

An Industry Case Study on
Cost-Minimisation Strategies of
Residential Retail in the Australian
National Electricity Market

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ABSTRACT

A cornerstone of the restructuring of Australia's electricity industry was the creation of a competitive retail electricity market. However, a primary challenge is to introduce competition without losing the benefit of cost-minimisation strategies of economies such as scale, integration and scope (Beato and Fuento, 1999; New South Wales Government, 2001; Quiggin, 2001; Ramos-Real, 2005). Now, the electricity market is showing signs of reduced competitive numbers in the residential retail market and oligopoly, with a shift to three large vertically integrated energy conglomerates and few new retailers.

This thesis examines how the industry, firm behaviour, regulation and competition in Australia National Electricity Market for residential retail operated for cost-minimisation strategies in economies of retail electricity. To accommodate the poor availability of firm cost data and only 16 residential retailers competing in the Australian National Electricity Market (NEM) this research follows an industry case study research strategy. Using a triangulation of data drawn from December 2004 to 2010, on the industry and market structure, regulation and competition to identify how cost-minimisation strategies operate for economies of residential retail electricity.

The research effectively identified cost-minimisation strategies by retailers, and led to the conclusion that vertical and horizontal integration can account for a shift to fewer and large retailers and reduced competitive numbers. There are economies of scope and the key area is in dual fuel of gas and electricity this mainly coming from gas firms buying into the electricity industry. Economies of scale exist in customer service technologies and perform as an L shaped stepped curve, with the steps reflecting differences in retail technology to firm size capacity. Furthermore, there

was evidence that firms had a perception of economies of scale in retail electricity, which supported the motivation for expansion.

The main influences for the vertical and horizontal integration sources of economies in residential retail electricity are the transaction costs in cost of goods sold (purchases), and residential customer costs of competition. The competitive market design, related to auction wholesale trading, explains much of the shift from disaggregation to vertically integrated firms. Inherent factors related to ineffective storage and electricity nature make the industry a supply driven market with demand fluctuating and inelastic in the residential market to offset these issue horizontal and vertical integration plays an important role in offsetting wholesale trading costs. Regulation is not an obstacle to competition. However, effective competition is strongly dependent on much greater integration of market design, industry structure, government policy and regulation, firms, consumers and the court system. The policy implication for effective competition in residential retail markets is that design of the auction wholesale market and competition costs for residential customers with the inherent nature of electricity being supply driven have resulted in particular economies of vertical and horizontal integration and scope requiring regulation to support effective competition.

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