Australia's Energy Sector: The State of the Market

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Well thank you Michael and John and to CEDA for the opportunity to come and address this luncheon. It's just surprising to see so many people here. We always ask for the guest list before we prepare a speech and this one came in fairly late and I was really surprised this morning when I got a chance to look at the diversity of people here so energy certainly is a very hot topic as has been said. I think if we took a pole of the room and asked the question, what should be the characteristics of a national energy regulator the sorts of things people would say is 'well the regulator needs to not get involved in policy, he needs to be incredibly independent, he needs to be predictable, he needs not to present surprises' and when you go down the list and you sum all that up in a couple of words it means that I'm a quid essentially boring person. So the challenge for someone who has to have always this aura of boringness, when we have to give a speech to such an eclectic audience as this is a challenge to my people because we sort of get off on things like rates of return, [lax, dorks, Mars] and I can see some of the people in the room getting very excited already. We even had a term last year which was a [crooked dork], which was actually mentioned in a threshold… a kink dork I think the word was… mentioned in a threshold decision by a number of judges in the Supreme Court so that lexicon is certainly pervading around the industry.

So, look what I want to do in the short time today though is really not get involved in lax and dorks but talk at a higher level about, a little bit about where the AER is at and what we're doing, but more particularly about what's happening in the energy sector more broadly both in terms of electricity and gas and hopefully it won't be too boring.

So I want to talk a little bit about the AER's new functions. As Michael said we're just over 2 years old now and we're on this journey to become a national regulator. One of the interesting things that's happened in the energy sector in recent times though is we've gone from a fairly benign, certainly in the electricity wholesale market, a fairly benign period to a lot of volatility in pricing, I want to talk a little bit about that, and also talk a little bit about some of the structural changes in the sector, one of which of course is industry consolidation which has been happening with a lot of merger and acquisition things going on.

Can I just open up a little bit on the AER's role. The AER will assume national responsibility for the regulation of electricity and gas. So we're on this transition. The culmination of that transition will be the passage of national gas and electricity legislation by all of the governments in their parliaments at the end of this year and that will give us our head of power to go to the next stage which is to take on board from state base regulators responsibility for regulation of distribution

networks. We already have transmission networks amongst our roles and then later next year we'll complete the journey to national regulation by picking up a number of retail functions, we won't have responsibility at this stage to regulate retail prices, that's end consumer prices, but there will be a range of areas in the retail sphere such as customer protection, service standards etc. that we will get involved in. So what you'll end up with is not quite a single national regulator because the Northern Territory and WA are still doing their own thing, but certainly that big orange box in the middle reflects that in the wholesale area, distribution and transmission are three very key areas of the supply chain, we will, from the end of next year, have the regulatory responsibility.

There is a, can I say in terms of retail prices, there is an agenda by all governments on a state by state basis to look at the cost and benefits of removing retail price regulation and letting prices be determined by the market. The first of those jurisdictions are undergoing those studies here in Victoria and the recommendation from the other regulator in the national, the Australian Energy Market Commission, will come to the Victorian government next year and it will be up to the minister to decide whether prices should float and that will be a fairly path finding decision I expect which could take us to another level in terms of our deregulation.

I'll come back at the end of my presentation and talk a little bit more about the AER but can I just move to, hopefully some more exciting stuff and talk a little bit about energy prices. As I said it's fair to say I think that gas and electricity prices, pretty well since the start of the [NEM] back in the mid 90s have been fairly benign, but 2007 has certainly seen a change to this and we've had some very interesting developments, mainly in the context of upward pressure on prices over the course of 2007. And of course, in particular we've had high prices in, right across the NEM, I think there are 4 episodes in terms of high prices in 2007 I want to talk about.

We kicked off in January 2007 with a bush fire episode here in Victoria and you can see there that first big blue blip. This is a graph depicting wholesale spot prices since 2006 right through until last week and you can see that big blip on the left hand side there was effectively the January bush fire episode in Victoria and prices really haven't recovered since that episode, you can see them basically going up to that next big blip around June. Now what happened in between time of course was the effects of the drought on the energy sector first became very apparent and prices moved around the autumn nationally into the sort of $60 to $80 range where they were previously tracking at around $25 to $30. Very unusually high prices for that time of year and I'll come back to some of the drivers here.

So that's the second stage. The third stage really has been the June 2007 episode where we saw unprecedented prices in wholesale electricity with some quite unprecedented repercussions particularly in New South Wales but of course that reverberated across the whole market and subsequently we've seen prices really come back down quite significantly but still around $5 higher than they were this time last year so we are certainly on an upward trend.

