THE EFFECTIVENESS OF THE TRADE PRACTICES ACT TO GUIDE MERGERS IN THE AUSTRALIAN ELECTRICITY MARKET

PREPARED FOR

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EXECUTIVE SUMMARY

As part of its Market Structures work program, the Energy Reform Implementation Group (ERIG) has commissioned Acacia CRE Pty Ltd (Acacia CRE) to provide advice on structural issues that may be affecting the ongoing competitiveness and efficiency of the Australian energy market, particularly the effectiveness of the *Trade Practices Act 1974* (*TPA*).

This report examines the effectiveness of the *TPA* to guide mergers in the Australian electricity market and the arguments for other measures to address the potential anti-competitive consequences of electricity industry mergers, including with reference to vertical mergers.

The *TPA*, as it currently applies, is effective. The provisions of section 50 address all in-principle sources of potential lessening of competition, across all types of horizontal and vertical electricity industry mergers.

Where they exist, the practical limitations of the *TPA* lie with the difficulties faced when trying to gather and consolidate sufficient evidence for a timely assessment of *prima facie* anti-competitive mergers. These limitations are not unique to the electricity industry and cannot be addressed by changes to the *TPA*. Proposed restrictions on generation/transmission mergers mean the limitations will be avoided in that important class of potential vertical mergers.

Vertical integration and horizontal aggregation

- Among other factors, the advantages of coordinating the use of sunk assets to meet uncertain demand means electricity supply naturally tends towards vertical integration. The firms created when countries restructured and disaggregated their electricity industries in the last twenty years have had strong incentives to pursue horizontal and vertical re-aggregation.
- The efficiency consequences of vertical integration are ambiguous in principle, and depend on the trade-off between gains to productive efficiency in the integrated firm and the (potential) allocative inefficiencies created by vertical foreclosure (the exclusion that results when unintegrated downstream rivals are foreclosed from the input supplies controlled by the firm that integrates).
- Recent theoretical and empirical economic assessments have emphasised that vertical integration is unlikely to be anti-competitive unless it somehow creates or amplifies horizontal aggregation and inefficiency. Anti-competitive vertical mergers are more likely where, other factors constant:
  - one of the firms has market power in its original level of production; and/or
  - the other level of production is not contestable or is not effectively competitive; and/or
  - the firm with market power is price regulated (and the merger creates an opportunity for regulatory evasion).
- Competition regulators assessing vertical mergers have to gauge the likelihood of vertical foreclosure. Anti-competitive mergers arise if, *inter alia*, the integrated firm:
  - restricts access to up- or downstream services, raising rivals' costs;
  - promotes less competitive conduct by rivals; or
  - thins associated services markets, increasing costs for rivals and new entrants.

Anti-competitive potential of electricity industry mergers

- There are strong incentives in practice for vertical mergers between firms in contestable sectors (generators and retailers) to form "gentailers". Benefits to the firm include: obtaining a physical hedge against pool market price risk; acquiring physical assets as collateral for financiers and market operators; and capturing economies of scale and scope.

- Theory and empirical evidence suggest gentailers can substantially lessen competition, where horizontal aggregation is excessive, by, *inter alia*:
  - thinning hedge markets, encouraging exercise of generator market power;
  - encouraging anti-competitive "bandwagon" vertical integration; and
  - directly exercising market power.
- Anti-competitive consequences of vertical mergers *between* contestable segments are best avoided by ensuring adequate competition horizontally, that is, *within* the contestable segments.
- Mergers between contestable and regulated segments of the electricity industry are not necessarily anti-competitive, but have features that increase the potential for anti-competitive outcomes compared with generator/retailer vertical mergers.
- Horizontal mergers between firms in contestable segments of electricity markets have the same potential anti-competitive effects as in other industries; however generators may possess and exercise an ability to generate congestion rents (pushing wholesale prices to value of lost load (VoLL) caps), despite only holding relatively small market shares.
- This means assessment of market power in electricity mergers may have to be undertaken even when market shares are within the "safe haven" thresholds generally applied to other industries.
- However, being able opportunistically to raise prices does not, of itself, constitute market power in any *TPA*-relevant sense. That requires the firm to be able to induce and sustain pool prices high enough over long periods to raise prices on average above long-run costs.
- The Australian Competition and Consumer Commission (ACCC) therefore needs to be able to distinguish in practice between the "scarcity rents" needed for an efficient investment signal in energy-only markets, and the excess profits arising from abuse of market power in the *TPA* sense of the term.

Adequacy of the *TPA*

- Australian electricity industry reform in the 1990s created the potential for merger activity that would raise competition concerns. Such activity has tested the ability of the *TPA* efficiently to influence the evolution of the industry and of the ACCC to assess the impact of the mergers, particularly in light of the Loy Yang Decision (see below).
- The *TPA*, as it currently applies, is effective, provided the ACCC is able to gather evidence to substantiate its *a priori* assessments of market power and the effects of mergers on competition. The provisions of section 50 allow the ACCC to address all in-principle sources of lessening of competition, across all types of horizontal and vertical electricity industry mergers.
- The practical limitations of the *TPA* lie with the difficulties faced by the ACCC (and, to a lesser extent, affected third parties) when trying to gather and consolidate sufficient evidence for a timely assessment of *prima facie* anti-competitive mergers.
- The ACCC has argued for special rules beyond the current provisions of the *TPA*, relying, *inter alia*, on the potential for competition concerns to arise through mechanisms that are not easily observable or verifiable. This argument has been applied mainly in the case of vertical integration between contestable and "natural" monopoly businesses.

The Loy Yang Decision

- The ACCC was unable to convince the Federal Court of its claims about the anti-competitive effects of the AGL acquisition of a stake in Loy Yang Power (LYP) in 2003.
  - the court did not reject the *possibility* of substantial lessening of competition as argued by the ACCC, only the *likelihood* based on the evidence presented to support the claims; and

  - although the findings of fact are likely to influence the direction and extent of merger activity in the electricity industry, they are not necessarily binding on the ACCC in future merger assessments.

- The Loy Yang Decision may have subsequently encouraged more prospective merger activity than would otherwise have occurred, but it should not ultimately limit the ACCC's ability to prevent potentially anti-competitive mergers in the electricity industry.

Electricity-specific rules

- The Parer Review recommended changes to the ACCC's Merger Guidelines to recognise that generators can have market power when market concentration is below the "safe haven" threshold, but electricity-specific concentration thresholds will not bind the ACCC and are unlikely to provide a useful guide to industry.
- In February 2006, the Council of Australian Governments (COAG) asked the Ministerial Council on Energy to develop specific recommendations to maintain the separation of competitive generation and monopoly transmission activities in the national electricity market.
  - A blanket prohibition on generation/transmission mergers means the ACCC would not have to substantiate an *a priori* expectation of a substantial lessening of competition in such cases.
  - Cross-ownership restrictions do not allow formal or informal assessment of the public benefits of restricted mergers or changes in market structure in response to price signals. Implementing cross-ownership restrictions reveals COAG's in-principle preference for maintaining vertical separation, but without specific evidence of the net benefits of the resulting industry structure.
- Given the likelihood of ongoing electricity industry mergers and the practical difficulties of substantiating its concerns with vertical mergers, the ACCC could reduce regulatory uncertainty if it could clearly explain, with supporting empirical examples, the circumstances in which it expects vertical mergers will be likely to be anti-competitive.
- Such an explanation may now emerge naturally as a consequence of the recent changes to *TPA* merger procedures arising out of the Dawson review. Without it, the ACCC will have to defend decisions about proposed vertical mergers that will appear to be based on little more than suspicion of anti-competitive conduct.

Darryn Abraham
22 November 2006

1. BACKGROUND

As part of its Market Structures work program, the Energy Reform Implementation Group (ERIG) has commissioned Acacia CRE Pty Ltd (Acacia CRE) to provide advice on structural issues that may be affecting the ongoing competitiveness and efficiency of the Australian energy market, particularly the effectiveness of the *Trade Practices Act 1974* (*TPA*).

In its assessment in last year's *Review of National Competition Policy Reforms*[1], the Productivity Commission (PC) concluded that there was no basis for supposing that section 50 of the *TPA* could not be used to prevent anti-competitive mergers between firms at each level of the chain of supply or between electricity retailers and generators. The only area on which the PC did not reach a firm conclusion was the adequacy of the *TPA* in relation to cross-ownership between generators and transmission owners. While treatment of this class of merger is an issue for consideration by ERIG, the Group's Terms of Reference give it a broad direction to examine market structure issues, including those already addressed by the PC and by the earlier Parer Review[2].

