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**Review of Energy Market Frameworks in light of Climate Change Policies
Response to 2nd Interim Report**

The Foundation's and the Centre's involvement

The Foundation and the Centre are partners in a project entitled:

Attaining optimal carbon abatement rules through consumer advocacy: Learning from European Experience on the Regulation of Energy

The project is aimed at producing advocacy research papers, as well as research support for consumer group advocacy, in relation to the various current consultation processes relating to the development and implementation of climate change policies for the Australian energy markets.

While the project involves consultation with consumer groups any opinions, conclusions and recommendations in this paper and future papers are to be attributed only to the project team members and not to any organisation consulted. Moreover, project team members recognise that certain organisations have special knowledge, particularly in the field of the needs and experiences of classes of consumers in Australia, especially those on fixed incomes and otherwise disadvantaged. Such organisations may well have their own developed views on appropriate solutions for the protection and advancement of the interests of particular classes of consumers.

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This paper was written for the project by Allan Asher.

Review of Energy Market Frameworks in light of Climate Change Policies

Response to 2nd Interim Report

Overview

This is a response to the AEMC's 2nd interim report of the review of energy market frameworks and their interaction with climate change policies. As I have said previously this is a very timely initiative at what the AEMC rightly terms "a profound and potentially rapid period of change". It is noteworthy that the UK Government has recently issued a call for evidence along similar lines.¹

In my response to the first report I said that the broad conclusion that the existing energy market framework is resilient was probably right in the sense that a fundamental overhaul was probably unnecessary, but that there were risks the scale of the challenge facing the Australian energy market frameworks has been understated. I continue to believe that. However I also believe that the focus on incremental change and on low-level mechanisms which sets the tone of the second consultation does not represent an appropriate response to these challenges, and the document lacks ambition.

Based on recent experience in other markets, particularly the UK, the interaction of new energy and environmental policies and the market framework has been a cause of much friction within the system and there are many barriers to realising efficient market settings that actively support government policy objectives. Several of these flow from the interaction of industry and market structure, and the AEMC has failed to address this issue. A further failing is that there is a undue emphasis on reliability issues and maintaining operational integrity, but a lack of regard to pricing impacts on consumers who will pay the additional costs arising from the proposals. The environmental drivers on policy are seen as a threat rather than an opportunity. This comes out most clearly in the emphasis on network expansion and supply-side solutions, rather than on integrated resource planning or on increasing the role of the demand-side. Those expecting a top-down critique will be disappointed with what is essentially bottom-up tinkering, and in a number of important instances change options are dismissed simply because they are radical and could involve significant change without any cost-benefit assessment being carried out.

Above all the AEMC has not adequately considered the potential for competition to be undermined by the concentration of market power that may occur as a result of climate change policies. It is clear that change will increase the potential for strategic behaviour in the NEM, further eroding effective competition in the energy market. Recent regulatory consultations in both Britain and the NZ are bringing focus to these issues, but based on this document it would seem this debate in Australia has yet to begin.

A particular theme under consideration in these and other markets is the need to introduce greater transparency between the different activities of integrated players, especially between production/generation and supply and the transfer pricing adopted between them.

¹ <http://www.decc.gov.uk/en/content/cms/consultations/electricsecure/electricsecure.aspx>

Consideration should, as I have previously noted, extend to ownership integration into LNG provision and its storage and access to it.

In this context I agree with AEMC's analysis that there is scope for transitory market power to emerge and be exercised as a result of the CPRS and RET. The commission should consider the role that development of robust consumer protection frameworks can have in mitigating the impacts on consumers of the exercise of such market power. Unfortunately there is no discussion of these matters in either of the consultations.

A further deficiency is the rose –tinted view of security of supply. I struggle to understand the bullish conclusion that current approaches over the longer-term are robust, when urgently required remedial steps are contemplated to ensure short-term reliability of the system

However it is clear that AEMC is not interested in critiques without solutions at this advanced stage; rather it wants specific proposals for change to the existing market and regulatory frameworks. I have therefore taken the themes set out in my first response and tried to add some tangible examples based on my experience where beneficial change could occur, together with the appropriate delivery mechanism.

The task is complicated by the fact that the structure of the two documents is rather different. I have therefore taken the structure of the second document as the template for comment, which is set out below. I have not addressed those chapters that set out specific recommendations for Western Australia and Northern Territory, but have focussed on more general themes and the NEM.