So what are the causes there? Well clearly, I mentioned drought, many if not all coal plant depends on water for cooling so if they haven't got access to water they are constrained in their production. That's certainly the case in Queensland, we've got about 800 megawatts of coal plant affectively not operating in Queensland because of water restrictions. We've got hydro dams in Victoria and Tasmania at very low levels. In deed in Tasmania where we were on Monday, they were telling us when they did the sums for Basslink the interconnect between Hobart and the mainland, they saw prices flowing mainly from Hobart into Victoria but the reality is for most of this year Tasmania has been importing about 70% of the flows on Basslink have been north to south, so that was certainly good timing on their part.

Now the effect of this of course on hydro is with constrained water, they've only got so much energy they can bid into the NEM so they're taking the economically rational decision to bid that in, in higher price bands, so we've got energy which was previously bid in at less than $50 being bid in at significantly higher prices.

When will the drought impact ease? Well when we get water and we've had some good water recently across the eastern seaboard but it will take some time and certain I still think there's some uncertainty when we talk about forward prices, the market's still putting a lot of uncertainty about when the effects of drought will unwind and we'll get some price relief.

June was a very abnormal month. In the whole of 2005/2006 we had 45 price events, by price event I mean 5 minute episodes where the price in the wholesale spot market went above $5,000 per megawatt hour and that triggers the AER undertaking an enquiry as to the cause of that and whether there are any market power issues behind those price increases. So 46 events in the whole of 2005/2006. In the month of June 2007 we had 42 alone. We had prices getting about $250 pretty well in all jurisdictions and the effect of this initially was in New South Wales but did flow on reverberating right across the market. Interestingly the forward price kerb has also been affected as we'll see shortly so those higher prices have been reflected in the forward curve. We saw our first retail failure in the NEM through Energy One. We saw another retailer momentum having to sell 15,000 customers to affectively stay in business and we had large users who had their contracts running off and had to be renewed certainly facing the exposure to very, very high energy prices and I think it's fair to say that most retailers generally suffered to varying degrees as a result of this abnormal month.

So what happened in June and could it happen again? Well clearly still the underlying… there was some fundamentals there, the underlying drought problem, we did have some floods in the Hunter Valley in New South Wales which impacted on coal supplies for New South Wales base load plant and we had the June winter peak hitting us fairly early, but it wasn't a peak that was any where near at the top of the forecast and in July we broke the national demand records that were previously set in June so it wasn't just demand driven. We've reported that in New South Wales a main cause, the main cause of the high price spikes was opportunistic bidding by one generator in particular and I won't go into the detail but we've reported on that publicly and affectively that signals I think that in New South Wales there is a strong element that the market there needs to be, in a generation sector. More competitive and we know that the New South Wales government is on the game and through the commissioning of the Owen report and will respond to that report when it's released.

We… So that's basically the June episode, could it happen again? Yes it could happen again if the right conditions happen. In January, if we had a transmission line outage, we had a series of 42 degree days, this is January/February, we've still got the effects of the drought say in Queensland, it could happen again. So what's the message in all of this? I think the message is that energy is, if we didn't realise it before, a very volatile commodity and many businesses in their strategies, their procurement strategies, have very well proven risk mitigation purchasing strategies to mitigate against volatility and all of the other inputs that they use. I'm not sure that's necessarily been the case for energy so the lesson in all this I think is that we really need to feed energy as a commodity and we need to make sure that, albeit it we don't get these events happening as a matter of course, but they can happen and it's important that we have appropriate hedging to mitigate this sort of risk.

I mention the forward prices, this just shows the New South Wales situation, the extremity of what's happened this year. These are prices to, in simple terms, purchase an energy contract at a particular point in time, and into the future and the bottom dotted line there shows if you went to the market for a contract in New South Wales in February 07 the price you would pay going forward from a quarter 07, 2 07, through to quarter 4 2010 what you would pay for an energy contract. The

blue line, sorry the red line shows the extent to which that rose in June. So if you were facing, if you were looking at the market in June going to the market for forward contract you can see a very significant increase and of course that's come back to the blue line since but still is up there and interestingly enough we've still got, out in 2010 and between now and 2010 some, historically I think, quite high prices for purchasing contracts and the good news I think is that hopefully that's sending a signal that we do need additional capacity in this market and hopefully that will come in a timely way.