The purpose of this report is to examine the effectiveness of the *TPA* to guide mergers in the Australian electricity market and the arguments for other measures to address the potential anti-competitive consequences of electricity industry mergers, both horizontal and vertical. Given work in previous reports and concerns raised in submissions to ERIG, the likely problems and best treatment of vertical integration receive slightly more emphasis. This report is relevant to a number of the market structures questions in the ERIG Issues Paper of July 2006, particularly:

- How are competition and efficiency affected, now and into the future, by:
  - integration between monopoly and contestable sectors;
  - vertical integration between contestable sectors; and
  - horizontal aggregation (greater market concentration)?
- What, if any, are the limitations of section 50 of the TPA in providing adequate protection against energy sector mergers which may lessen competition substantially?
- Are these limitations generally applicable, or especially relevant, where contestable and non-contestable markets are combined?
- Is the energy market sufficiently different to warrant special rules beyond those generally applicable? If so, how?

The report is organised as follows: Section 2 briefly discusses the economics literature on drivers of vertical integration and its potential efficiency consequences. Section 3 discusses the particular problems that can arise from mergers across the different segments in electricity markets, taking into account recent Australian and international experience of restructuring and regulation. Section 4 examines the adequacy of the *TPA*, and the associated processes of assessment and review, to protect against mergers that might ultimately reduce the efficiency of electricity markets. Finally, Section 5 provides a discussion of some of the alternatives to the current arrangements.

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1 Productivity Commission, *Review of National Competition Policy Reforms*, Report no. 33, 28 February 2005, Canberra, pp. 188-194, http://www.pc.gov.au/inquiry/ncp/finalreport/ncp.pdf.

2 Council of Australian Governments (COAG), Energy Market Review, *Final Report: Towards a truly national and efficient energy market*, 20 December 2002 (also known as the Parer Review) http://www.industry.gov.au/assets/documents/itrinternet/FinalReport20December200220040213110039.pdf.

2. POTENTIAL PROBLEMS WITH VERTICAL INTEGRATION

It is well understood that horizontal mergers have potential anti-competitive consequences because the merged firm may acquire and abuse market power. Although the firm may be productively more efficient (have lower overall costs), the reduction in the number of competing firms can be an overriding cause of allocative inefficiency[3] when, for instance, the market is highly concentrated and there are high barriers to entry. That inefficiency can arise directly through the firm increasing prices, and profits, or indirectly through practices that raise prices without necessarily increasing reported profits (eg prices that do not reflect the structure and level of costs of delivery to different customers or inefficient production that might benefit management or workers but raises costs above best practice).

The sources of concern with vertical mergers are more subtle, although identifying inefficient vertical integration also generally requires an assessment of the balance of improvements in productive efficiency and potential anti-competitive consequences. Recent theoretical and empirical economic assessments of vertical integration have emphasised that it is unlikely to be anti-competitive unless it somehow creates or amplifies horizontal inefficiency.

2.1 WHY DO FIRMS VERTICALLY INTEGRATE?

Vertical integration usually refers to the merger (by agreement or acquisition) of two firms that produce outputs that are complements in a chain of production[4]. One of the products may be an input into the production of the other, where production is in sequence, but this is not always the case. The factors driving vertical integration lie at the heart of the size and scope of the organisation of firms, since the legal and economic relationships between factor supplies within and outside a company can be quite different and have significant impacts on its efficiency and costs.

Large multi-product firms exist because of the advantages of vertically integrating production and supply "in-house", rather than buying all inputs and services in open markets. Compared with relying solely on market transactions, vertical integration can benefit the integrated firm by:

- reducing the transaction costs of contracting for inputs[5];
- avoiding the hold up problem that arises when up- or downstream firms have market power and attempt to negotiate better terms by withholding supply or demand (particularly when one party has made a sunk investment);
- allowing better integration of inputs to downstream production by lowering the costs of co-ordinating the chain of production;
- allowing the implementation of internal policies (such as geographic exclusivity, uniform pricing or quality standards) that might otherwise represent potentially illegal vertical restraints on trade; and
- possibly creating the (anti-competitive) potential to affect rivals' input costs.

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3 Allocative inefficiency arises when there are unexploited gains from trade. It is a consequence of inefficient production (producing outputs at above minimum cost) and can also arise when efficiently produced outputs are not allocated to the consumers (or to other production processes) where they have the highest value.

4 Goods that are complements have a negative cross-price elasticity of demand: an increase in the price of one good leads to an decrease in the demand for the other good. Complementary inputs work together to increase production and there is no, or only limited, scope to increase final output by using more of one complement without also using more of the other.

5 This point was first made in Coase, R. H., "The theory of the firm", *Economica*, 4(16), 1937, p. 286.

Some of these advantages can also be obtained through vertical restraints (long-term contracts and other partnership agreements) that stop short of merging the two firms but nevertheless recognise their interdependence and the benefits of close co-operation.

Conversely, vertical integration may impose costs on the integrated firm through:

- higher internal costs of management and coordination;
- a loss or distortion of price signals that may lead to inefficient resource allocation (something that can flow over into competing input markets); and
- a reduction in the flexibility of the firm to adjust to external changes in technology or consumer demand.

Vertically integrated firms can therefore get "too big", and the challenge for management and owners is to discover and maintain a profit maximising structure that balances the costs and benefits, particularly when faced with changes in production technology or the regulatory framework. That balance will depend on, among other factors, the technology for producing the outputs of the firm and the nature of the sources of supply of inputs. As noted by Michaels[6]:

> *Vertical integration is an efficient organizational choice if (1) assets are highly specific to a given use or location, (2) assets are utilized in activities that must be coordinated, and (3) if the best uses of an asset depend on contingencies that are hard to predict.*

He then argues that, because of some of the advantages listed above, including avoiding the hold up problem and risk management, "Several attributes of electrical service make vertical integration an efficient organizational choice"[7].

In Australia, as in most developed countries, pre-reform, electricity supply was commonly a highly vertically integrated and (usually publicly owned) "natural" network monopoly industry through most of the last century. By the early 1980s it was clear that this organisational structure had become a source of productive and allocative inefficiency, and many countries sought to disaggregate electricity supply horizontally and vertically. This restructuring often also extended to privatising at least some of the newly created "contestable"[8] segments of supply.

The "natural" tendency towards integration in electricity supply has created incentives for horizontal and vertical re-aggregation in most of the countries that restructured their electricity industries in the last twenty years. This tendency has been tempered by the development of markets for financial and other supporting services that reduce the costs of maintaining disaggregated structures. Vertical re-aggregation also creates the challenge to competition regulators of allowing productively efficient vertical (and even horizontal) integration without reintroducing the allocative inefficiencies of monopoly and market power.

While a trend towards re-aggregation might suggest that the disaggregation went "too far", it must be acknowledged that one goal of restructuring was to introduce price signals as a driver of industry structure (instead of simply following the historical precedent of vertical integration). Without substantial initial disaggregation and sale to disparate new owners, electricity supply would

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6 Michaels, R. J., *Vertical Integration and the Restructuring of the U.S. Electricity Industry*, Cato Institute Policy Analysis no. 572, 13 July 2006, http://www.cato.org/pubs/pas/pa572.pdf, p. 3 (citing Williamson, O., "The Vertical Integration of Production: Market Failure Considerations," *American Economic Review*, 61(2), 1971, pp. 112-23).

7 Michaels, *op cit*, p. 4.

8 Contestable markets are those in which production technology favours a small number of firms (possibly only one) that are relatively large compared with total demand, but in which conditions exist that allows effective competition for the limited number of supplier shares of the market. Large market shares do not translate into market power in contestable markets, because attempts to raise price or otherwise exploit market power are nullified by the increased supply from incumbent rivals or the entry by a replacement firm of suitable scale.

have retained a structure that does not necessarily reflect the costs and benefits of vertical integration.

2.2 EFFICIENCY CONSEQUENCES OF VERTICAL INTEGRATION

The efficiency consequences of vertical integration are ambiguous, both in theory and in practice. Economic theory and recent empirical studies suggest it can either enhance efficiency or be anti-competitive[9], depending on the circumstances. The net effect depends on the balance of the gains to efficiency from lowering the production costs of the integrated firm and the (potential) social costs of the allocative inefficiencies created by vertical foreclosure[10]. The balance of these effects in principle depends on details of the economic model used and, often, the results are not robust within a particular model (that is, a model can often produce different results under alternative conditions).

If anti-competitive consequences can be avoided, the benefits of vertical integration for the firm enhance efficiency more generally. In competitive markets, the cost savings from vertical integration would pass directly (or, indirectly, through other firms and their products) to consumers as lower prices. If output prices do not change because of vertical integration, there is no loss to consumers, and the efficiency gains from vertical integration still represent benefits to society to the extent that they pass to resident shareholders (as higher dividends or capital gains).

Nevertheless, vertical integration can have anti-competitive effects through a variety of alternative forms of vertical foreclosure. These include:

- restricting access to up- or downstream services, with the effect of raising rivals' costs;
- promoting less competitive conduct by rivals (e.g. by increasing concentration or barriers to entry); and
- thinning of supporting services markets, increasing costs for rivals and new entrants.