I should be very happy to discuss my comments and these issues further.

Comments on Specific Matters

Connecting remote generation

A number of consumer representatives have suggested the viability of a different approach to the “investment hubs” approach outlined by the AEMC involving greater central planning of connection assets. They have argued this may be a superior approach to minimising consumer risk (which the AEMC acknowledges). A further point I would make is that the proposed model relates only to planning of remote generation, and not network interactions arising from RET and CPRS more generally. The brief discussion of the alternative options at p22 of the report is cursory to address wider impacts and issues.

Related to this in a number of places the consultation simply states that increasing the scope for intervention by the system operator is undesirable and rejected on that basis alone, which takes the discussion into a cul-de-sac. The reality is that proliferation of wind and the wind-down of coal will raise many operational challenges for the AEMO (who will need to collaborate much more closely with the TNSPs) that go far beyond more orderly arrangements for connecting remote generation, and the current planning framework based around the Statement of Opportunities is outmoded.

In this context an interesting recent paper from British regulator Ofgem² as part of the RPI-X@20 review addresses similar issues, and it seems to illustrate well the tension between the competing objectives for effective network regulation as they adapt to climate change policies. Ofgem developed three alternative potential models as representing points on a spectrum:

- a central Government-led model. In this model decisions would be made centrally about the future role of energy networks to a plan of how energy networks would facilitate delivery of agreed environmental, security of supply and social objectives or targets. Networks would be responsible for delivering on this plan, and Ofgem would be responsible for ensuring that it was delivered as efficiently as possible, including that the networks’ obligations were financeable;
- a joint industry-led model. A joint industry body would make decisions about the future role of energy networks and map out a plan which would be endorsed by Ofgem and the sponsoring government department DECC. The body could incorporate electricity network companies only, or it could include all players in the energy sector as well as possibly consumer representatives. As with the central government-led model, there could be variations in the level of detail at which the decisions were made by the joint industry body and those that were left for the individual networks; and
- an adapted regulatory framework. Decision-making on what the networks needed to do would continue to rest with the networks and Ofgem, with individual networks responsible for delivering on their plans. At a high level such a framework is seen as likely to involve: a focus on outputs and their efficient delivery; a change in mindset and culture by both

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<http://www.ofgem.gov.uk/Networks/rpix20/forum/Documents1/rpix20%20who%20decides%20what%20energy%20networks%20of%20the%20future%20look%20like%20FINAL.pdf>

networks and Ofgem in putting together and assessing business plans; a focus on alternative ways of delivering outputs, an assessment of the value of different options and of keeping options open; encouraging potentially riskier investments with enhanced returns; learning and adaptation by networks and Ofgem in response to lessons learned; and innovation, particularly trialling.

Ofgem set out an assessment of the models against criteria of desired outcomes, including delivering a sustainable energy sector and value for money for consumers. It said that the central government model was potentially the one that could put a plan for meeting environmental targets in place most quickly, but the adapted regulatory framework was potentially most likely to ensure value for money for existing and future consumers over time. It is this latter option that seems most closely aligned to the AEMC's preferred approach, but there are still important differences and the commission needs to tap into this debate.

It is also interesting to note in this context that the British regulator is also contemplating allowing network companies greater flexibility to undertake strategic investment (e.g. where there is not an identified beneficiary). I commented on this in my previous response at A6 (p14). Perhaps I should have added that the regulator is also proposing to allow differential returns in areas depending on how useful speculative investment turns out to be and criteria that might be applied to applying such a regulatory test. This is an issue that the AEMC needs to address given the acknowledged risk of customer exposure to costs of stranded investments. Under the current proposals it is not clear how to define how much surplus capacity might be appropriate to be built and how the costs would be allocated, and it appears that these issues are to be left with AEMO/AER. The bottom line is simply that the consumer would underwrite any additional unrecovered costs, which is an unattractive—and unnecessary—default option.

I therefore propose that:

- the AEMC should further investigate a more joined-up planning role that looks across the system (not just remote connection sites) and explicitly takes on board gas interactions; and
- it should consider adoption of a similar mechanism that is being developed by Ofgem for screening the regulated return on strategic but speculative investments by network companies with a view to developing appropriate risk sharing mechanisms that treat network companies and customers equitably.

