The Australian Gas Light Company
ABN 95 052 167 405

North Sydney
AGL Centre, 111 Pacific Highway
North Sydney NSW 2060
Locked Bag 944
North Sydney NSW 2059

Telephone 02 9921 2585
Facsimile 02 9957 3871

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NCP Inquiry
Productivity Commission
PO Box 80
Belconnen ACT 2616

By email: ncp@pc.gov.au

Productivity Commission Review of National Competition Policy Reforms – Discussion Draft

The Australian Gas Light Company (AGL) makes this supplementary submission to further the debate over whether there is a case for special merger rules for the electricity sector. In particular AGL wishes to comment on the submission of the Australian Competition and Consumer Commission (ACCC) dated 10 December 2004 and its Appendix B (Dr Darryl Biggar: "The exercise of Market Power in the NEM: An analysis of Price-Spike events in the NEM January-June 2003").

AGL does not consider that the paper by Dr Biggar provides a reliable basis for any regulatory or policy response.

Firstly, a study of behaviour in the spot electricity market can not be used to draw conclusions about generator market power. Generators' revenue is made up of sales at prices set in both the spot market and under hedge contracts, options and other derivatives. To quote from the National Generators Forum submission to this review (submission number DR 220 dated 17 December 2004):

> *Generator Incentives to influence spot market outcomes are diminished once they have hedged their expected output. To undertake an assessment of the NEM on the basis of spot price outcomes ignores the real economic outcomes and focuses only on the residual energy not traded in the hedge market.*

Similarly, Justice French noted (AGL v ACCC (No3) [2003] FCA 1525 at paragraph 382):

> *There is...a degree of unreality involved in separating out and identifying separate markets for the sale of electricity and the provision of derivative contracts. ... [D]erivative contracts ought to be regarded as an integral part of the pricing and payment arrangements between generators and retailers in relation to the underlying product, which is electrical energy, and which they deal with 'as if' it had been sold from supplier to retailer.*

In fact the behaviour described in Dr Biggar's paper is open to the interpretation that generators do not have market power. The behaviour in question is characterised as being designed to achieve a higher pool price than would otherwise be expected. A higher pool price is only of benefit, however, to generators that have at least part of their revenue coming from sales through the spot market. That is, they are less than fully hedged. But if the generators concerned were truly able to exercise market power it would be in their interests to do so through the hedge market, by holding out for inflated prices in long term hedge contracts for their full expected output. Such a strategy would lock in the higher prices for a certain volume over an extended period of time and would be preferable to relying on the uncertainty of opportunities that may arise in the spot market. That is, they would be fully hedged.

Secondly, it is an established principle of competition law that a firm can only possess a requisite degree of market power where it can increase prices during a sustained period. The attachment to this letter details two key flaws in Dr Biggar's analysis which arise from a lack of recognition of this principle. In summary the flaws are:

1. The analysis has been undertaken on the basis of discrete and limited trading intervals, thereby failing to distinguish the significant from the insignificant; and

2. The analysis has not taken account of competitive entry and expansion. That is, the analysis fails to identify the significant competitive effects of generation sector entry and expansion which historically have taken place within a period of just a few months.

Contrary to the conclusions drawn by Dr Biggar, his work may (subject to further factual investigation) suggest that the appropriate response is for adjustments to be made to the regulatory environment governing the National Electricity Market's regional boundaries and interconnection investment.

If you have any queries about this supplementary submission, please contact my office on (02) 9921 2585.

Yours sincerely

Dr Robert Wiles
General Manager, Regulation and Policy

Attachment A

Dr. Biggar's basic thesis[1] is as follows:

- NEM trading statistics suggest that Victorian baseload generators regularly withhold capacity during peak price periods (defined as periods in which the spot price exceeds $80/MWh). In many such periods, NSW baseload generators withdraw an even higher quantity of capacity;

- Such conduct by Victorian baseload generators may be explained either by their playing a secondary role in the exercise of market power by NSW generators, or by an attempt to relieve constraints on exports to high price regions (thereby "importing" the higher price) and to induce constraints on imports from lower-priced regions;

- Based on a limited empirical examination Dr Biggar concludes that (at times) the Victorian baseload generators do engage in bidding to relieve constraints and "import" high prices from adjacent regions; and

- If actions taken by Victorian baseload generators reduce the incidence and intensity of interconnector constraints, neither the frequency of such constraints nor the degree of price separation between regions during these periods, provides reliable information in defining the geographic dimension of relevant markets within the electricity industry.

