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Dr John Tamblyn Chairman Australian Energy Market Commission **AEMC Submissions** PO Box A2449 SYDNEY SOUTH NSW 1235

submissions@aemc.gov.au

Dear Dr Tamblyn

Review of Energy Market Frameworks in light of Climate Change Policies – Scoping Paper

The Clean Energy Council thanks the Australian Energy Market Commission (AEMC) for the opportunity comment on the Scoping Paper for the Review of Energy Market Frameworks in light of Climate Change Policies (the Paper).

The Clean Energy Council (the Council) is the peak body representing Australia's clean energy industry. The Council is a member-based industry association representing businesses ready to innovate, invest and act to meet Australia's energy needs safely and reliably while lowering greenhouse emissions. Our member organisations cover a quarter of Australia's total electricity production and are involved in renewable energy, gas, energy efficiency, and distributed generation.

As Nicholas Stern said, "Climate change risks are a consequence of the greatest example of market failure we have ever seen". Australia is one of the world's biggest per capita greenhouse gas emitters. As a result, we require substantial reform of our energy markets and the potential for seismic shifts in our industrial base, household and consumer activity and the design and operation of our cities. The Garnaut Report highlighted that Australia will be one of the countries most affected by climate change, but also has the opportunity to adapt and is unique in its wealth and breadth of clean energy resources. Australia can and should become a clean technology superpower supported with the right policy framework to release this potential.

It is most timely for the Ministerial Council on Energy (MCE) to call for this review as the Federal Government is moving quickly to implement a suite of policies that are designed to drive this change. The keystone to the new policy will be the Carbon Pollution Reduction Scheme, but many other measures will be included to move Australia's economy quickly and securely to a low carbon future. These complementary measures include:

- a stronger renewable energy target;
- nationally consistent feed-in tariffs for grid connected solar PV;
- nationally consistent and coordinated energy efficiency targets and regulations;

 a strong Clean Energy Innovation Fund to support Research Development and Demonstration.

The current market objectives for both the gas and electricity markets are written to promote efficient investment in and efficient and use of, electricity /natural gas services for the long term interests of consumers. The Council is most disappointed that the Terms of Reference of this Review do not extend to a review of the market objectives. The Council strongly believes that the Market Objectives should include specific reference to the long term environmental impacts of climate change. We believe that the lack of this reference has hindered the development of the markets. The Council will be writing separately to the MCE on this matter.

The Council has reviewed the list of basic issues raised in the Paper and believes that most of the key issues have been identified. One area of possible impact that is not addressed in the list of issues is the impact of the climate change policies may have on customer demand patterns and the ability for the market managers to accurately predict customer demands both in the short and the longer term. This could manifest itself either as large changes if certain industries were to close as a result of the policies, or more subtly as demand patters change as a result of the price increase or through government policies to encourage aggressive energy efficiency. For example, a significant push to replace existing storage water heaters with gas boosted solar heaters may have a significant impact on off-peak demand and may highlight the issues of the inflexibility of some of the large coal fired generators.

The Council is also concerned that the approach taken in identifying these issues seems to be based around the premise of "how to manage the problems" rather than "how to best to exploit the opportunities". This negative approach may colour the debate around the review and could lead to suboptimal outcomes for the long term benefit of the market, developers and consumers.

Further comments on the specific questions are included in the attached table. As can be seen in the table, the key issues with the market mechanisms that need to be investigated primarily relate to the networks and how they are planned, built and operated.

If you are seeking clarification on any of the issues raised in this paper or answers to any questions that arise, please do not hesitate to contact me or the Council's General Manager Policy, Mr Rob Jackson on ph. (03) 9929 4105 or email rjackson@cleanenergycouncil.org.au.

Yours sincerely

Matthew Warren CEO

Attachment

AEMC Review of Energy Market Frameworks in light of Climate Change Policies: Scoping Paper Questions

IS	SUE		QUESTION	COMMENTS	MATERIALITY
1. Conve gas a electr marke	ergence of nd icity ets	1.	How capable are the existing gas markets of handling the consequences of a large increase in the number of gas-fired power stations and their changing fuel requirements?	The gas markets will need to adapt to both the increased demand for gas and the varied usage patterns for gas fired generation. This has the potential to place stress on the management of gas dispatch and consequently on line-pack. In the current gas market, gas fired generation is usually the first plant to be load shed when trying to manage an emergency within the gas market	М

