

Comparing electricity distribution network costs and revenues in New South Wales and Great Britain

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Bruce Mountain and Stephen Littlechild

Ongoing public policy questions include whether to privatise electricity networks and how to regulate them. This paper seeks to inform that debate by comparing the effects of different patterns of ownership and regulation of electricity distribution networks in New South Wales (NSW) and Great Britain (GB). In GB, the electricity the 14 electricity networks are now privately owned and regulated by Ofgem. In NSW the 3 electricity distributors are government-owned and regulated initially by IPART and later by the federal Australian Energy Regulator (AER).

In 2000, allowed distribution business revenues per customer in NSW were twice those in GB. Since then, NSW allowed revenues have increased markedly, and are projected to continue to do so, whereas GB revenues have shown little if any increase. By 2014, the NSW/GB revenue per customer multiple will be more than four.

These higher and increasing revenues are associated with higher and increasing operating costs and capital expenditure per customer in NSW compared with broadly constant costs per customer in GB. NSW regulators allow a higher return on capital.

Can these cost differences be explained by differences in the structure, geography or operating environment of the two sectors? Many aspects seem similar as between the two countries. Population density is lower in NSW but is not so different in the areas of the actual networks. NSW networks have fewer customers on average than in GB, but the scores on Ofgem's Composite Size Variable are not significantly different. In GB some companies own two or three networks: this might account for about a

10% difference in costs but not for cost differences of the level observed.

We then compare the regulatory frameworks. There are three noticeable differences. First, Ofgem in GB has more discretion as to how to carry out a price control review than does the AER. Second, in GB the onus of proof is on the companies to explain why the regulator's price control proposal is not reasonable whereas in NSW the onus is on the regulator to explain why the regulated company's proposal is not reasonable. Third, if a company appeals in GB then the whole price control proposal is re-examined and the appeal may make the company worse off. In NSW the company can limit the grounds of appeal to particular aspects of concern to it, and the outcome can make the company better off but not worse off. In our view, these three differences can partly explain the less lenient regulatory treatment in GB compared to NSW.

How has each regulator operated within its own framework? Ofgem in GB has made much greater use of benchmarking to enhance incentives (including the collection of information, the development of regulatory accounts, the use of benchmarks, and the involvement of expert advisers). We also find that Ofgem has determined a noticeably lower allowed return on capital (WACC). In NSW the higher return recently allowed by the AER was subsequently increased even further on appeal.

In GB the electricity networks are privately owned, in NSW they are government-owned. A substantial economic literature has documented that privately owned networks tend to be more efficient. They have higher cost of capital and prefer lower capital expenditure. The GB companies tend to underspend against their regulatory capital and operating cost allowances whereas the NSW companies tend to overspend. Regulators in NSW have been accommodating with respect to such overspenders.

The higher and increasing per customer costs and allowed revenues in NSW compared to GB thus seem to reflect factors associated with ownership and regulation, rather than with the physical structure of the industry. A cross-check on this hypothesis is provided by Victoria, which is characterised by private ownership as in GB, and by regulation that was not dissimilar to that in GB during the last two price control periods. If our hypothesis is correct, the pattern of costs and revenues in Victoria should be more comparable to what is observed in GB than in NSW.

In terms of organisational arrangements (size of company) and physical network conditions, Victoria is faced with more demanding conditions than NSW. Its costs and allowed revenues were indeed higher in 2000. However, since then its costs and allowed revenues have decreased rather than increased, so that now they are lower than in NSW. This is comparable to initial experience in GB after privatisation.

Private ownership and/or effective regulation are thus likely to be important determinants of allowed costs and revenues. The comparisons suggest that the issue deserves further and more rigorous examination. It would seem helpful to study other states in Australia. Econometric analyses using network or company-specific data rather than state-wide aggregates may be able to quantify the explanatory factors.

There are potentially important implications for public policy. Government, regulators and energy users in GB can perhaps take some comfort in the results, although questions have been raised (not least by Ofgem itself) as to whether the approach taken in the past is sustainable and appropriate in the future.

In Australia, obvious questions arise. Are the present restrictions on the AER appropriate? Could the AER do more to encourage efficiency even within its present regulatory framework? Is it time to consider privatisation of electricity and other businesses where this has not yet taken place?

Contact
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sclittlechild@tanworth.mercianet.co.uk
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