The first of these forms, restricted access to up- or downstream services, is what is traditionally meant by vertical foreclosure, and essentially represents the extension of market power from one level of the chain of production into other, otherwise competitive, levels. Without market power at one level, the merged firm has no advantage unless the merger lowers total costs. In that case the merged firm has advantages driven by productive efficiency, not anti-competitive foreclosure.

Whether the firm with market power needs to vertically integrate to obtain an advantage has been the subject of debate in both economic and anti-trust literature. For instance, it can be argued that

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9 Recent surveys can be found in:
Armstrong, M. and Sappington, D. E. M., "Regulation, Competition, and Liberalization", *Journal of Economic Literature*, 44(2), June 2006, pp. 325–366;
Cooper, J. C., Froeb, L., O'Brien, D. P. and Vita, M., *Vertical Antitrust Policy as a Problem of Inference*, Vanderbilt University Law School, Law and Economics Working Paper Number 05-12, February 18, 2005, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=699601;
LaFontaine, F. and Slade, M., "Exclusive Contracts and Vertical Restraints: Empirical Evidence and Public Policy," February 2005, forthcoming, *Handbook of Antitrust Economics*, Paolo Buccirossi (ed.) Cambridge: MIT Press, http://www2.warwick.ac.uk/fac/soc/economics/staff/faculty/slade/wp/ecfeb2005.pdf; and
Victorian Department of Infrastructure, *Cross-ownership Rules for the Energy Sector: Issues Paper*, February 2005,
http://www.doi.vic.gov.au/doi/doielect.nsf/2a6bd98dee287482ca256915001cff0c/fd14b890c989af1eca256fac00060073/$FILE/CrossOwnership_IssuesPaper.pdf.

10 Vertical foreclosure strictly refers to "the exclusion that results when unintegrated downstream rivals are foreclosed from the input supplies controlled by the firm that integrates" (Ordover, J. A., Saloner, G. and Salop S. C. "Equilibrium Vertical Foreclosure", *The American Economic Review*, 80(1) March 1990, at page 127). The term is often also used more broadly to refer to any strategy exercised by an integrating firm to restrict or obstruct competition in another level of production.

a firm with upstream market power simply needs to restrict supply and obtain the benefits of higher product prices from downstream firms[11].

A direct abuse of market power may not be feasible because of the obvious problems it could cause with competition regulators. Vertical integration may therefore be an attempt to evade existing or prospective regulatory control. For instance:

> *All else equal, a firm under rate-of-return regulation has incentives both to cross-subsidize, and to engage in vertical strategies that circumvent the regulatory profit constraints. In some cases, these hypothesized vertical strategies for circumventing profit constraints may disadvantage downstream competitors.*[12]

There is also the possibility that a firm with market power obtains important market information through vertical integration. This might allow it more profitably to set prices for rivals at the other level of supply or to predict their strategic responses, particularly when the level of supply it integrates into is less than perfectly competitive.

Foreclosure by promoting less competitive conduct by rivals creates inefficiency similar to that which can arise from horizontal mergers. Although the merged firm may benefit from increased prices for its product in the previously more competitive level of supply, it is not clear that this will offset the impact on its sales of its product to the up- or downstream rivals (including its merged division). If the firm with market power is unconstrained in its market segment, it may profit more by monopolising the demand created by an efficient and competitive downstream market. Generally, a firm with market power at one level of supply is unlikely to profitably foreclose by integrating into another level if that level is perfectly or effectively competitive.

The merged firm is more likely to benefit unambiguously from foreclosure that thins associated services markets (such as the hedge market in the case of electricity supply). Because it creates its own internal "market" through the vertical merger, the firm should avoid the higher costs of reduced volumes in the supporting services market. Balancing this is the prospect that the less efficient supporting services markets then create a barrier to entry into the more competitive level of supply, reducing demand and profitability at the level of supply where the merged firm has market power.

This discussion highlights the ambiguous efficiency consequences of vertical integration in principle. The likelihood of inefficient outcomes in models of vertical foreclosure depends on factors such as:

- the level of market concentration at each level of production;
- the number of firms at each level of production;
- whether the integrating firms have cost advantages over rivals at the same level;
- whether either of the integrating firms already have market power;
- the existence and effectiveness of the regulation of monopoly market segments;
- the extent to which other firms can replicate the integrated vertical structure; and
- the strategies adopted by the merged firm and its competitors at the different levels of production.

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11 Conversely, a firm with downstream market power (monopsony power) would restrict demand and obtain the benefits of lower input prices from upstream firms.

12 Aron, D. J., *Developments in the Theory of Vertical Foreclosure as Applied to Regulated Telecommunications Markets*, Northwestern University, March 2002, http://www.abanet.org/antitrust/at-committees/at-telecom/pdf/regulatedtcom.pdf, p. 1.

As explained by Chipty[13] in the context of the US Cable television industry:

> *Theory suggests that vertical integration may be used to facilitate the strategic practice of market foreclosure, by which an integrated firm denies a rival access to an input for the purpose of gaining monopoly power. In such instances, vertical integration can raise prices of both intermediate and final goods and harm consumer welfare. Theory also suggests that vertical integration may have a number of efficiency improving effects that ultimately lower prices, improve product quality, and thus increase consumer welfare. In practice, vertical mergers may well result in a combination of strategic and efficiency effects. Thus, assessing the welfare effects of integration requires weighing the relative importance of the various effects.*

It is this need to assess and weigh the costs and benefits of vertical integration that justifies a process under the *TPA* to review and potentially disallow mergers, rather than relying on *per se* prohibition of broad categories of mergers or vertical relationships.

Importantly, vertical integration will generally reduce welfare only when one of the firms involved already possesses significant market power. While the existence of market power alone is not sufficient to guarantee successful foreclosure, it is necessary. Similarly, profitable foreclosure requires the other level to be less than perfectly or effectively competitive.

Thus, in the context of the electricity industry, anti-competitive effects are unlikely if neither the retailer nor generator in an integrated "gentailer" firm had market power prior to integration. The potential for anti-competitive foreclosure will be greater in a vertical merger between a retailer or generator and a firm with a monopoly over a transmission (or distribution) network, particularly if it is not regulated effectively.

[13] Chipty, T., "Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry", *American Economic Review*, 91(3), June 2001, p. 428 (footnotes omitted).

3. POTENTIAL PROBLEMS WITH ELECTRICITY INDUSTRY MERGERS

As discussed above, the characteristics of electricity production and supply mean that the industry naturally tends towards vertical integration. It is therefore not surprising that, at least in the States where restructuring included substantial disaggregation and privatisation of electricity assets, there has been a noticeable trend towards increased vertical integration between retailers and generators. Vertical integration has occurred both through mergers (such as the acquisition by the Australian Gas Light Company (AGL) of a stake in the generator Loy Yang Power (LYP)) and through direct investment by retailers in generation capacity (mostly peaking plant). This has raised concerns about the efficiency consequences of "undoing" the industry disaggregation underlying the creation of the National Electricity Market (NEM) in the eastern and southern States of Australia.

It should be clear from the discussion in the previous section that it is difficult to identify circumstances in which particular types mergers are unambiguously either efficient or anti-competitive. A useful first step in examining the potential problems with future electricity industry mergers is to distinguish them by "direction" (vertical or horizontal) and industry segments involved (generation, transmission, distribution, retail)[14]. Some conclusions can then be drawn about the particular problems that might arise in each case, taking into account recent Australian and international experience of restructuring and regulation.

3.1 VERTICAL INTEGRATION BETWEEN RETAILERS AND GENERATORS

The particular incentives for firms in contestable sectors (generators and retailers) to form vertically integrated "gentailers" include[15]:

- the creation of a physical hedge against pool market price risk;
- the acquisition (for retailers) of physical assets that provide collateral for financier and NEM prudential requirements;
- protection against the downstream costs of potential uncompetitive upstream outcomes arising from a tight supply demand balance and/or concentration of ownership in conjunction with competitors having vertically integrated operations; and
- a means of capturing some economies of scale and scope, such as:
  - economies from sharing managerial oversight and central office services (financial market dealing, NEM participation, basic management – personnel etc) across more products and a larger volume of activity; and
  - the potential quickly to identify and respond to synergies, such as new market or product opportunities, between the retail and wholesale businesses.

14 This is the approach taken in the concise discussion of these issues in Victorian Department of Infrastructure, *op cit*, at pp. 8-9.

15 Some of these advantages were claimed by the Australian Gas Light Company (AGL) as expected benefits of the part ownership of a share in the consortium buying Loy Yang Power. See: Australian Gas Light Company v Australian Competition & Consumer Commission (No. 3) [2003] FCA 1525 (19 December 2003) (the "Loy Yang Decision") at paragraph 197.

Once a few firms gain these advantages there will be incentives for others quickly to follow where similar opportunities remain. Incentives to integrate may still exist even if regulators require undertakings that restrict coordinated action.

