Public Competition Assessment
14 April 2005

China Light & Power's proposed acquisition of the Australian non-regulated energy assets of Singapore Power

On 30 March 2005 the Australian Competition and Consumer Commission ('the ACCC') announced that it would not intervene in the proposed acquisition of Singapore Power's non-regulated Australian energy assets by China Light & Power ('CLP').

The ACCC made its decision on the basis of the information provided by the parties and information arising from its market inquiries.

Timing of the ACCC's consideration

On 3 March 2005, the ACCC commenced market inquiries in relation to the proposed acquisition.

On 11 March 2005, the ACCC released a Statement of Issues outlining where it believed the most significant competition issues arose.

On 30 March 2005, the ACCC announced that it would not intervene in the proposed acquisition.

The transaction

The transaction is being effected through a share sale agreement of all of the shares in the merchant energy business of SPI Australia Group, a wholly-owned subsidiary of Singapore Power. The acquirer is CLP Power Australia Energy Holdings Pty Limited, a wholly-owned subsidiary of CLP Holdings Limited (also referred to as 'CLP'). The consideration for the acquisition is A$2,128 million.

The ACCC notes that Singapore Power and related companies had given undertakings to the ACCC under section 87B of the *Trade Practices Act 1974* ('the Act') on 24 July 2004 in connection with Singapore Power's acquisition of TXU's Australian energy assets. These undertakings contained structural obligations.

Market inquiries

The ACCC conducted market inquiries through most of March 2005. The results of the market inquiries were taken into consideration by the ACCC in reaching its decision.

The matter was listed on the ACCC's mergers public register with the contact details of the relevant ACCC officers for comments. The Statement of Issues, published on the website on 11 March 2005, assisted in focussing the market inquiry discussions on the competition issues of most interest to the ACCC.

Overall, market inquiries did not reveal a high degree of concern about the proposed acquisition.

The ACCC also hired expert economic consultants to assess how the acquisition would be likely to affect competition in the relevant markets.

Singapore Power's non-regulated energy assets

Singapore Power will retain its regulated Australian assets, which are predominantly power transmission and distribution businesses. The non-regulated energy assets/contracts that Singapore Power is selling/assigning are:

- Singapore Power's gas and electricity retail business (the TXU retail business). TXU has a customer base of approximately 1.1 million in Victoria, New South Wales, South Australia and Queensland, although the retail customers are predominantly located in Victoria. TXU has a large number of small Victorian gas and electricity retail customers, having inherited a position of incumbency.

- The long-term lease over the Torrens Island Power Station in South Australia north of Adelaide. The long-term lease allows Singapore Power to operate the eight gas-fired generating units which have a combined registered capacity of 1280MW. The power station relies on gas delivered from the Cooper Basin or from the SEAGas pipeline running from Victoria.   The Torrens Island Power Station is the largest in South Australia based on capacity and the second largest based on average output.

- The Master Hedge Agreement (and associated Fuel Supply Agreement) with Ecogen Energy Pty Ltd ('Ecogen'). In 1999 TXU (which was subsequently acquired by Singapore Power) entered into a 20 year hedge agreement with Ecogen which enables TXU to call upon Ecogen to supply power to it at agreed prices. The agreement is effectively a take-or-pay agreement and the ACCC understands that it secures at least 95% of Ecogen's forecast revenue. Ecogen's assets (the 'Ecogen portfolio') include the gas-fired Newport Power Station located 6 km south-west of Melbourne and the gas-fired Jeeralang Power Station located near Morwell, Victoria. The registered capacities of these stations are 500MW and 432MW respectively. The Ecogen portfolio has approximately 11% of the installed capacity in Victoria, but on average it generates 2 to 3% of Victoria's total electricity output. This reflects the mid-merit and peaking nature of the Ecogen portfolio. For the purposes of its competition assessment under section 50 of the Act, the ACCC considered that the proposed acquisition will give CLP dispatch control over the Ecogen portfolio.

- TXU's Western Underground Gas Storage facility ('WUGS') located at Iona near Port Campbell. WUGS was completed in 1999 and has 10.7Pj of storage capacity and 260Tj per day of processing capacity. The role of WUGS is to store gas during off-peak Summer periods and provide gas into Victoria during Winter peak periods. The facility is also connected to the SEAGas pipeline which carries gas into South Australia.

- A 33% interest in the SEAGas pipeline, which connects the natural gas fields in the Otway Basin, Victoria, to South Australia. The other partners are International Power and Origin Energy. The ACCC understands that after the acquisition CLP will inherit a position as a foundation shipper on the SEAGas pipeline.