Alleged market power arising from bidding to "import" high prices from adjacent regions

Dr. Biggar suggests that a firm has market power when it is "able to increase profit by withdrawing output below the output that it would sell in a competitive market, thereby increasing the price." This definition of market power is a crucial step towards his conclusion that several Victorian and NSW generators possess market power.

However, it is an established principle of competition law that a firm possesses the requisite degree of market power for regulatory action only where it can increase prices during a sustained period. Frontier Economics' paper[2] which, along with Dr Biggar's paper, the ACCC provides to the Productivity Commission states by analogy that a corner store may have a monopoly during a snowstorm but that is hardly the form of monopoly that is amenable to regulatory action. This accords with economic theory, which recognises that a purely competitive market is a theoretical concept, and that actual markets – at the highest – only ever attain a state of workable competition.

Analysis of discrete, isolated trading periods and market outcomes can provide important market signals and lessons for all market participants leading each of them to play their part in the efficient working of the market as a whole in the medium and long term. Regulatory decision-making, on the other hand, is, both in its implementation and effects, necessarily conceived and conducted across a longer temporal span. Before any regulatory decisions can be made based on such theories, it is important that occasional observations are distinguished from persistent outcomes. However, Dr. Biggar's conclusions that market power exist are drawn from a small proportion of trading intervals within the year under observation. The very limited significance of the alleged conduct examined by

[1] See "The Exercise of Market Power in the NEM"

[2] "Assessing electricity generation mergers in the NEM", September 2004, page 41, Appendix A to the ACCC Supplementary Submission. See also page 5 of the Report, where Frontier Economics cite Kaysen and Truner's definition of market power as being the ability "to behave persistently in a manner different from the behaviour that a competitive market would enforce on a firm facing otherwise similar cost and demand conditions." Kaysen, C. and Turner, D. F., *Antitrust Policy* (Harvard University Press, Cambridge: 1959). Frontier Economics later elaborate on French J's decision in AGL v ACCC (at pp. 22-25 of Appendix A) and observe that the judgement "stands for the idea that the existence of market power involves consideration of the long term and is not a matter of short term influence on price, even if the influence leads to fairly extreme price increases". Frontier Economics note that "In this respect, the decision is consistent with previous cases." citing *Re Queensland Cooperative Milling Association Ltd and Defiance Holdings Ltd* (1976) 25 FLR 169; 1 ATPR 40-012; *Re Tooth & Co Ltd and Tooheys Ltd* (1979) 2 ATPR 40-113 and *Queensland Wire Industries Pty Ltd v The Broken Hill Pt Ltd Co and Anor* (1989) 167 CLR 177.

Dr Biggar's paper is illustrated by examining the impact of the price spikes of concern on the average annual prices in Victoria. If the price had only been $80 in the relevant trading intervals in 2003, the demand weighted average price in Victoria in 2003 would have been only 28c or approximately 1% lower than the average demand weighted average price in Victoria in 2003 in fact was. The effect on the annual average price is even less if measured on a time weighted basis.

Dr. Biggar's paper identifies 23 occasions – parts of single days in a single year – in which prices in Victoria exceeded $80 and the flows over the interconnectors were consistent with Victorian generators engaging in a withholding of capacity. However, of those 23 occasions, only 8 meet the other necessary condition of his thesis – that the interconnectors were close to being, but were not, constrained. This is a necessary condition because, if the interconnector is constrained, there is price separation and the generators cannot "import" a high price from an adjacent region. If, however, the interconnectors are far from being constrained, a rational generator who is allegedly withholding capacity would choose to dispatch more generation capacity to earn the high prices available, but not sufficient capacity to constrain the interconnector.