I think also when you… we've given some thought to what really is behind these forward prices, clearly as I said the risk of drought, I think there's a question about the time –v- investment response, I'll talk about investment shortly, but there is some I think uncertainty in the market about whether new investment will be delivered in a timely way and clearly this sort of issue about carbon trading and the uncertainty that that might have on energy prices and on the market is adding some uncertainty and risk as well and that's being factored into the forward price. So the message I think out of electricity is for some time yet, with all of those fundamentals happening, we are looking at prices being, certainly trending upwards and potentially being volatile at periods of time.

So what's happening in reliability? Well this is a chart which affectively looks at the new generation requirements going forward. The green line there, the green upward sloping line shows maximum forecast demand and as you would expect that's growing and this is, for those of you at the back, this is tracking on the left hand side there from 2006/7 through until 2011/12 and the red line, the perpendicular red line there, parallel red line is what capacity needs to be or is required in the market if you in-build reliability requirements and then each of the histograms basically show what capacity is either in the market or planned and the bottom dark area is install capacity, the purplish area is committed capacity and where the red line goes above the purple line that's clearly when we need more generation capacity. And you can see there, where… on a committed basis we're pretty right until 2009/2010 but certainly beyond 2010 we are needing more capacity in the market, so hopefully those higher prices in those out years is reflective of that.

There was a debate about investment, and I'll come back at the end of my speech in terms of whether we've had sufficient investment in the sector and whether regulation has crowded out investment occurring. We've looked at investment historically in the sector and I think it's a fairly good story when you look at the empirical evidence. In transmission we've had, and this is a slide which shows investment in transmission and distribution again across the national market from 2003/4 until 07/08 and you can see there an upward trend. The bottom dark area is investment occurring in transmission electricity networks and the pink in distribution. In transmission we've seen about an 80% increase in transmission investment since 2003/4 and as an indication Powerlink the transmission grid owner in Queensland will have going forward, as a result of our recent price determination, potential to spend $4 billion on their grid in 5 years. That involves a number of contingent projects, all of which won't happen but if they did you'll have $4 billion of investment affectively doubling their asset base in one regulatory determination period.

Distribution, we've had $3 billion roughly and that's over the period… and that's forecast to rise by about 30% over the 5 years which is a 30% increase over the 5 years to the current time. And in terms of gas around $2.5 billion in new pipelines since the year 2000 and gas distribution, new investment is running at around $250 million per annum. So when you look at the evidence the picture certainly is that, at least in the network sector, we haven't had an unduly constrained investment picture.

Meanwhile what's been happening with reliability? We haven't got complete data sets going all the way back to mid 90s on reliability except for in Victoria. Victoria… this basically, you can measure reliability in a number of ways, this just takes a snap shot on one measure which talks

about total outages for distribution in terms of minutes of outage per year and the red line, the pinkish line on the bottom in Victoria and you can see there a fairly stable picture in terms of distribution reliability. Interestingly enough the blue line at the top is Queensland so what you've got is a picture which says that in South Australia and in Victoria we've got lower levels of reliability than is occurring in New South Wales and Queensland but that's on this measure so one needn't draw sort of great conclusions… sorry… sorry higher, I meant higher. I wondered why I was getting some puzzled looks… offending the Victorians. But on a national basis which is that black line you can see if you drew a trend line through that's fairly stable. So look that's a pretty good picture when you've got demands certainly at distribution level occurring at some quite high levels.

Can I talk a bit now about gas. Now we've got a similar picture in gas and this slide here shows over the last couple of years that we've had some very significant increases in gas prices as well. The orange bar charts on the left are 2005 and the purple 2006 for the states, the Australian states and you can see there an increase between 2005/2006 in most states but the big increase of course has occurred in 2007 where in Western Australia in particular, but even here in Victoria we've seen some quite significant increases in gas prices.

The Western Australian situation is quite interesting where prices have risen from 2006 at a level of about $2.50 per gigajule to around currently $7.00 and this is due not only historically low price, $2.50 is a pretty low price when you look around the world, but also rising production costs and of course the Western Australian gas producer is Northwest Shelf being the primary producer having the opportunity to export LNG with the oil price going up we're currently looking at export parity pricing so it's now attractive for WA gas producers to export unless we get a match of domestic prices. The good news is that this sends a single, these rising prices for the development of very small gas reserves which may not have the economies of scale for LNG and already this year we are seeing a number of announcements by the likes of Apache, Santos, Arc Energy and Alcoa to name a few in Western Australia with a view to developing smaller reserves. But in WA which has really had this very low gas price, this new capacity will take some time to deliver so the scenario there is that prices are unlikely to ease for probably, until about 2011/2012.