The advantages of vertical integration will be stronger when the costs of transacting between parties in the chain of production are higher. Consequently, anything that increases the costs of arms-length dealings between electricity generators and retailers (such as inefficiencies in the hedging market) will increase the incentives to form "gentailers".

The structure and efficiency of the NEM therefore plays an important part in driving vertical integration. Although there may still be intrinsic advantages in vertical integration, the benefits will be smaller when these supporting markets are more efficient.

Vertical integration between generators and retailers is potentially anti-competitive for the in-principle reasons discussed in the previous section. Specific claims along these lines were set out by the Australian Competition and Consumer Commission (ACCC) in its unsuccessful case against the AGL purchase of a stake in LYP. In that case the ACCC claimed the partial vertical integration would result in:

- Exercise of generator market power as a result of a thinning of hedge markets;
- Encouragement of anti-competitive vertical integration by other industry participants; and
- Likelihood of exercise of market power by AGL.

As discussed in more detail in section 4.2 below, in response to the evidence presented in the case, the Federal Court did not accept that any of these effects were likely in practice.

The ACCC's concerns about the barriers to entry created when vertical integration reduces financial market liquidity are based, in part, on the outcomes observed in New Zealand[16], particularly the unsuccessful entry of NGC (substantially owned by AGL) as a retailer competing against vertically integrated gentailers. Because the incumbent firms had generation load closely matched to retail demand, there was no scope for NGC to contract for the capacity it needed to compete.

It is not clear that the current vertically integrated structure of New Zealand's electricity industry is necessarily inefficient. The failure of AGL's attempt at entry might be explained by several factors, including the possibility that entry was not warranted because the incumbents were producing and pricing efficiently. Nevertheless, the emergence of regionally dominant gentailers in New Zealand does appear to have reduced the liquidity and efficiency of the hedge market, possibly to the point where specialised retailer entry may not be viable.

Bushnell et al[17] report theoretical modelling and empirical studies of the Pennsylvania, New Jersey and Maryland (PJM), New England and Californian electricity markets. In discussing the possibility of vertical foreclosure they note[18]:

> *Much of the concern about the negative impacts of vertical arrangements has focused on foreclosure or the ability of the integrated firm to raise rivals' costs. However, in the markets we study, third party independent system operators control the common*

16 Australian Competition and Consumer Commission (ACCC), *Cross-ownership Rules for the Energy Sector, Submission to the Victorian Department of Infrastructure*, April 2005, at p. 8 http://www.doi.vic.gov.au/doi/doielect.nsf/2a6bd98dee287482ca256915001cff0c/a2feb1738e8f2535ca256fef001bd78d/$FILE/ACCC.pdf.

17 Bushnell, J., Mansur, E. T. and Saravia, C., *Vertical Arrangements, Market Structure, and Competition: An Analysis of Restructured U.S. Electricity Markets*, Center for the Study of Energy Markets, Working Paper 126, February 2005 (presented to the Australian Competition and Consumer Commission (ACCC) Regulatory Conference 2006 – Gold Coast, Queensland), p 5.

18 Bushnell et al, *op cit*, p 5.

> *distribution networks. This, combined with the fact that electricity is a homogenous commodity makes it somewhat more difficult for suppliers to foreclose competitors or discriminate in favor of their own retail affiliates.* (footnotes omitted)

This suggests that the market and regulatory structures of the NEM in Australia (particularly independent transmission and settlement companies) mean vertical integration between firms in contestable sectors (generators and retailers) is less likely to lead to anti-competitive market foreclosure. Problems are more likely (but not certain) to arise with mergers that dilute the independence of the third party system operators (transmission owners or dispatch and settlement companies).

Amongst their conclusions, they note that it is more difficult for generators to foreclose on rival retail firms or favour their retail arms when the industry has independent (regulated) third party operators controlling common networks that require all parties to adhere to common rules for market participation. This effect would hold even if the common network regulators were themselves not effective and efficient.

The discussion in the previous section suggests that retailer/generator mergers are unlikely to be anti-competitive unless at least one of the merging firms already has some degree of market power. Even then, profitable foreclosure requires the other level of production to be less than perfectly or effectively competitive. This suggests that vertical integration need not be a source of inefficiency provided competition policies can maintain effective competition horizontally, that is, at each level.

This is consistent with the ACCC's assessment of the UK experience[19]:

> *In the UK, a market structure has developed over the past three years where there are now six major vertically integrated generator-retailers. Since this market structure has developed electricity prices have come down substantially from prices evident in the initial stages of the operation of the UK market. However, it should be noted that the UK reforms have combined vertical integration with horizontal disaggregation of generation and changed trading arrangements. As such, it is difficult to separate the impacts of vertical integration. The UK experience suggests that vertical integration may not have an adverse impact on electricity prices if the appropriate horizontal market structure is in place.*

Consequently, as the ACCC argued in relation to the trend towards gentailers[20]:

> *"the best approach is to ensure adequate competition at both the generation and retail levels."*

There is little scope directly to influence the level of horizontal competition in generation and retailing from firms based in Victoria and South Australia because all of the relevant assets are already in private ownership. Nevertheless, the likelihood that future problems with generation/retailer mergers in the NEM arise may depend on whether and how the NSW and Queensland state governments further corporatise or privatise their generation and retail assets. As currently organised, generators and retailers in these jurisdictions may already have market power, albeit only as consequence of their (effectively) coordinated management. Privatisation of NSW and Queensland electricity assets to diverse interests would help ensure their independent operation and improve competitiveness, reducing the likelihood of anti-competitive consequences if generator/retailer mergers which involved those assets were then proposed.

Although the contestable markets in Australia have consolidated horizontally from the initial disaggregated beginnings, the vertical holdings still appear to be dispersed and none of the

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19 ACCC, *Submission to the Productivity Commission Discussion draft: National Competition Policy Reforms*, *op cit*, p. 35.

20 ACCC, *Cross-ownership Rules for the Energy Sector, op cit*, at p. 8.

vertically integrated firms obviously have clear dominance in either of the contestable sectors. Despite ACCC claims that "two of the three dominant retailers in the Victorian and South Australian markets are substantially integrated (AGL and TRU)"[21], the investments do not necessarily represent vertical integration in the economic sense of creating a single entity with control over the vertical chain of production.

The absence of dominant market shares reduce the likelihood that further generation/retailer vertical integration would lead to effective foreclosure. However, as noted below, market shares by themselves are not good indicators of the potential existence of transient or enduring market power in electricity markets. So, while small market shares reduce the likelihood that sufficient horizontal concentration exists to allow successful vertical foreclosure, they do not guarantee that particular vertical mergers will not be anti-competitive. It is therefore appropriate that generator/retailer mergers continue to be subject to normal section 50 processes for assessment and approval.

3.2 VERTICAL INTEGRATION BETWEEN CONTESTABLE AND REGULATED SEGMENTS

The adequacy of the *TPA* in relation to cross ownership between generators and transmission owners was the only area on which the PC did not reach a firm conclusion in its assessment of the adequacy of section 50[22].

There is no in-principle reason to expect that a merger between a firm in a contestable segment of the electricity industry (a generator or retailer, or a vertically integrated "gentailer") with a regulated transmission or distribution owner is necessarily either efficient or anti-competitive. Nevertheless, as suggested by the discussion above of the conditions for successful vertical foreclosure, there are a number of features of contestable and regulated segments that increase the potential, compared with generator/retailer vertical mergers, for an anti-competitive outcome in practice. These features include:

- the market power of the natural monopoly transmission or distribution segment;
- regulated returns to transmission or distribution; and
- less than perfect competition in the contestable segments.

As noted above, mergers that dilute the independence of the third party system operators (transmission owners or dispatch and settlement companies) may also increase the likelihood that vertical mergers between contestable segments are anti-competitive. This suggests that a merger between contestable and regulated segments, although not anti-competitive in itself, could have the effect of increasing the scope for successful vertical foreclosure by existing gentailers.

Vertical integration can also provide the regulated firm with means to evade regulatory controls. One of the problems with vertically integrated firms encompassing unique and monopolised (bottleneck) facilities is the difficulty of separately identifying the costs of those facilities as the basis for regulation (such as profit monitoring or the setting of regulated prices). Consequently, although a merger between contestable and regulated segments may not be immediately anti-competitive, it could lead to circumstances in which the merged firm was eventually able to better evade regulatory oversight and possibly attempt a form of vertical foreclosure. This could occur despite the best efforts of the regulator because of the increased difficulty of regulating an

21 ACCC/Australian Energy Regulator (ACCC/AER), *ERIG Response to Issues Paper*, August 2006, p 18. This dispersed integration is, so far, unlike what emerged in New Zealand, where vertically integrated gentailers have clear lines of vertical ownership and control which, combined with concentration in separate geographic regions, create a set of regionally dominant firms.