	2.	What areas of difference between gas and electricity markets might be cause for concern and how material might the impacts of such differences be?	The markets work to differing dispatch timeframes which may present issues in attempting to coordinate the efficient dispatch of generation. The variable load likely to come from increased use of OCGT may lead to increased uplift payments in the gas market, with consequential impacts on consumers and	Μ
			the retail markets.	
			The emergency management in the gas markets, in which gas fired power stations are the first shed to limit gas usage, may impact on the electricity markets, particularly if the increased usage of gas generation leads to more problems managing gas dispatch.	
			The differing regulatory regime for network access may lead to locational distortions as new entrants minimise their connection costs without consideration of the overall cost to the community	
2. Generation capacity in the short term	3.	What are the practical constraints limiting investment responses by the market?	 In the short term the constraints limiting investment are: The delays in seeing the details of the CPRS and the RET legislation. The current global economic conditions The lead times to obtain and install equipment. 	Μ
	4.	How material are these constraints, and are they transitional or enduring?	These should be transitory.	L

		5.	How material is the likelihood of a need for large scale intervention by system operators? How likely is it that this will be ineffective or inefficient?	If Government moves quickly to finalise its promised legislation, there is only a small likelihood of the need for intervention	L
				Large scale intervention is likely to be ineffective and inefficient as it will create market uncertainty and a reluctance for businesses to invest, rather waiting for the intervention to occur. It is likely that that it will bring about the very market failure which it sought to avoid.	
3.	Investing to meet reliability standards with increased use of renewables	6.	How material is the risk of a reduction in reliability if there is a major increase in the level and proportion of intermittent generation?	NEMMCO has recently implemented the new AWEFS wind forecasting system and early next year will be using this to assist in semi-scheduling wind farms. These are expected to mitigate the risks to reliability from increasing penetration of wind generation into the NEM.	Μ
				Further, we are seeing a greater geographic diversity in wind farm development in the eastern states which is likely to smooth out the impacts of wind variability.	
				There may be more issues in the smaller grids such as the SWIS, however a wide mix of technologies is again likely to mitigate this somewhat.	
				The increased penetration of zero fuel cost renewable such as wind is highlighting the issue of managing the traditionally inflexible coal fired generation, particularly in small or lightly connected grids such as WA and SA.	
		7.	What responses are likely to be most efficient in maintaining reliability?	There may be a need to review the ancillary services markets to ensure that the correct signals are delivered to manage all plant flexibly and economically.	М

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4.	Operating the system with increased intermittent generation	8.	How material are the challenges to system operations following a major increase in intermittent generation?	The market consists of highly variable and generally inflexible loads, large controllable, but still quite inflexible thermal generators, highly flexible and usually controllable hydro generators, flexible controllable OCGT gas generators and variable wind and other renewable generators. There will always be a challenge to managing such as system, particularly in such a long thin network as the NEM. To single out a single technology as the cause of the challenges likely to lead to ineffective and inefficient outcomes. As indicated in Question 7 above, there may need to be a review of the ancillary services markets to ensure they meet the needs of the future. This may include the introduction of a market for inertia and different time frames for the FCAS markets.	L
		9.	Are the existing tools available to system operators sufficient, and if not, why?	The NEM has recently introduced the AWEFS system and will commence semi-dispatch of wind farms in March 2009. These should provide good tools to the system operators. Similar tools may be beneficial in the SWIS	L
		10	. How material is the risk of large scale intervention by system operators and why might such actions be ineffective or inefficient?	As indicated in question 5 above any large scale intervention in the market is likely to be highly inefficient and drive participants to expect the intervention and act to maximize their position with the intervention rather than allowing market forces to deliver the economic outcome.	L
		11	. How material are the risks associated with the behaviour of existing generators, and why?	This is not seen as a material risk. Any changes to the rules with respect to ancillary services are likely to encourage economic and flexible behaviour.	L

5.	Connecting new generators to energy networks	12.	. How material are the risks of decision-making being "skewed" because of differences in connection regimes between gas and electricity, and why?	Differing connection regimes between gas and electricity will influence the locational decision made for some generators, in particular gas fired generation as businesses look to minimize their own costs without concern for the total cost to society. However, these decisions are also influenced by the access conditions that are associated with the connection. Guaranteed access to the network compared to the so called open access will influence decisions.	Н
		13.	. How large is the coordination problem for new connections? How material are the inefficiencies from continuing with an approach based on bilateral negotiation?	This is the biggest issue that the market will face with the new generation that will be needed as a result of the climate change policies. Multi-lateral arrangements where a group of proposed generators in a general location can jointly negotiate for an optimal connection are theatrical possibility under the current rules; in practice this is very difficult, and the more usual bi-lateral agreement often lead to sub- optimal networks. Other countries have adopted other approaches such as encourages government-underwritten network connections to hubs in renewable energy rich areas.	Н

