this issue would be particularly relevant in the current process of assessing "scale-efficient network investments", which is reported on the AEMC site here:

<http://www.aemc.gov.au/Electricity/Rule-changes/Open/Scale-Efficient-Network-Extensions.html>

(however this is one of many reviews that we have not had the time to consider in detail).

2) Competition between generation and transmission

There remains a challenge to upgrade inter-regional interconnections that would deliver "customer benefits" but not sufficient "market benefits", as these terms are defined in the Regulatory Test.

In your Discussion Paper, you reference a calculation of "Cost of Congestion" that is used by the AER but which excludes the price differences, as we previously posted about here:

<http://www.wattclarity.com.au/2008/04/cost-of-congestion-to-energy-users/>

As a very useful indication of how this measure is commonly misinterpreted, the AEMC has (in the same paragraph on p47) compared the AER's figure for "Cost of Congestion" (which is measured by assumed input cost differences) to total volume traded in the NEM (which is measured by spot prices, not input costs).

There are many instances we see of this "apples to oranges" comparison.



We understand that, even in its new formulation as a "Regulatory Investment Test for Transmission" the definition of benefit is still too narrow.

If the overall objective of the NEM is to deliver sustainably lower prices to energy users, we would question the exclusion of customer benefits in such an assessment.

3) The Revenue Reset process

There is also the very topical issue of the revenue reset process now being administered by the AER, and the subject of increasing discussions in the industry (and the popular press).

We are not aware of the full details encompassing this broad issue – though we have heard a wide range of claim and counter claim.

We believe we are not alone in being unable to see the full picture with respect to this issue.

If the AEMC could provide this clear picture (as a starting point), we believe it would be very welcome.

I trust that these thoughts will prove useful in your ongoing drive to deliver a (technically & economically) more efficient, and more sustainable, electricity and gas supply industry for Australia.

We will look forward to seeing the outcome of the AEMC process (though not without a degree of scepticism, as noted above).

Yours sincerely,



Paul McArdle
Managing Director
(a.k.a. General Dogsboddy)