22 Productivity Commission, *Review of National Competition Policy Reforms*, *op cit*, pp. 188-194.

integrated firm when, for instance, internal pricing/policies replace visible external prices and different levels of production share common facilities and costs.

The range of potential issues that might arise in mergers in practice between contestable and regulated electricity segments was well detailed in the ACCC's statement of reasons in its decision not to oppose the acquisition by Singapore Power of TXU Australia[23]. In that case the ACCC's concerns included:

- incentives for anti-competitive behaviour created by the acquisition:
  - the incentive for SPI (the Victoria transmission network operator) to reduce the evacuation of electricity from Victorian generators that compete against Ecogen (TXU's generator company);
  - the incentive for SPI to reduce the transfer capabilities of the Victorian transmission network (including imports and exports of electricity from other regions of the NEM); and
  - the incentive for SPI to engage in foreclosure strategies that could frustrate or delay parties seeking to connect new generation capacity to the Victorian transmission network.
- the ability (notwithstanding the roles and responsibilities of VENCorp and NEMMCO) to affect outcomes in relevant wholesale markets through:
  - self-preferential treatment in short notice and unplanned network outages;
  - self-preferential altering of network ratings of lines and equipment;
  - providing its generator arm with access to confidential information from its role as the transmission network service provider; and
  - frustrating, delaying or otherwise inhibiting provision of transmission network connection services.

Although these concerns are specific to the extension of the market power held by a transmission network owner, similar problems could arise in a merger between a retailer and the owner of a distribution network. In that case the systems operators and regulators would have different roles in the relationship between the merging parties. Again, there is no reason to suppose that such a merger would necessarily create a substantial lessening of competition, particularly given the existence of access regimes and other regulation of the distribution business. The likelihood and extent of any anti-competitive impact would again have to be assessed in each case, but additional means to do this exist, including comparing the performance of retailers with and without a "stapled" distribution network.

The ACCC's concerns with the acquisition of TXU Australia by Singapore Power were addressed by undertakings intended effectively to separate the regulated and contestable businesses. On that basis, the acquisition was allowed to proceed. Singapore Power subsequently divested itself of the contentious retail and generation assets (to CLP Power Asia which already owned the Yallourn Power station) and retained only TXU Australia's network assets. The discretion available to the ACCC under existing processes allowed it to let the merger proceed, subject to the undertakings, without putting Singapore Power at a commercial disadvantage by revealing that it intended or was required to divest itself of the assets that were the primary source of the ACCC's concerns. The extent to which the ACCC may have been able to substantiate its concerns, together with their likelihood and substance, or to enforce the undertakings in this case was not tested before the courts. The outcome therefore does not clearly suggest that the ACCC will be

[23] ACCC, *Assessment of SP Energy's acquisition of TXU Australia*, 19 July 2004 http://www.accc.gov.au/content/item.phtml?itemId=574327&nodeId=ae0c959629665c4187789e656aa3afc3&fn=SPI%20Energy's%20acquisition%20of%20TXU%20Australia%20-%2019%20July%202004%20-%20re%20electricity%20supply%20and%20services.pdf, pp. 5-6.

able to obtain a similarly acceptable agreement with the parties to a future transmission/generator/retailer merger if the intention of the parties is to create and preserve a highly integrated electricity supply company.

There is no guarantee that the ACCC would therefore be able to enforce continued operational vertical separation in other such mergers if the parties chose to contest a decision rejecting the merger or an undertaking that allowed greater vertical integration than the ACCC was willing to accept.

Any vertical mergers involving regulated electricity segments will require assessment through section 50 processes because they are deemed to have market power and there will be a strong *prima facie* case that this will be extended into the contestable segments. Although the ACCC may have a strong in-principle case in each instance, there is substantial scope for dispute over the extent to which anti-competitive consequences might arise in practice and the types of undertakings that might address them. Although this may suggest a problem with the practical implementation of the ACCC's powers under section 50, it is not one that can be solved through changes to that section or the *TPA* more generally.

The balance of likely effects of vertical mergers involving regulated electricity segments remain uncertain, as found by the PC. The *TPA* gives the ACCC sufficient powers to prevent anti-competitive mergers in principle. Nevertheless, the subtle and indirect means by which a regulated/contestable merger might allow the extension and use of market power from the regulated to contestable segments means the analysis of anti-competitive consequences is difficult in practice, particularly at the standard required by the courts.

3.3 HORIZONTAL AGGREGATION WITHIN CONTESTABLE SEGMENTS

Horizontal mergers – those between firms producing substitute products at the same level of production – raise competition concerns in principle because the merged firm may acquire and abuse market power. The merger reduces customers' substitution possibilities by definition, raising the prospect that the merged firms (and possibly all other firms) can increase their margins. The reduction in the number of firms can also reduce the costs, and increase the possibility, of direct or tacit collusion.

However, increased market shares do not mean market power *per se* when the conditions for contestability apply (such as minimal barriers to entry and exit, and regimes to ensure access to networks and facilities on comparable terms to incumbent firms), or the merged and rival firms are aggressive competitors. Consequently, as with vertical integration, there is no clear answer to whether or when horizontal mergers are likely to lead to a substantial lessening of competition and anti-competitive outcomes. Again, a case-by-case assessment is required.

As noted in the Issues Paper for the Victorian review of cross-ownership rules[24], because they are already regulated, horizontal mergers between non-contestable transmission owners or distribution companies are less likely to cause a substantial lessening of competition. Mergers between firms in contestable sectors (generation and retailing) are more likely to be potentially anti-competitive, but do not raise significant problems beyond those normally faced in assessing horizontal mergers in other industries.

The only specific issue which might distinguish horizontal mergers in the electricity industry from mergers in other industries is the potential for generators to possess and exercise market power, despite only holding relatively small market shares[25].

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24 Victorian Department of Infrastructure (2005), *op cit*, at p. 8.

25 See, for instance, the discussion in the ACCC, *Submission to the Productivity Commission Review of National Competition Policy Arrangements*, 13 July 2004, http://www.pc.gov.au/inquiry/ncp/subs/sub111.pdf, at p. 32.

For instance, in periods when it is known with some certainty that almost all available generation capacity (or, at least, some capacity from all existing generators) is needed to meet demand, each generator can raise price by threatening to withhold supply. This is one rationale behind imposing value of lost load (VoLL) caps on pool prices – to limit the prices that can be charged when demand reaches the limit of generation capacity. Nevertheless, the ability occasionally to raise price, even up to VoLL, does not, by itself, indicate a generator has market power in any *TPA*-relevant sense. That requires the firm to be able to induce and sustain pool prices high enough over long periods to raise prices on average above long-run costs. Rather, *occasional* price spikes reflect the scarcity value of existing capacity and the potential value of additional generator capacity, price signals vital for the dynamic efficiency of the NEM.

Whether the frequency and duration of instances when prices reach VoLL indicates that incumbent generators have market power, in the sense of being able to maintain prices across the long periods needed to raise prices on average above long-run costs, is an empirical question and cannot properly be addressed here.

The empirical analysis of wholesale price/cost data could be used to infer the existence and sustained exercise of market power, but would necessarily have to answer or make assumptions about the appropriate rates of return in the various types of electricity generation (baseload, peak, etc), the effects of exogenous factors (such as unpredictable weather patterns and equipment failures) and the extent to which high wholesale prices might be the result of deliberate coordinated or strategic bidding or simply the coincidence of independent competitive decisions. These factors would be relevant to whether prices are sustained at "excessive" levels on average, or within the bounds of opportunistic pricing behaviour in favourable circumstances. A key test of the existence of *TPA*-relevant market power would be whether high rates of return are sustained without inducing entry.

In cases where empirical studies suggest particular firms have, or are on the cusp of obtaining, market power to the extent of being able to sustain prices above long-run average costs, there would be a strong *prima facie* case for disallowing horizontal mergers with the relevant firm(s) on the basis of an expected substantial lessening of competition arising from the increased likelihood of strategic bidding to raise prices.

Moreover, the potential for firms with small market shares to have influence over prices, even only occasionally, suggests at least the possibility that the safe haven concentration thresholds in the ACCC's Merger Guidelines may not be appropriate measures of the levels below which particular horizontal generator mergers are unlikely to produce a substantial lessening of competition.

This point is discussed in more detail in section 5.1 below.

4. IS THE TPA ADEQUATE?

There have been many reviews of the operation and effectiveness of the *TPA* in recent years, notably the Dawson review[26] and various Commonwealth Parliamentary inquiries[27]. These reviews have resulted in various amendments, or proposed amendments, to the Act and to the processes associated with the application and administration of the Act by the ACCC.

The initial disaggregation of the electricity industry in Victoria and South Australia in the early 1990s naturally created the potential for merger activity of a size and significance that was always likely to raise concerns about anti-competitive consequences[28]. Dealing with those concerns was a test of both the capacity of the *TPA* efficiently to influence the evolution of the industry, and of the ACCC's ability appropriately to assess the impact of the mergers in a new and evolving regulatory framework.