	14. Are the rules for allocating costs and risks for new connections a barrier to entry, and why?	 The current rules do discourage new generation being built in remote areas even when the energy resources in the area are significant. The current regulatory test for new networks publically funded investment is unlikely to deliver optimal network designs. A review of the payment and access arrangements for new networks is recommended. 	L
6. Augmenting networks and managing congestion	15. How material are the potential increases in the costs of managing congestion, and why?	Congestion management costs are currently very low. Increasing generation away from the traditional generation regions is likely to lead to increased congestion within the existing network which is likely to increase these costs. An inability of generators to manage the level of access they have to the local reference node creates an unmanageable investment risk which is becoming a barrier to investment.	Н
	16. How material are the risks associated with continuing with an "open access" regime in the NEM?	The present "open access" regime allows generators to connect anywhere without paying any deep connection costs, but as a result there is no guarantee to the capacity in the network and the generator may be constrained off by limits in the network. This provides a weak locational signal, but provides no incentives for businesses to upgrade the network. This is likely to lead to sub-optimal generation location and network augmentations.	М
	17. How material are the risks of contractual congestion in gas networks and how might they be managed?	This is not seen as a material issue.	L

	18. How material is the risk of inefficient investment in the shared network, and why?	There is always a risk of stranded assets in the transmission network. It is likely that the climate change policies are likely to lead to the retirement of existing generation and the consequential stranded network assets. The current rules are unlikely to over invest in the shared network as few new network investments are likely to pass the regulatory test. The inefficiencies are more likely to come from the delayed construction of shared network.	Μ
	19. How material is the risk of changing loss factors year-on-year?	The inability to have certainty over loss factors at the time of investment is seen as material. Some generators have experienced very large reductions in loss factor (as a result of the actions of others), which have seen the value of their investments substantially eroded. A mechanism to provide greater stability in loss factors over the life of an investment would remove a currently unmanageable investment risk from the market – lowering barriers to investment and thereby enhancing the market objective.	Н
7. Retailing	20. How material is the risk of an efficient retailer not being able to recover its costs, and why?	The current retail price caps that apply in a number of states place large and generally unmanageable risks on retailers wanting to operate in those states. There is a risk to retailers that additional gas generation could lead to more unexpected (and not easily hedged) uplift events in the gas markets.	М
	21. What factors will influence the availability and pricing of contracts in the short term?	The current uncertainty on the details of the CPRS, the RET and other policies are limiting the liquidity in the contract markets.	L

		22. How material are the risks of unnecessarily disruptive market exit, and why?	A more volatile electricity market is likely to lead to higher levels of prudential requirements. Sudden calls to increase this cover could lead to problems for some retailers. However current changes to the re-allocation arrangements have the potential to significantly reduce the retailer's exposure to market prices.	L
8.	Financing new energy investments	23. What factors will affect the level of private investment required in response to climate change policies?	The issues paper seems to indicate support for the inclusion of a capacity mechanism as a means of driving further private investment. There is no indication that capacity markets are a panacea to any perceived issues. The energy only market is the NEM has delivered significant new private investment in a wide range of generation technologies across most regions. Regulatory/Policy uncertainty and the current global financial situation are likely to be the biggest risks in the short term. Once the marketplace has more certainty over the details of the climate change policies the liquidity and depth of the forward financial markets will increase to drive further investment.	Μ
		24. What adjustments to market frameworks, if any, would be desirable to ensure this investment is forthcoming at least cost?	The National Transmission Planner should be well placed to improve the current for transmission planning regimes that will be needed to support generation development. A review of the cost recovery of transmission investment and the accompanying access certainty following participant-funded shared network upgrades is required.	Н

9. Forecasting Customer Demand 24. Are the existing tools available to system operators sufficient to forecast consumer demand as it changes in response to climate change policy? Customer demand patterns will change as customers respond to climate change policies. This could manifest itself either as large changes if certain industries were to close as a result of the policies, or more subtly as demand patters change as a result of the price increase or through government policies to encourage aggressive energy efficiency. For example, a significant push to replace existing storage water heaters with gas boosted solar heaters may have a significant impact on off peak demand and may highlight the issues of the inflexibility of some of the large coal fired generators.	Μ
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