China Light & Power

CLP is an existing player in the Australian energy sector. CLP's main existing assets in Australia are:

- Yallourn power station, a brown coal fuelled generator in the Latrobe valley, Victoria, with a capacity of 1450 MW. Yallourn has approximately 17% of Victoria's installed capacity and on average supplies approximately 22% of Victoria's electricity output. Yallourn is the third largest generator in Victoria, after Loy Yang A and Hazelwood.

- AusPower, the electricity retail business of Yallourn Energy. AusPower focuses exclusively on retailing electricity to industrial and commercial users, and sells electricity across the National Electricity Market ('NEM'), but predominantly in Victoria and NSW.

Relevant Markets

The ACCC considered that several markets were relevant to its analysis of the proposed acquisition. The most relevant markets were:

- The market for the provision of electricity retailing services in Victoria. There are approximately 2.2 million electricity customers in Victoria, 95% of which are categorised as small customers (i.e. those that use less than 160MWh p.a.). These customers are residential and small businesses and are generally referred to as the 'mass market.' TXU and AusPower both participate in electricity retailing in Victoria, however only TXU competes to supply small customers.

- The market for the supply of wholesale electricity in Victoria, and also in Victoria and South Australia combined. Within this market trade occurs through the NEM. The average output of Victorian generators is approximately 6000 MW and the average output of South Australian generators is approximately 1200 MW.

Several issues arose in relation to these market definitions.

In relation to the first market, the ACCC considered that it is possible that that there may be a broader Eastern seaboard market for electricity retailing. The ACCC also considered the possibility of gas retailing and electricity retailing being in the same market, and the possibility that there could be separate markets for large commercial/industrial users and small users. However, in the context of this matter, the ACCC did not consider that it was necessary to reach a conclusive view on these issues because it was unlikely to affect the outcome of the competition assessment.

In relation to the second market, the ACCC notes that it differs from the broader geographic market definition adopted by Justice French in the AGL-Loy Yang decision.[1] The ACCC also notes that the Australian Courts have long recognised that market definition under the Act is 'purposive' and depends on the particular matter under consideration.[2] While noting the market definition adopted by Justice French in the AGL-Loy Yang decision, the ACCC is of the opinion, after taking into account the views of market participants and an assessment of

[1] *Australian Gas Light Company v Australia Competition and Consumer Commission (No. 3)* [2003] FCA 1525.
[2] See for example *Singapore Airlines v Taprobane Tours WA Pty Ltd* (1991) 33 FCR 158.

the roles of the interconnectors (which transmit electricity between States or regions in the NEM), that the market referred to above better addresses the relevant competition issues that arose in relation to this proposed acquisition.

The nature of the proposed transaction between CLP and Singapore Power and the relevant competition issues raised by this acquisition differ from the issues raised in the AGL – Loy Yang case. The ACCC believes that for the purpose of analysing this acquisition, a more limited geographic market than that considered by Justice French in the AGL – Loy Yang base is appropriate.

In this context, the ACCC also took into consideration the views of market participants regarding the effect of the interconnectors on the market. The ACCC noted that interconnectors can, at limited times, be constrained and therefore cannot make electricity available to the Victorian and/or Victoria/SA regions in excess of their capacity regardless of the price differential between the regions in the NEM.

The ACCC also took into consideration the existence of times where even if the interconnectors are not constrained, the fact that they are able to become constrained can have a significant effect on industry behaviour. Use of data solely relating to the frequency and severity of interconnector constraints for the purposes of geographic market definition may not give adequate recognition to the ability of players in one region to exercise market power up to the point where inter-regional flows of electricity through the interconnectors threaten to become a competitive constraint. In recognising this possibility, the ACCC is in effect recognising the possibility of incorrectly interpreting data on the basis of what is often referred to as the "Cellophane Fallacy." [3]

In summary, the ACCC believes that a geographic market based on Victoria and on Victoria and SA combined, taking into account the ability of this region to 'import' electricity from other parts of the NEM subject to interconnector capacity constraints, is a more accurate representation of the geographic constraints imposed on the merged entity in the context of this acquisition compared to consideration of a NEM-wide market.

Nature of the Competition Issues

The ACCC considered that the most significant competition issue to arise in relation to this proposed acquisition related to horizontal aggregation of ownership and control of generation capacity. Before turning to the horizontal aggregation in generation the other competition issues that arose are discussed.

Horizontal aggregation in retailing

The proposed acquisition will result in CLP having a large share of the retail load in Victoria. Ultimately, the ACCC considered it unlikely that this aspect of the acquisition would raise section 50 issues.

