



# Independent regulation of government-owned monopolies: An oxymoron? The case of electricity distribution in Australia<sup>☆</sup>



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## ABSTRACT

The network component of household electricity bills served by government-owned network service providers in Australia more than doubled between 2007 and 2013. Their regulated assets and profits more than tripled over this period. These outcomes have been delivered under a similar system of price cap regulation that has delivered quite different outcomes in Great Britain, and in Victoria (Australia) to the privately owned network service providers in that state. We conclude that changes in operating conditions, demand, customer numbers or reliability do not explain this. Rather we find that government ownership has undermined the authority and independence of economic regulation. The Australian experience in the regulation of government-owned electricity distributors casts doubt on the assumption that regulation can be entirely independent of government ownership, or would operate in the same way as for an entity in private ownership.

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## 1. Introduction

Household electricity prices in the main capital cities of Australia doubled on average between the end of 2007 and the end of 2013. Having roughly kept pace with the consumer price index since records began in 1980, this was unprecedented.

The main reason for this increase for many but not all households has been higher charges for network services. The network component of household electricity bills for households served by government-owned network service providers (NSPs) more than doubled in constant currency over the same period. These outcomes have been delivered under a similar system of price cap regulation that has delivered quite different outcomes in Great Britain, and in Victoria (Australia) to the privately owned NSPs in that state.

The focus of this paper is on the relationship between ownership and regulation. It suggests that ownership matters to regulatory independence based on the evidence that the implementation of

price cap regulation of government-owned NSPs has delivered exactly what it was not meant to deliver, while at the same time price cap regulation of privately owned NSPs has been broadly successful.

In some Australian states, as in other countries, governments have been unable to secure popular support for privatisation. In the absence of privatisation, a regulatory approach, based on the price cap approach adopted in Britain has nevertheless been implemented and applied to the state government-owned NSPs as if they are privately owned. When this was adopted in the late 1990s it was not clear whether this reflected an intentional rejection of the guidance from Austrian economics,<sup>1</sup> agency theory<sup>2</sup> and public choice theories<sup>3</sup> that ownership does matter, or whether it

<sup>1</sup> Demsetz, H. (1967). "Towards a theory of property rights." *American Economic Review* (Proceedings), Littlechild, S. C. (1978). *The Fallacy of the Mixed Economy: An Austrian critique of recent economic thinking and policy*. Hobart Paper 80. I. o. E. Affairs. London.

<sup>2</sup> Ross, S. A. (1973). "The Economic Theory of Agency: the Principal's Problem." *American Economic Review* 62: 134–139., De Alessi, L. (1980). "The economics of property rights: a review of the evidence" *Research in Law and Economics* 2: 1–47.

<sup>3</sup> (Stigler, G. J. (1971). "The Theory of Economic Regulation." *The Bell Journal of Economics and Management Science* 2(1): 3–21., Buchanan, J. M. (1972). *The theory of public choice*. Michigan, University of Michigan Press. Peltzman, S. (1976). "Towards a More General Theory of Regulation." *Journal of Law and Economics* 19(2): 211–240.

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reflected a desire to proceed with what might have been considered a partial solution in view of the political realities preventing privatisation.

As the disparity in the performance of government and privately owned NSPs has become evident, the government owned NSPs and the regulators have argued that factors other than regulation and ownership explain the disparity. This paper suggests the contrary and seeks to shed light on the role that seemingly independent regulation of government-owned networks has had in explaining these outcomes. It builds on earlier work<sup>4</sup> which called for further analysis of company-specific data. The paper begins by describing the industry structure, summarising relevant outcomes and assessing commonly cited explanations for those outcomes. It then discusses the roles of ownership and regulation as explanatory factors and finally concludes.

## 2. Industry structure and regulatory arrangements

From the early 1990s, the electricity sector in several parts of Australia began to be reformed following, roughly, the changes in that occurred in Britain about a decade earlier. This involved vertical disaggregation of generation, transmission, distribution and retailing (supply).

State-based regulatory commissions applied five yearly price caps to five privately owned NSPs in Victoria (from 1994), and one in South Australia (from 1999), one public-private partnership in the Australian Capital Territory (from 2000), and then also to three state government owned NSPs in New South Wales, two in Queensland, one in Tasmania and one in Western Australia. Although half of the NSPs in the south and eastern states are privately owned, around three quarters of electricity users are still served by government-owned distributors.