More efficient provision and utilisation of the network

The second report notes “The recommendations reflect our finding that there is a high likelihood of congestion, and its associated economic costs, increasing as a result of the expanded RET and, to a lesser extent, CPRS” and that “congestion is likely to be material”. Both of these statements are important acknowledgements of the potential significant consumer detriment under the current market settings.

I support the proposal to introduce transmission use of system (TUoS) charges for generators as the current approach to locational price signalling through regional wholesale prices is, as the AEMC recognises, “comparatively weak”. However the AEMC puts forward the

proposition that the total cost for G-TUoS would be zero—some generators would pay and some would get a benefit. The argument for this approach is that it retains the current balance of end users continuing to pay for the net cost of the transmission network, which is not a rationale.

The failure to allocate transmission use of system costs to generators has been a major flaw in the NEM. Consequently I don't agree with the AEMC recommendation that the scheme should be revenue neutral for generators. It is hard to see how generators can value access if they do not pay for it. This arrangement if applied with changes set out in the previous chapter would skew the market against new entrants given they will see new charges applied to generators in remote areas, and which will also distort retiral decisions by existing operators. Facing a real cost for the service they derive for use of the common network is likely to ensure generators pressure transmission providers to ensure that the operation and development of the transmission system is more efficient, and it will also incentivise them to engage with the AER. In turn this incentive will help deliver the “decentralised decision-making by individual market participants” the AEMC seeks.

It is surprising that the AEMC does not reference any need to revisit the security standards and supporting operating policies—or at least their application—as a means of mitigating increased constraint costs. Section 3.4 is weak, in effect simply noting that the review of the delivery of network support and control services is to be delayed. It is clear that the AEMC needs to join-up its thinking and assessment with on-going work by the Reliability Panel before it delivers its recommendation to the MCE.

However, even if the costs could be mitigated by more flexible application of operational standards, there is a strong case that a congestion pricing mechanism should be applied—though it does not follow that such a mechanism should be “localized and time-limited”. AEMC refers to risks of inefficient dispatch (which of course leads to higher consumer costs) arising from the current rules, and it can facilitate anti-competitive behaviour. The commission also accepts that these challenges are set to increase. For these reasons an enduring mechanism is needed. Locational constraint charges are being actively considered in Britain³ without moving to complex nodal pricing solutions, and this is precisely because the costs have gone through the roof and appear to be set to soar further. It is clear there are a range of options that should be considered without the shift to full nodal pricing.

I propose that to deal with the need to establish a longer-term locational signal G-TUoS should be set to be a proportion of the total cost of TUoS reflecting the total costs incurred in a region referenced back to a number of generation connection points to the shared network. Such an approach would be consistent with the concepts propounded by the AEMC for grouping remote generation for a common connection to the shared network elsewhere in the document. The preferred G-TUoS arrangement should not, as the AEMC suggests, be grandfathered.

Other specific mechanisms that should be considered by the AEMC to tackle short-term costs, especially those arising from increased transmission congestion costs, are:

³ <http://www.nationalgrid.com/NR/rdonlyres/B9BD2D45-195A-479F-A369-B5BE6A3D22E9/34447/GBECM18conclusionsdocumentvolume1.pdf>

- enabling the AEMO flexibility within the rules to vary local operating standards and to allocate transmission rights on a non-firm basis to accommodate increased intermittent plant; and
- targeting of intra-regional constraint costs back to generators that cause them on an enduring basis.

Inter-regional transmission charging

I support the introduction of a load export charge (LEC) possibly from 1 July 2011, as well as the underlying intention to “remove existing implicit cross-subsidies between consumers in different regions”. The mechanism should also foster more efficient transmission investment. I do not see why the costs should only be allocated to load customers in importing regions, especially when exporting generators are arguably the main beneficiaries. It is not clear why the proposed mechanism does not include thermal loss effects on the networks.

I also believe the proposed approach should be a transitional step towards a single NEM-wide transmission pricing methodology, which must be the only end-point if the goal is (as it should be) to achieve coordinated planning of efficient transmission investment across the different regions. As a minimum AEMC should consider how to ensure that a LEC arrangement assuming it is implemented does not inhibit transition to single NEM transmission pricing over the medium term.