The effectiveness of the *TPA* and the ACCC's approach to proposed electricity industry mergers have both been questioned largely as a result of the Federal Court decision in the case brought by AGL (the "Loy Yang Decision")[29] after the ACCC refused definitively to disallow the acquisition of Victorian generation capacity by a consortium in which AGL planned to hold a significant stake. That case and its implications are discussed in more detail Section 4.2 below.

4.1 IS THE TPA, AND SECTION 50 THEREOF, ADEQUATE?

As explained by the PC[30]:

> *Section 50 of the TPA prohibits a merger or acquisition which would be likely to 'substantially lessen' competition, unless it is authorised by the ACCC on public benefit grounds. It also provides a framework for assessing the likely competition effects of a merger or acquisition, that is generally applicable across the economy.*

The ERIG Issues paper asked:

- What, if any, are the limitations of section 50 of the *TPA* in providing adequate protection against energy sector mergers which may lessen competition substantially?

The majority of views in submissions to ERIG is that section 50 of the *TPA*, as is, is effective, to the extent that it is possible to gather evidence and demonstrate the presence of market power and the likelihood that a merger will result in a substantial lessening of competition. The provisions of section 50 are sufficiently broad that it can address all possible in-principle sources of a substantial lessening of competition, such as those discussed in section 2, across all types of horizontal and vertical electricity industry mergers.

Regarding horizontal mergers between generators, the PC concluded[31]:

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26 Review of the Competition Provision of the *Trade Practices Act*, January 2003 (Dawson Inquiry) http://tpareview.treasury.gov.au/content/report.asp.

27 Senate Economic References Committee, *Inquiry into the effectiveness of the Trade Practices Act 1974 in protecting small business*, March 2004, for instance. Other inquiries, such as the August 1999 Joint Select Committee on the Retailing Sector, have also focussed on the effectiveness of the *TPA* to maintain competitiveness in particular industry sectors.

28 Some indication of the volume of electricity industry merger activity is provided by the listing of matters considered by the ACCC under section 50 between 2000 and 2004 presented in Appendix E of ACCC, *Submission to the Productivity Commission Discussion draft: National Competition Policy Reforms*, 10 December 2004, http://www.pc.gov.au/inquiry/ncp/subs/subdr165.pdf.

29 Australian Gas Light Company v Australian Competition & Consumer Commission (No. 3) [2003] FCA 1525 (19 December 2003) ("Loy Yang Decision").

30 Productivity Commission, *Review of National Competition Policy Reforms*, *op cit*, pp 188-189.

> *Put simply, there does not appear to be anything inherent in mergers between generators that section 50 would not be able to handle. The prospect that some market power currently exists does not preclude a useful role for section 50 in preventing mergers that would exacerbate this situation.*

Similar conclusions can be drawn regarding the adequacy of section 50 for handling horizontal mergers at other levels of the chain of electricity supply, particularly in retailing, where mergers will reduce competitor numbers and increase industry concentration almost by definition. Moreover, because the problems with vertical mergers arise largely through their horizontal effects, the processes and provisions of the *TPA* are equally well able to address vertical mergers in the electricity industry.

None of the submissions to ERIG provides a substantive case for specific changes to section 50 or to any other part of the *TPA* to improve its effectiveness in protect against anti-competitive electricity industry mergers. Many submissions argued that section 50 or the merger processes in general do not adequately protect competition in electricity industry mergers. For instance:

- the ACCC/AER submission highlights (*inter alia*, at page 17) potential inefficiencies that might arise in generator/transmission mergers that are unlikely to be captured in the substantial lessening of competition test in section 50;
- the Public Interest Advocacy Centre submission argues (page 7) that section 50 is not sufficient by itself to identify mergers in the public interest;
- the Consumer Law Centre Vic. Ltd submission argues (page 5) that section 50 is deficient because the ACCC will only conduct detailed competition analysis of mergers that fall outside the safe harbour provisions of the merger guidelines; and
- the Major Energy Users submission claims that section 50 is "grossly inadequate … given the extent of concentration that has been permitted to occur" (page 48).

These arguments do not provide evidence to support the claims that section 50, or the *TPA* in general, has failed to prevent mergers that resulted in a substantial lessening of competition or is likely to fail in the future. In any case, whatever the reasons given for the inadequacy of section 50, none of the submissions suggest change to the *TPA* as a solution. The changes that have been suggested generally involve implementing restrictions on energy industry mergers in addition to the existing *TPA* provisions and processes[32].

As the Freehills submission to ERIG[33] concluded:

> *At times, the ACCC has called for an industry specific competition test, given the perceived failings of section 50 (at least as it is applied by the Federal court). These concerns focus on a perceived inability of s.50 to deal with vertical integration in the energy sector. …*
>
> *In our view, section 50 is adequate to deal with energy mergers. There is no case for industry specific measures and no evidence that s. 50 has failed in this industry.* (footnote omitted)

To the extent that they exist, the limitations of the *TPA* lie with the difficulties faced by the ACCC[34] (and, to a lesser extent, affected third parties) when trying to gather and consolidate sufficient

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31 Productivity Commission, *Review of National Competition Policy Reforms*, *op cit*, p. 190.

32 ACCC/AER submission to ERIG, p. 17, for instance.

33 Freehills, *Response to Issues Paper of July 2006*, 7 August 2006, at p. 10.

34 The Australian Energy Regulator (AER) was established in July 2005 as part of the ACCC. It is responsible for economic regulation of the wholesale electricity market and electricity transmission networks in the NEM, and enforcement of the National Electricity Law and National Electricity Rules. The ACCC proper nevertheless remains responsible for administering section 50 across all industries, including electricity markets. Despite this

evidence to support opposition to proposed mergers that *prima facie* are expected to result in a substantial lessening of competition. This may be, in part, because the concerns relate to future actions and intent that are not observable *ex ante*.

An inability to substantiate its concerns about the anti-competitive consequences of a merger would leave the ACCC at loggerheads with potentially merging firms. The parties cannot confidently pursue a merger while the risk of ACCC (or third party) intervention through the courts remains. If the merger is nevertheless pursued, the ACCC has to substantiate its concerns in court, but needs to somehow establish a case against the merger that is, by definition, based more on suspicion about future consequences than evidence based on past outcomes.

If the ACCC allowed, or was unsuccessful in blocking, a merger that led to anti-competitive consequences, section 46 of the *TPA* gives it some recourse. Once the merger is completed, the ACCC could carefully monitor behaviour and outcomes for signs of anti-competitive conduct and, if sufficient evidence can be gathered, pursue an action for a breach of the Act. Note, however, that this would not remedy the problems that arise if the merged entity did not abuse its market power, but became inefficient in ways not easily addressed by market processes[35].

The ACCC has argued for special rules beyond the current provisions of the *TPA*, relying, *inter alia*, on the potential for competition concerns to arise through mechanisms that are not easily observable or verifiable. For instance, in referring to the problems that might be created by generation-transmission mergers, the ACCC noted the possibility of substantial lessening of competition from:

> *"Mergers involving natural monopoly and contestable activities may allow a regulated entity to discriminate in favour of its upstream or downstream businesses through subtle forms of regulatory manipulation"*[36]*;* and
>
> *"problems of a 'regulatory evasion' nature, … consequent on the existence of information asymmetries, … unlikely to be fully captured in the substantial lessening of competition test in section 50"*[37]

These arguments are not convincing as criticisms of section 50 or the *TPA* in principle. Although complex, a substantial lessening of competition arising from regulatory evasion, even if implemented through vertical lines of control, is well within the bounds of section 50. The provisions of section 50 are also sufficiently broad that the ACCC can use any coherent economic argument to justify its decision to block a merger. The only real constraint on the ACCC's powers is that any argument it makes needs to be able to withstand judicial review in the event that the parties to the merger appeal the decision. The stronger the *a priori* case and supporting evidence, the smaller the likelihood that the parties to the blocked merger will pursue an appeal.

Consequently, the real concern with the effectiveness of the *TPA* merger processes to guide the development of the electricity industry lies with the ACCC's ability to gather the evidence (such as

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formal division of responsibilities, the ACCC is able to draw on the energy market expertise of the AER in assessing mergers and potential breaches of the *TPA*. See, for instance, Willett, E., "The AER and its 'fit' with the ACCC model", Speech to the Trade Practices Law Council Workshop, Canberra, 23 July 2006, http://www.accc.gov.au/content/index.phtml/itemId/754819.

35 For instance, if market power allows inefficiency in ways not contrary to section 46, such as by allowing gold plating or other excess costs, there is no legal recourse. Improvements in competitiveness and efficiency then rely on market factors, such as entry or a hostile takeover. If there are barriers to entry or impediments to an effective market for corporate control, the merged firm could continue to earn supernormal profits (rents). Over time, those rents could become part of "normal" returns in the market and capitalised into the industry cost structures.