As part of the reform, state government owned distributors were corporatised (subject to companies law) and required to pay income tax to the Commonwealth (Australian) Government. However this income tax is then paid to the state government that owns the NSP because the Australian Constitution precludes the Commonwealth Government from taxing state governments. The government owned NSPs are funded by their state treasuries.

In 2004, state and territory governments in the south and eastern states chose to transfer economic regulation to the Australian Energy Regulator (AER). At the same time, the Australian Energy Markets Commission (AEMC) was created. This “federalisation” and bifurcation of regulation was justified on the basis that it would lower the cost and complexity of regulation as perceived by investors, enhance regulatory certainty and ensure national uniformity (see (Ministerial Council on Energy, 2003)).

The AEMC is a rule maker and advisor to a ministerial council<sup>5</sup> representing state government energy ministers, and is chaired by the federal energy minister. This arrangement bifurcates the design of economic regulation (by the AEMC) from its implementation (by the AER). As far as we know this arrangement is not adopted in other countries.

Privatisation of the remaining six government-owned network service providers has been problematic. Previous state

governments in New South Wales in 1997 and again in 2008 sought to privatise their NSPs, but were unable to pass legislation. The governments in New South Wales and Queensland have recently committed to seek an electoral mandate to privatise their NSPs. The Commonwealth Government is promoting privatisation including through financial support for state government infrastructure investment, as part compensation for the loss of income tax currently collected by the state governments.

## 3. Outcomes

### 3.1. Prices and quality of supply

Network charges for households in Australia are now around 2.5 times higher than those in Britain.<sup>6</sup> There is however a significant range amongst individual firms both in Britain and Australia. The highest price NSPs in Australia are charging households about nine times as much as the lowest NSPs in Britain. On the other hand the lowest Australian NSPs are charging households about 20% less than the highest in Britain.

The large increase in network charges in Australia explains why electricity prices in Australia are now amongst the highest globally (Mountain, 2012a). We calculate that network charges now account for about 60% of the typical household electricity bill for customers served by government-owned networks, and 30% for those customers served by privately owned networks. By comparison in Britain, around 20% of the household electricity bill is accounted for by network charges (Ofgem, 2013).

Much higher prices in Australia have not been associated with meaningful changes in the quality of supply. Australia’s metropolitan and most regional electricity users have long had a high quality of supply both before and after prices rose.<sup>7</sup> Remote rural customers served by single wire earth return or radial 11 kV lines have long experienced relatively lower quality of supply than their metropolitan peers and this continues.

### 3.2. Regulated assets

In the period from 2002 to 2013, government owned distributors incurred capital expenditure of \$8571 per connection. By comparison, privately owned distributors incurred capital expenditure of \$3240 per connection. The large increase in capital expenditure by government owned distributors has resulted in a significant expansion in the regulated asset value for government-owned NSPs, as shown in Fig. 1.<sup>8</sup>

In the Australian system, the regulated asset value is indexed at the consumer price index, and connection assets that are funded by customers and subsequently gifted to the NSPs are also reflected in the RAB, although costs associated with this are not recovered in regulated revenues. Government-owned networks are mostly

<sup>4</sup> Mountain, B. R. and S. C. Littlechild (2010). “Comparing electricity distribution network revenues and costs in New South Wales, Great Britain and Victoria.” *Energy Policy* 38: 5770–5782.

<sup>5</sup> Now known as the COAG Energy Council but previously known as the Standing Council on Energy and Resources and before that the Ministerial Council on Energy).

<sup>6</sup> At purchasing power parity rates of exchange. Based on published network tariffs in Australia and Britain and using average consumption data.

<sup>7</sup> On average about 300 min of outage per customer per year and two outages per customer per year.

<sup>8</sup> Sourced from regulated asset data (which reflects actual expenditure until 2010) and the regulatory regulated asset bases determined by the AER for regulatory control periods not yet complete. Data for the period to 2010 is available from regulatory decision documents from the state regulators from their websites (sometimes archived) and data for the regulatory periods under way can be obtained from regulatory decisions or Regulatory Information Notices both available from [www.aer.gov.au](http://www.aer.gov.au).

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