There are obvious parallels here with the development of the inter-TSO compensation mechanism in Europe, which has evolved since a pilot arrangement was implemented in 2002. A similar arrangement was rolled out to interconnected South Eastern European states from 2005. The current arrangements are voluntary, and the European Commission is presently considering how to progress to implementation of a binding guideline.⁴ One of the lessons from this work-stream is that vested interests can mean it takes a considerable amount of time to design and implement an appropriate enduring mechanism. It also demonstrates that there are always more than a simple, single choice.

I propose that:

- the recommended LEC approach should be adapted so that costs are recovered equitably from both importing loads and exporting generators;
- the arrangement should be extended to take on board the effect of network losses; and
- the AEMC should scrutinize European plans for the development of an enduring ITC mechanism.

Regulated retail prices

I note that the AEMC does not address potential competitive distortions arising from some retailers operating on an inter-regional basis and who will see regulatory protection arising from the proposed measures in some states and territories but not others. The risks will be most manifest in states with full retail competition, and where some participants will not enjoy safeguards afforded their competitors.

⁴ http://www.entsoe.eu/_library/publications/etsa/etsaresponsetoitcconsultation_2009319111928.pdf

As a guiding principle large integrated players are much more adept and adaptable at managing the complexity and increased cash-flow demands that arise from new environmental duties and imposts.

From the customer's perspective it will be essential that the retailer of last resort arrangements are effective and if invoked kept under close review.

Generation capacity in the short-term

The AEMC's recognition of the risks in this area is to be welcomed, though I still think there is a clear supply-side bias in the consultation and its thinking. The current framework was not designed to address current problems of the scale which already exist, even before consideration of the likely effects of RET and CPRS.

The short-notice reserve contracting proposal appears sensible but given the risks highlighted by AEMC at section 6.2.2 it is not obvious why the related work of the Reliability Panel is not being accelerated. However, as AEMC notes, if the economic costs of intervention are to be contained longer-term options available to the Reserve Trader need to be considered alongside short notice reserve contracting.

In this context, as I noted in my response on the first consultation, based on experience in other markets, including Britain, the role of the reserve trader could be extended beyond 9 months with longer-term option contracts entered into with generators on a targeted basis. In this regard the introduction of new balancing services (including the new supplemental standing reserve service which itself was replaced by a short-term operating reserve product following a review in 2005) of reserve requirements do warrant scrutiny because the consultation's discussion of standing reserve contracting largely disregards this experience.

Further in Britain the risks of imprudent contracting, which clearly concern the AEMC, are dealt with through the system operator incentive scheme, and while the ownership and governance of the AEMO is different some form of similar incentivisation arrangement should be examined. (It is also relevant in the context of constraints management discussed in chapter 2 as well.) The system operator also operates within the umbrella of detailed procurement guidelines—essentially a mix of commercial and operating policies—which addresses many of the concerns flagged by the AEMC at section 6.3.3.

On the basis that an expanded portfolio of short notice and standing reserve contracting can (and should) be designed, the prolonged reserve target approach should be rejected.

AEMC has given wide-ranging consideration to reserve contracting with generators; but its consideration of the role of the demand-side as an alternative to securing short-term access to generation capacity is inadequate. It is clearly right to rationalise demand-side reporting (section 6.3.5), to address inconsistencies between NSPs in their technical assessment of distributed generation (section 6.3.6), and to incentivise unremunerated load shedding (section 6.4). However active load shedding and other demand-side responses to peak demand are worthy of further consideration as low-cost options to guarantee reliability and restrain costs at times of peak demand. Given the Australian regulators' interest in this issue in the past, the current document's omission of them is perplexing.

I propose that:

- the AEMC should examine the regulatory framework and incentives applied to the role of the system operator in Britain, especially the mechanisms adopted to address risks of imprudent contracting;
- it should consider the operating parameters and tendering rules adopted in that market for efficient procurement of different types of standing reserves; and
- it should assess further practical options for active load shedding and other demand-side responses to peak demand as low-cost options to guarantee reliability and restrain costs at times of peak demand, and should consider the placing of a formal requirement on the AEMO to consider demand-side options in discharging its obligations.

Investment in capacity to meet reliability standards

It is difficult to reconcile some of the statements in the consultation as to how the long-term reliability framework “provides effective signals to promote efficient levels of investment in transmission capacity, generation capacity and demand response” when the short-term framework it also describes is clearly dysfunctional. At the same time AEMC seems to be arguing that into the future interventions by the SO need to be minimised for the market to function properly, but that new mechanisms are needed in the short-term to ensure short-term reliability, which is contradictory.