The ACCC considers that a significant barrier to competing for retail customers is the possibility of limited access to competitively priced hedge contracts or access to a natural hedge through control of generation. The ACCC therefore considers that the level of

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[3] In light of the United States Supreme Court decision in *United States v E I du Pont de Nemours & Co* 351 US 377 (1956).

competition at the generation functional level and the extent of vertical integration between generators and retailers are likely to be important factors in determining the level of competition at the retail functional level.

The ACCC considers that barriers to entry are higher for retailing to small customers than for large industrial and commercial customers, particularly given the significant economies of scale and sunk costs involved in overcoming positions of incumbency in retailing for small customers. Further, the ACCC noted that the extent of competition for small customers may be affected by the fact that the Victorian and South Australian Governments have chosen to regulate retail prices until at least the end of 2007 for customers who have not chosen to take up a market-based contract.

An important factor in the ACCC's consideration of the horizontal aggregation in retailing was that CLP's existing retail operation, AusPower, supplies only industrial and commercial users. Therefore, the proposed acquisition does not result in any aggregation in relation to retailing for small customers.

Vertical integration between electricity retailing and generation

The acquisition results in a significant degree of integration between electricity retailing and electricity generation.

The ACCC considers that integration between retailing and generation may increase barriers to entry/expansion for stand-alone retailers or generators by potentially reducing the scope for them to secure competitively priced hedge contracts. The ACCC expects there to be a reduction in liquidity in the hedge markets arising from this acquisition, however, after taking into account the views of market participants, the ACCC found that there was not enough evidence that this acquisition would give rise to a substantial lessening of competition on these grounds.

As a general proposition, the ACCC considers that generation-retail integration is unlikely to raise substantial competition concerns where there is, and there is likely to remain, a high degree of competition at both the generation and the retail level.

Other vertical issues

The ACCC noted that the acquisition does not significantly change the nature of the vertical relationship between the Torrens Island Power Stations and the SEAGas pipeline. Similarly, it does not significantly change the nature of the vertical relationship between WUGS and TXU's gas retail business or the nature of the vertical relationships between the gas assets and the gas-fired generators that will be held by CLP.

Horizontal aggregation in generation

As stated above, the ACCC considered horizontal aggregation of ownership and control of generation capacity to be the most significant competition issue raised by this acquisition. The ACCC considered that, after the acquisition, CLP will effectively control dispatch from the following key generators:

- Torrens Island Power Station in South Australia (1280MW – fuel: gas);

- Yallourn in Victoria (1450MW – fuel: brown coal); and

- the Ecogen portfolio in Victoria (932MW – fuel: gas).

The ACCC investigated in detail the possibility that the horizontal aggregation in generation will increase CLP's market power or CLP's incentive to exercise market power in the relevant markets. The ACCC's detailed economic analysis and the analysis by external consultants showed that the acquisition would potentially result in an increased ability to profitably manipulate the wholesale spot price to a significant extent at certain times. However, additional factors taken into consideration by the ACCC led the ACCC to the conclusion that there was unlikely to be sufficient evidence of a substantial lessening of competition in breach of section 50. The additional factors that the ACCC took into consideration included:

- The existence of planned peaking capacity for Victoria that is likely to be commissioned in the near future. In particular, the ACCC took into consideration the new Basslink interconnector, due to be commissioned in April 2006, which should provide approximately 600 MW of peaking capacity to Victoria from Tasmania. In addition, Snowy Hydro Limited is expecting to complete a 300 MW gas-fired peaking plant in Laverton in December 2005. These two developments together will add an additional 900 MW of peaking capacity to the Victorian market in the near future. The ACCC considers that this new peaking capacity will assist in constraining CLP, particularly since this new peaking capacity will roughly match the size of CLP's peaking capacity after the acquisition.

- The ACCC also recognised that CLP will have a significant retail position. The ACCC considered the possibility that, at least in the short term, the retail position may lessen CLP's incentive to raise wholesale spot prices by utilising market power. To this end, the ACCC investigated in detail the hedge positions of Singapore Power and CLP and the nature of the incentives that CLP will have after the acquisition. The ACCC took into consideration the percentage of CLP's retail load that would be on fixed price tariffs and the length of time for which the tariffs would be fixed. The ACCC took into consideration how CLP's incentives could change over time, particularly given that hedge positions can be changed.

- The supply-side responses of other generators when bidding in the NEM.

- The constraining effect of the interconnectors between Victoria and South Australia and between Victoria and New South Wales.