Of the 8 occasions on which both the necessary conditions of Dr. Biggar's thesis hold, and generators are in fact withholding capacity, the reasons provided by generators suggest that the theory does apply. However, in other cases, it would be necessary to conduct an investigation to analyse whether, in fact, generators were withdrawing capacity, and if so, whether it was for the reason postulated in Dr Biggar's thesis.

As noted above, before such a theory could be accepted as a basis for making ACCC merger decisions or Commission regulatory design recommendations, it would be necessary to demonstrate that the practice was having a significant effect on profits and costs.

In particular, Dr. Biggar's theory does not assist a regulatory decision-maker faced with the decision as to whether the observations are of sufficient concern to warrant market intervention. To do so, the analysis would need to distinguish the significant from the insignificant. Having undertaken that task in AGL v ACCC, Justice French summarised the position as follows (at paragraph 493):

> *I am prepared to accept that there are periods of high demand where a generator may opportunistically bid to increase the spot price. I do not accept that such inter-temporal market power reflects more than an intermittent phenomenon nor does it reflect a longrun phenomenon having regard to the possibilities of new entry through additional generation capacity and the upgrade of interconnections between regions. It does not amount to an ongoing ability to price without constraint from competition. [Emphasis added]*

The second significant flaw relates to this latter observation by Justice French. That is, the theory does not recognise that the NEM is a contestable market. Summer 2001 in Victoria illustrates this contestability. Until Summer 2001, there had been significant excess generation capacity within Victoria, with demand growth inadequate to bring about a full and efficient utilisation of capacity. However, in Summer 2001 demand growth was finally sufficient, and, in combination with unseasonably high weather related-demand, resulted in a significant increase in prices.

The market response was virtually immediate. By the following year, significant capacity augmentations of between 731 and 781 MW had been committed in Victoria by both new and existing market participants (entry and expansion). That entry and expansion consisted of the following generation plant: Duke (Bairnsdale), Edison Mission Energy (Valley Peakers), Origin (Geelong), AGL (Somerton), Pacific Hydro (Codrington and Portland). In AGL v ACCC, the competitive effects of entry were the subject of extensive examination by Justice French who concluded (at paragraph 448):

> *On 20 February 2001, demand across Victoria, New South Wales and South Australia reached approximately 20,000 MW and prices reached $3,681.22/MWh in Victoria. Forward hedge prices rose in response to the increase in prices. Announcements were made of new generation plants by various entities. They started in March 2001. Following the announcements the rise in forward contract prices stopped. Hedge prices for 2002 and beyond began to fall and the hedge price for each subsequent year was lower than its predecessor. So much was indicative, in my opinion, of a competitive market at work.*

The competitive effects of entry are absent from Dr. Biggar's theory and constitute a second flaw of focusing too narrowly on very short time periods in making policy recommendations.

If a significant issue does exist, what is the appropriate regulatory response?

The introduction to Dr. Biggar's paper suggests, on a preliminary basis, that his findings have implications for merger regulation.

However, the alleged ability of Victorian generators to withhold capacity and "import" a high price to their NEM region is in fact a highly peculiar form of alleged anti-competitive conduct. No analogous conduct could be described in any other industry. This suggests that the policy concern may be in the design of the market rules rather than the market ownership structure. Specifically, the alleged conduct is only possible because

1. the NEM has been divided into regions by regulatory decision and

2. there is limited inter-regional interconnection and the construction of, and returns generated from, interconnection are set pursuant to the regulatory decisions and required processes rather than by market forces.

This suggests that the primary regulatory response may be to adjust the design of the NEM rather than prohibit market-driven merger activity.

The above matters are recognised by the participating State, Territory and Commonwealth governments in the current Exposure Drafts for the new National Electricity Law and new National Electricity Rules as matters which are in need of regulatory overhaul.