36 ACCC, *Cross-ownership Rules for the Energy Sector, op cit*, at p. 5.

37 ACCC/AER, *ERIG Response to Issues Paper*, August 2006, p 17.

opinions from industry experts and supporting market data and analysis) to establish convincing cases. This point has been acknowledged by the ACCC:

> *"The ACCC believes that relying solely on section 50 to ensure the separation of generation and transmission may be problematic. The ACCC believes that convincing the court of the competition problems in these areas would be a significant challenge."*[38]; and
>
> *"there may be instances where it may be difficult to ensure that the Courts fully appreciate the complex and dynamic nature of the electricity industry, which may lead to undesirable precedents"* [39].

The ACCC was unable to convince the Federal Court of its claims about the effects of the AGL acquisition of a stake in LYP. However, as discussed below, there is nothing in the economic findings in that case that should prevent the ACCC gathering new evidence and analysis successfully to support its arguments against another potentially anti-competitive merger.

This problem of gathering evidence to support its decision is not specific to the electricity industry, and can arise with any proposed merger that the ACCC is asked to approve. It cannot be addressed by changes to the *TPA*, although it may require changes (such as those recommended by the Dawson Review and recently passed through the Commonwealth Parliament) to merger processes to encourage better information flows and preliminary competition analysis.

Although the ACCC and, within it, the Australian Energy Regulator (AER) have accumulated electricity market expertise, there is no guarantee that this will be sufficient to allow the ACCC properly to assess some electricity industry mergers or substantiate its in-principle concerns in future. Providing the ACCC with additional resources may help, but the problem will be intractable if the data (and subsequent analysis) required to substantiate objections to potentially anti-competitive mergers either does not exist or proves to be impractically difficult to gather.

Section 5 below discusses the case for addressing the problem with special merger rules for the electricity industry beyond the current provisions of the *TPA*.

4.2 THE LOY YANG DECISION

The key sources of substantial lessening of competition claimed by the ACCC to arise from AGL's proposed 35 per cent holding in the consortium buying LYP were[40]:

- Exercise of generator market power as a result of a thinning of hedge markets;
- Encouragement of anti-competitive vertical integration by other industry participants; and
- Likelihood of exercise of market power by AGL.

None of these arguments was accepted by the court.

4.2.1 THINNING OF HEDGE MARKETS

The ACCC did not contend that the AGL acquisition of a share in LYP would result in a lessening of competition in the markets for wholesale or retail electricity, *per se*. Rather, it argued that AGL, having acquired a natural hedge, would reduce its contract (hedge) cover and leave LYP or other base load generators with both less cover and greater incentive and tendency to exercise their

38 ACCC, *Cross-ownership Rules for the Energy Sector, op cit*, at p. 13.

39 *ibid*, at p. 23.

40 The case made by the ACCC is summarised at paragraph 357 of the Loy Yang Decision (AGL v ACCC (No. 3) [2003] FCA 1525). The findings on the major points of the case are discussed in Attachment B of Victorian Department of Infrastructure, *op cit*.

market power in the wholesale market. This, in turn, would increase the spot prices and reflect a substantial lessening of competition. The undertakings offered by AGL and its consortium partners to address perceptions of a direct substantial lessening of competition arising from co-ordinated vertical operations were therefore incapable of reducing the ACCC's concerns about the impact on competition.

French J concluded that the ACCC's claims about the consequences for the hedge market were unlikely and did not accept the claim that LYP had market power.

Several submissions to ERIG contend that the claimed thinning the hedging markets has not been borne out in subsequent experience. Volumes in the forward market have continued to increase, and AGL itself claims[41] that its reliance on hedging contracts has actually increased as a consequence of the merger, since it uses the contracts to balance some of the positions created by the inability to perfectly match LYP generation and AGL retail activities[42].. There are many possible explanations for the increased volumes in forward markets. These include vertical integration, the natural tendency for the hedging market to develop as the physical electricity market matures and the progressive phasing out of off market risk management and pricing arrangements such as the Electricity Tariff Equalisation Fund (ETEF) in NSW and Benchmark Pricing Agreement (BPA) in Queensland. Whatever the reasons for the increased volumes, the key point to note is that, contrary to the ACCC's claims, the merger did not clearly lead to the catastrophic thinning or collapse of hedge markets.

4.2.2 BANDWAGON VERTICAL INTEGRATION

The ACCC argued that the acquisition would give AGL greater incentive to contract with LYP than with other generators, and other generators and retailers would contract between or amongst themselves rather than with AGL and LYP for confidentiality reasons. This would increase incentives for vertical mergers between other generators and retailers that would further thin the contract market, raise barriers to entry and, consequently, substantially lessen competition.

French J noted[43]:

> *"there is a natural tendency on the part of major retailers in the NEM to undertake some degree of vertical integration at the level of peaking or intermediate plant"*

That is, the court found that AGL's proposed acquisition was part of an existing trend to vertical integration and would not substantially influence other firms to instigate or advance plans to vertically integrate.

The ACCC's claims about the likely encouragement of vertical integration were supported, in part, by the New Zealand experience of the formation of dominant regional gentailers, although it is not clear that any consideration was given to the impact of differences in Australian and New Zealand competition policies or electricity market structure and regulation.

4.2.3 EXERCISE OF MARKET POWER

The ACCC argued that LYP already possessed market power and that the merger would increase the likelihood that that power would be exercised by the merged entity.

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41 AGL Submission to ERIG, page 3.

42 This effect is understandable, given that most of the vertical integration merger activity to date has been partial (portfolio) investment that has not created a fully vertically integrated entity. Although vertical integration has given the merging firms a stake in other segments of supply, they have not created or gained control of an integrated entity.

43 Loy Yang Decision, paragraph 594.

French J found that[44]:

> *having regard to the structure of the market and the extent to which its major participants operate across regional boundaries, I am satisfied that there is one NEM-wide geographic market for the supply of electricity, and associated with that, entry into electricity derivative contracts.*

This finding was not, of itself, as important to the decision as the assessment of the likely strength of competitive pressure on the merged entity. The adoption of a broad market definition did, however, have a direct impact on the assessment in the decision of the likely degree of market concentration before and after the merger, since the parties to the merger had smaller percentage shares of the larger market.

The broad market definition did not drive the assessment of the likely effects of the merger on the workings of the NEM or on the scope for the merged entity to hold or exercise market power. Rather, the market definition followed the assessment that the operation of the NEM was likely to ensure that there would be sufficient competitive pressure from outside Victorian state boundaries to constrain the merged entity. In other words, the court implicitly assessed that there was sufficient competition to ensure that LYP, as a significant generator in Victoria, could not profitably sustain a small but significant non-transitory increase in prices above competitive levels. This is not necessarily the same as assessing a national market, but rules out a market narrowly defined by Victorian state boundaries.

4.2.4 IMPLICATIONS

Two key points can be drawn from the Loy Yang Decision:

- The court did not reject the *possibility* of substantial lessening of competition by the means argued by the ACCC, only the *likelihood* based on the evidence presented to support the claims; and
- Although the findings of fact are likely to influence the direction and extent of merger activity in the electricity industry, they are not necessarily binding on the ACCC in future merger assessments.

The Loy Yang Decision leaves open the possibility that, in another case (particularly one with parties located outside Victoria), the court might find that the extent of competitive pressure was unlikely to be sufficient to constrain a similarly merged entity. It is hard to find anything in the decision that would be a precedent binding on the ACCC when assessing the potential for a substantial lessening of competition from other future mergers. The findings on market definition and the extent of competition in the Loy Yang Decision would probably have to be addressed in a new case. They are also likely to have influenced the formulation of subsequent other proposals for electricity industry mergers by giving the parties a stronger presumption that lower market shares and concentration ratios would apply in formal and informal discussions with the ACCC.

Nevertheless, changes in market shares at wholesale and retail levels, in the nature and extent of barriers to entry, and in the extent of vertical integration are all occurring sufficiently rapidly that future mergers effectively have to be assessed *de novo*. The possibility remains that, in another case, it might be possible successfully to argue that the relevant market has a smaller geographic dimension. With new evidence and supporting analysis, the ACCC could still demonstrate that other mergers could lead to a substantial lessening of competition in a geographic sub-market of the NEM. So, although the Loy Yang Decision may have encouraged a greater degree of

[44] Loy Yang Decision, paragraph 387.

prospective merger activity than would otherwise have occurred, it may not ultimately limit the ACCC's ability to prevent potentially anti-competitive mergers in the electricity industry.

For instance, as evident in its statement of reasons in the acquisition by Singapore Power of TXU Australia[45], there is nothing to stop the ACCC adopting other market definitions in other merger assessments where it believes that is appropriate and would withstand judicial appeal. Consequently, the importance of the finding of a national market in the Loy Yang Decision therefore lies more with its impact on the bargaining positions of the ACCC and parties to potential electricity industry mergers, than on the outcome of any rigorous competition analysis of the effects of a proposed merger.