The chapter provides a dry description of how the market and transmission arrangements are intended to work separately and in tandem, but does not provide any assessment of what investment has occurred under the current market settings, what new entry is happening and how the contracts markets are working. Many respondents have argued that the NEM is highly volatile, risky and costly, and the expectation of CPRS and RET is aggravating the position. In addition, the report concludes that the NEM has an “active and flexible capacity market” but then notes a scarcity of contracts, and a number of market participants told you that they are concerned about the high cost and limited availability of electricity supply contracts in the current market.

Empirically there is extensive evidence that the NEM is increasingly concentrated, with fewer and dominant players, and with the creation of vertically integrated businesses. Consumer representatives have made a strong case that the exercise of market power by generators in recent times cannot be considered as transient and that there have been substantial economic damage caused as a result of this exercise of market power.

I propose that the AEMC should extend its examination of the market design and investment by developing its assessment of:

- the liquidity of contracts markets (exchange-traded, bi-lateral and over-the counter). This should include an analysis of the number of market participants and volumes of trades by region;
- the regional vertical integration of production and supply and its impact on inter-regional trading;
- the extent of new entry and exits (together with the reasoning behind both);
- the volatility of energy prices and the extent to which contract markets are seen as providing effective risk management;

- demand-side participation in the wholesale market and why it has been so slow to materialize (i.e. the barriers to it).

Until these issues have been examined thoroughly, the commission's conclusions in this chapter can only be seen as partial or provisional. I am sure many will argue that it has failed to meet its terms of reference.

Convergence of gas and electricity markets

It is not clear why AEMC sees the electricity market design as “not creating incentives or obligations that prevent gas from being put to its most valuable use” (but then cites a number of situations where this might occur). Nor is it obvious why the commission concludes “[the impact of climate policies] does not necessarily point to greater convergence in market designs”, although its consultants' analyses point to potentially significantly increased gas-fired generation and wide-ranging operational interactions between the two markets.

Above all it is very surprising that the document does not reference the likely role of LNG and its possible impact on the electricity flexibility market and the need to develop effective regulatory reporting and scrutiny in this area.

I propose the AEMC should consider:

- an overarching duty for the AEMO to co-optimize between gas and electricity;
- alignment of locational signals between the two markets; and
- the possible impact of growth in LNG on both the electricity and gas markets.

System operation with intermittent generation

The focus of this chapter is almost exclusively on technical parameters, and the main message is that given the examples of change that have occurred future changes should be manageable. It also notes a number of important work-streams that are on-going and which have yet to report.

As the report notes “Recent events in Germany and the UK, where effective power operation appears to have been hampered by a lack of transparency and control over intermittent generation, illustrate the value of better information and control systems”. The recommendations do not, however, address how these might be tackled, and it is clear from several responses to the commission's consultations that similar issues are rife in the Australian system.

I propose that the AEMC should:

- keep the operational record under review and consider how greater transparency can be introduced into the AEMO's reporting on behalf of the market; and
- reconsider its recommendations in the light of the various on-going assessments it references.

Distribution networks

Many of the remarks about more central planning of networks set out above in response to chapter 2 are pertinent here.

Similarly other of the papers out of Britain on the RPI-X@20 review work-stream and provisional thinking from the regulator in Britain on the on-going distribution price control review are relevant. Other recent papers from RPI-X@20 that address associated issues concern:

- what are networks to deliver in an increasingly carbon-constrained sector;⁵ and
- the role of innovation in networks.⁶

A skim through of the documentation suggests that the thinking summarised in chapter 10 of the consultation is somewhat thin and needs considerable further amplification.

I note however that the AEMC has picked up the innovation funding incentive proposed in Britain, which is based on a thorough cost-benefit assessment that shows consumer benefit, and this mechanism clearly warrants further consideration by the commission.

⁵ <http://www.ofgem.gov.uk/NETWORKS/RPIX20/FORUM/Documents1/RPI-X20%20Working%20Paper%20-%20What%20should%20a%20future%20energy%20regulatory%20framework%20deliver%20-%20Final.pdf>

⁶ <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=28&refer=Networks/rpix20/forum>