When we look at the eastern seaboard, we have had some pressures on keeping prices down, one of which is the coal sea methane story, particularly in Queensland and of course we've got no LNG export capability at this point in time. So certainly we've had some ceilings on prices here but Victorian prices reached $5.00 this winter and that's certainly up.

The coal seam methane story in Queensland is quite amazing. When I was back there working 10 years ago the likes of Chevron and these guys were pulling out of town because they couldn't make coal seam methane commercial and what we've seen over the last 10 years is this massive growth spurt where now coal seam is responsible for 10% of eastern gas consumption and growing fairly strongly and reserves being found and developed all the time.

Can I turn quickly now to another trend in the industry and that is consolidation and I did mention that we have had a history in recent times of I guess putting humpty dumpty together again because when some of the reforms that Michael here in Victoria were doing many years ago the government's basically desegregated the sector, we've basically seen since then through various processes significant consolidation and the main area has been in networks but there's also been ownership changes in retail and generation and some vertical integration between the two. I won't go through the recent saga on this but clearly some very major players are consolidating. I guess the issue is where's all this leading to? Well currently we affectively have three main players in the network sector and this is following the Alinta acquisition which is currently going through by Babcock & Brown and Singapore, the parent of Singapore Power and we'll end up with affectively

3 main players, SP Oznet, [Chung Cong] and the APA group. Babcock & Brown certainly are having some transmission and distribution assets in gas and also Hastings which isn't on the slide. So we've got a very significant consolidation in terms of the network sector. When you look at the retail sector a similar story, and I've just looked at Victoria and South Australia here because we have got public ownership still in New South Wales but we are seeing clearly major players in the form of True Origin and AGL in the retail space and a growing trend towards balancing their retail loads with generation and you can see there in both slides we've matched the electricity, and this is just roughly, the electricity share, with gas and electricity you can see True Energy and Origin AGL being the major players and then the next slide showing how that's matching up with generation capacity and you can see True Energy there in the orange, the two shades of orange, in Victoria with generation load or generation capacity roughly matching load and a similar picture for AGL and that's a trend I think that's been brought about by the fact that these guys need to manage their risk.

Can I do an advert towards the end, one of the things that AER has recently done is to release a state of the market report which is this production here. There is a whole lot of data out on energy produced by varying sources, state retailers, ourselves, industry. We've worked on it for about 18 months to pull all this together in one document called the 'State of Energy Market Report', it's free, you don't get many things free from the regulator, so get your copy. If you give us a call or get it, give us a yell on the web we'll get you a hard copy. You can actually download it from our website.

Just wrapping up, I just want to get back to some closing comments on the AER. These slides by the way, the slide pack will be available to you. This effectively just makes the point that by the end of 2008 or 2009 all of those blue squares will be filled in and they mean that we'll have our full suite of responsibilities so we've been working towards a smooth transition from state based regulation to ourselves and this is a very complex slide that many of you might have seen in other places but it shows the bow wave of work that we'll have in terms of resets. One of the things that is a core activity of us as a regulator is to set revenue determinations for business for 5 years and we've got a bow wave of those happening around 2009/2010 with assets of about $18 billion facing regulation so we've been gearing up to that bow wave. Roughly we'll have about $48 billion of network assets under regulation across 47 businesses.

Just one take on the policy environment. There has been a lot of debate in the last 3 or 4 years about regulation in the energy sector. Are we over regulated, should we have light handed regulation, has regulation crowded our investment, what should be the form of regulation going forward, and that's been a very… I think one of the great attributes of the Australian reform model has been that we really do have quite intensive albeit some would say prolonged debate about some of these things before we come to a policy conclusion. So that debates happen over the last couple of years and with this new legislation that will be passed by all parliaments at the end of this year hopefully, does present the policy response by state governments to that debate.

So what are the main aspects of that legislation? Well we've now got a more prescriptive framework. The regulator has got, in some respects lest discretion and has to follow more prescriptive process which, I guess from a business point of view they could argue that provides them with more certainty about the regulatory environment. We've got a lot more alignment between electricity and gas, we've got a light handed regulation option for gas and we've got tighter timelines. So I guess going forward we'll be working within that framework and hopefully a lot of the policy uncertainty that we had over the last couple of years will be taken away.

So what are our conclusions? Well we think we're well prepared for the transition to national regulation. We've got a market which looks like being a bit more volatile going into the future,

certainly rising wholesale prices in electricity and gas, we expect there'll be an extension of the consolidation trend and hopefully with good quality regulation you'll see strong investment in the sector and steady reliability across the networks.

I'll leave it there, thank you.

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