45 ACCC, *Assessment of SP Energy's acquisition of TXU Australia*, *op cit*, p. 3.

5. ELECTRICITY-SPECIFIC RULES

Outside of changes to the *TPA*, other changes to electricity industry merger processes have been suggested, including:

- industry specific merger guidelines; and
- cross-ownership restrictions.

Given the likelihood of ongoing electricity industry mergers, the ACCC may still face problems with the absence or unavailability of information when assessing some vertical mergers (other than those prohibited by cross-ownership restrictions). Although these information problems are intractable by definition, regulatory uncertainty may be reduced if the ACCC is able clearly to explain to industry, with supporting empirical examples, the circumstances in which it expects vertical mergers would be likely to be anti-competitive.

5.1 INDUSTRY-SPECIFIC MERGER GUIDELINES

ACCC's Merger Guidelines[46] are intended to provide businesses with an indication of the processes the ACCC follows in considering mergers and acquisitions. They include generic "safe harbour" market concentration thresholds below which mergers will ordinarily be accepted without assessment and other thresholds that signal potential substantial lessening of competition in different circumstances.

In its recommendations on electricity industry market structure issues, the Parer Review recommended, *inter alia*[47]:

> *"the ACCC needs to include in its Merger Guidelines specific criteria relating to mergers between generators. The ability of generators to exercise market power in a costly way at particular times should be explicitly recognised. More competition is needed than would be normally required in other industries to address this concern."*

However, the PC subsequently noted[48]:

> *"the recommendation appears to have been overtaken by events with, in particular, recent moves towards vertical reintegration of generators and retailers"*

But the PC also acknowledged that[49]:

> *"electricity generation has some unusual characteristics which, in combination, may mean the industry-wide concentration ratios specified in the ACCC merger guidelines, are too high to be effective as an initial screening device for market power in this sector."*

This issue was raised in section 3.3. Because generator market power arises from intermittent capacity constraints, it is unlikely to be addressed by "more competition" as suggested by Parer. Moreover, it is not clear that the problem can be addressed by simply fixing a set of electricity-specific merger thresholds.

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46 The Merger Guidelines have evolved over time and have recently been revised in light of past experience and the recommendations of the Dawson Inquiry. They presently comprise the July 2006 *Merger review process guidelines* which supplement the *Merger Guidelines 1999*, and replace the *Guideline for Informal Merger Review* originally issued in October 2004. See: http://www.accc.gov.au/content/index.phtml/itemId/589109.

47 CoAG Energy Market Review, *Final Report: Towards a truly national and efficient energy market*, *op cit*, p. 21.

48 Productivity Commission, *Review of National Competition Policy Reforms*, *op cit*, p. 189.

49 Productivity Commission, *Review of National Competition Policy Reforms*, *op cit*, p. 190.

The ACCC already has the discretion to institute a competition assessment where it believes a merger is likely to be anti-competitive, even if the merger notionally falls under the safe haven thresholds in the Merger Guidelines. Given there is no clear-cut link between market concentration and potential anti-competitive effects in most industries, there is no reason to define a separate set of thresholds for electricity industry mergers. The thresholds would not bind the ACCC and are unlikely to provide a useful guide to industry about the ACCC's likely treatment of small generator mergers.

Instead, it seems likely that electricity industry and the ACCC will, over time, informally develop an understanding of the levels of thresholds that are likely to raise substantial lessening of competition concerns with horizontal mergers.

5.2 CROSS-OWNERSHIP RESTRICTIONS

Cross-ownership restrictions are a blunt instrument, not to be adopted lightly. They allow no scope for formal or informal assessment of the public benefits of mergers and do not allow changes in market structure in response to price signals.

In February 2006, the Council of Australian Governments (COAG) asked the Ministerial Council on Energy to develop specific recommendations under the National Electricity Law to maintain the separation of competitive generation and monopoly transmission activities in the national electricity market.

Cross-ownership provisions were a necessary part of the initial disaggregation of the Victorian and South Australian electricity industries, since without them there would have been substantial pressure for immediate reintegration and no scope for the development of a functional hedge market. That is, the hedge market would have been unlikely to develop to the point where it could have provided the financial services necessary to sustain a disaggregated industry if firms had re-aggregation as an immediate alternative. It is not clear that the cross-ownership provisions are now required for this purpose. Unlike the earlier Victorian and South Australian sales, the hedge markets are already established and would prevent undesirable immediate reintegration if NSW and Queensland electricity assets were privatised into dispersed ownership.

The decision by COAG to enforce strict separation of ownership or control of transmission from other segments of electricity supply should ensure none of the potential anti-competitive risks of vertical integration involving transmission will arise while some of the major generation and distribution assets remain in essentially centralised government control. If NSW and Queensland properly disaggregate, and possibly privatise, their electricity assets, it may then be possible to lift cross-ownership prohibitions and leave decisions about the competitiveness and efficiency of vertical integration including transmission assets to the ACCC. Despite the potential costs of blocking efficiency-improving vertical mergers, cross-ownership restrictions on transmission might therefore have net benefits in the short- to medium-term.

As noted above, a problem arises if the ACCC cannot adequately demonstrate the likelihood of a substantial lessening of competition when the source of that lessening will be actions that are intrinsically difficult to observe contemporaneously or to prove after the event. The ACCC has argued that cross-ownership provisions are justified by its inability to justify its concerns about some electricity industry mergers to the satisfaction of the courts.

A blanket prohibition on generation/transmission mergers means the ACCC would not have to substantiate its *a priori* expectation of a substantial lessening of competition in such cases. However, this necessarily precludes any detailed assessment of the costs and benefits of the prohibition, since, by definition, the consequences of the merger are difficult to quantify. This "Catch-22" means implementing cross-ownership restrictions reveals an in-principle preference by COAG for maintaining vertical separation, but without specific evidence of the net benefits of the resulting industry structure.

Similar reasoning might be applied to mergers involving firms that control distribution networks. As discussed in section 3.2 above, the sources of potential vertical foreclosure in that case are similar to those in mergers with owners of transmission networks. However, unlike transmission networks, the present trend appears to be towards divestment by integrated firms of their distribution networks and future reintegration would require section 50 approval. While this does not rule out the possibility that cross-ownership restrictions might be needed to prevent or inhibit vertical mergers with distribution networks in future, the likelihood and efficiency cost of their anti-competitive effects are probably not of the same magnitude as for transmission network mergers. Consequently, there does not seem to be the same immediate justification for cross-ownership restrictions for distribution networks as applied for transmission.

5.3 OTHER CHANGES

Given the likelihood of ongoing electricity industry mergers, the ACCC will continue to have to assess the potential for substantial lessening of competition in circumstances that have caused it problems in the past. In recent years the ACCC has invested substantially in internal and external research into electricity markets, including data gathering and analysis, and has had the opportunity to build its corporate expertise through its assessment of proposals for electricity mergers or acquisitions. This should help to:

- reduce regulatory uncertainty and minimise the incidence of disputes over rejected merger proposals;
- improve the ACCC's chances of having its position supported if disputes are contested in the Federal Court or the Australia Competition Tribunal; and
- better prosecute, to the extent possible, any anti-competitive conduct that becomes apparent after mergers have been allowed.

The some of the problems the ACCC has identified with mergers between regulated and contestable electricity firms arise from the absence or unavailability of information. Although continued research and monitoring, appropriately resourced, can reduce some difficulties with substantiating perceived sources of substantial lessening of competition, the likelihood of the type of conduct the ACCC is concerned about is inherently difficult, if not impossible, to predict *ex ante* and similarly difficult to prove *ex post*. While the COAG decision to maintain the separation of competitive generation and monopoly transmission activities removes this problem in one important class of potential mergers, the ACCC may still face problems when assessing vertical mergers involving regulated distribution networks.

The ACCC could also reduce the regulatory uncertainty created by the practical difficulties of substantiating its concerns with vertical mergers by proactively identifying which characteristics of vertical merger proposals suggest the likelihood of a substantial lessening of competition. That is, if it could clearly explain, with supporting empirical examples, the circumstances in which it expects vertical mergers will be likely to be anti-competitive, the ACCC could more confidently enter into discussions with merger participants or commence or defend court action, even when the *prima facie* legal case is not strong in either direction.

Such an explanation may now emerge naturally as a consequence of the recent changes to *TPA* merger procedures arising out of the Dawson review, as the ACCC will have to provide reasons for its decisions on merger proposals. However, if it does not provide a clear identify how substantial lessening of competition is likely to arise, or the *ex ante* indicators it will use to assess the likelihood of anti-competitive conduct or outcomes, the ACCC will have to defend decisions about proposed vertical mergers that will appear to be based on little more than suspicion of anti-competitive conduct.