In relation to the last point, the ACCC investigated capacity constraints that exist on the interconnectors themselves and capacity constraints on transmission lines within NEM regions that may prevent full utilisation of the interconnectors. The ACCC also took into account the ability for out-flows on interconnectors to heighten opportunities and incentives for price manipulation. For example, if there is average demand in Victoria, but high demand and prices in New South Wales, the interconnectors connecting Snowy-NSW to Victoria, by drawing electricity from Victoria, can create situations where Victorian generators have a heightened incentive to manipulate prices in Victoria.

In summary, although the ACCC considered the horizontal aggregation in generation to be the most significant competition issue to arise from the proposed acquisition, the ACCC concluded that there was not sufficient evidence of a substantial lessening of competition in breach of section 50 of the Act.

During the course of investigations, the prospect of CLP providing a court-enforceable undertaking to the ACCC pursuant to section 87B of the Act was discussed. Given the ACCC's finding that there was unlikely to be a substantial lessening of competition in any of the relevant markets the ACCC did not pursue this course of action.

Application of the s50(3) merger factors

The ACCC considered the proposed acquisition in the context of the merger factors set out in section 50(3) of the Act. The most relevant factors from section 50(3) are discussed below.

The height of barriers to entry

The ACCC considers that barriers to entry for Victorian or South Australia base-load generators are very significant due to many factors including the very high sunk costs combined with economies of scale, environmental and regulatory barriers, transmission constraints, potential strategic responses by incumbents and significant time-lags in building a new plant. The ACCC considers that barriers to entry are lower for gas-fired peaking plants, but still significant. The ACCC took into consideration recent investment in gas-fired generators as an indicator of the level of barriers to entry.

In retailing, the ACCC considers that barriers to new entrants competing for small customers are moderate to high due to strong economies of scale and the sunk costs involved in overcoming competitors' positions of incumbency. Barriers to expansion by incumbent electricity retailers were considered to be lower.

In relation to retailing electricity to large industrial and commercial customers, the ACCC considers that barriers to entry are lower than for small customers.

The ACCC considers that an important factor influencing the height of barriers to entry for electricity retailing is the availability of competitively priced hedge contracts, which in turn is influenced by the level of competition in generation and the extent of vertical integration between generators and retailers.

The possibility of the acquisition raising barriers to entry was an important consideration when the ACCC considered the vertical integration between generation and retailing. The ACCC considers that vertical integration may increase barriers to entry and expansion for stand-alone retailers or generators, through reducing the scope for them to secure competitively priced hedge contracts. In the event that retail load closely matched generation output for the vertically integrated market participants, there would be little surplus to be traded in the contract markets, potentially reducing the threat of new entry.

The level of concentration in the market

The level of concentration in the market was a relevant factor throughout the ACCC's assessment. Precise market share information in retailing is confidential. In generation, the market share of CLP after the acquisition based on capacity (excluding the effect of interconnectors) will be approximately 28% for Victoria and approximately 30.5% for South Australia and Victoria combined.

The ACCC also considered market share information based on output at various price levels, taking into account flows from interconnectors. Based on recent data, CLP is likely to have a Victorian market share of approximately 30% during periods of peak price in Victoria, but during periods of lower price this figure falls to approximately 23%.

The ACCC is very mindful that the same conclusions that might be drawn from concentration measures in other industries cannot be drawn from concentration measures in electricity generation. There are several reasons for this, including:

- electricity cannot be economically stored;
- supply and demand must be matched at all times to ensure the stability of the system;
- demand is highly inelastic, particularly in the short term;
- withholding capacity can lead to extremely large changes in the price. For example, a few additional hours at the very high prices that sometimes occur in the NEM can significantly raise average annual wholesale prices;
- the interaction between the forward contract market and the wholesale spot market can affect incentives;
- electricity is homogenous and is only differentiated by the time and location that it is produced or consumed;
- transmission network congestion and losses limit the extent to which electricity can be transported; and
- generators typically have a fixed maximum capacity for the short to medium term.

While there are some other markets that have some of these characteristics, there are none that have all of them. It is the combination of all of these factors that is important and makes the electricity industry unique.

Likelihood of sustainable price increases

Ultimately, much of the ACCC's analysis focussed on the possibility of price increases, a factor which has been discussed throughout this document. The ACCC took into consideration the relationships between prices in the forward and spot markets and also noted that brief price-spikes can have a very significant effect on annual average prices.

The nature and extent of vertical integration

The nature and extent of vertical integration was discussed in the section of this document outlining the competition issues.

Conclusion

The ACCC decided that the proposed acquisition was not likely to have the effect of substantially lessening competition in any of the relevant markets in breach of section 50 of the Act.

The ACCC is acutely aware of increasing consolidation in the energy sector. The ACCC remains firmly committed to close scrutiny of all acquisitions that involve significant vertical integration in energy supply chains or horizontal aggregation at any level.