

Comments on Electricity Network Regulation Draft Report

((The Commission's reference is in blue, my response is in black))

Footnote 17

The MEU has not ever commissioned research from me. The reference here should be to the EUAA

Similarly, while higher revenues per connection *could* be a reasonable measure of inefficiency (as claimed by Mountain 2011 and Mountain and Littlechild 2010) (page 158)

Neither Mountain and Littlechild (2010) or Mountain (2011) made such claims.

Many of the criticisms levelled by network businesses against the benchmarking findings of Mountain and Littlechild (2010) ... (page 161)

Mountain and Littlechild (2010) did not claim to make “benchmarking” findings

It is doubtful, given their large magnitude, that these gaps genuinely reflect differences in the underlying productive efficiency of the businesses. (page 222)

This statement seems to be contradicted by the Commission's observations on page 145.

What constitutes a reasonable difference within which the Commission would consider that gaps could possibly reflect changes in underlying productive efficiency? Neither the Commission (nor any other party) has provided plausible explanation of exogenous factors that have might explain the remarkable expansion of the RAB of government-owned NSPs over the last decade. In the absence of such plausible explanations, on what basis can the Commission rule out such large declines in underlying productive efficiency?

Other benchmarking studies of Australian network businesses ... However, most did not report efficiency gaps as wide as Mountain (2011) (page 223).

I think this statement is incorrect:

1. Almost all of these studies – of distributors in the NEM - were of opex exclusively. My analysis of opex changes relative to changes in customer numbers and so on, produces conclusions that are indeed comparable to those studies that focussed only on opex. More importantly, I think all of this means little. As the

Commission noted on EnerNOC's submission "opex bad, capex good" - a comparison of opex alone means little since it has been distorted by regulatory incentives to capitalize expenditure.

2. None of the studies mentioned focussed on capex or RAB changes, as I did, and in this respect are not methodologically comparable to mine, and so should not be compared to mine for the purpose of drawing contrasting conclusions.

3. None of the studies (even those that looked at TFP) were of comparable measures of changes in efficiency over time, as mine and in this respect are not methodologically comparable to mine, and hence their conclusions not comparable.

In particular, network businesses have questioned the stark findings of Mountain's various studies. (page 225)

"Stark" is emotive and in this context perhaps pejorative.

NERA pointed out several limitations in Mountain's 2011 study (and effectively Mountain and Littlechild's 2010 paper), including that it:

- used a model specification that ignored the fixed costs of networks (by setting a zero intercept in his regression model)
- failed to report any specification tests
- did not systematically consider the ratio of peak to average demand or the lumpy nature of investment
- did not control for all differences in the operating conditions between firms.

of these points, the first two are correct, albeit it is not clear that much of a bias is associated with Mountain's assumption about the intercept. (page 225)

Several comments:

1. NERA is indeed critical of Mountain and Littlechild (2010) but not for the reasons cited in any of these bullet points (Mountain and Littlechild 2010 did not develop regression-based benchmarks to which these comments refer).

2. The drafting "NERA pointed out several limitations in Mountain's 2011 study ..." is, I suggest, incorrect. NERA made many allegations of flaws in my work (I don't think they called them "limitations"). I would suggest, and evidently the Commission's main conclusion seems to agree, that neither "several limitations" nor "have been pointed out" are terribly accurate descriptors of NERA's seminal contribution.

Of these points, the first two are correct (page 226)

I am not clear on the second statement (on specification tests). What specification test should have been done, that was not done?

In the case of the international comparisons of Australia with the UK, NERA correctly pointed out that Mountain used market exchange rates, not purchasing power parity rates (for which there is more theoretical justification) (page 226)

I disagree that PPP rates of exchange are necessarily more theoretically (or practically) appropriate for consideration of the relative valuation of regulated assets. The regulated asset value is the depreciated, escalated (for inflation) value of assets acquired over a long period of time (up to 60 years before). Over this period the exchange rates and PPP rates will have changed significantly. Why is it any more correct to compare the regulated asset base at a single point in time using PPP adjusted rates of exchange (when the assets in the RAB will not have been acquired at such rates).

The third point is true in terms of the regression analysis since Mountain did not include the load factor as a regressor (page 226)

This seems somewhat spurious. The load factor of the networks (by which I infer the Commission means the ratio of average to peak demand) will not have meaningfully changed (in absolute terms for any network service provider and in relative terms amongst service providers) over the period of analysis. So it is not clear why it is suggested that my analysis is flawed because it did not entertain the prospect that load factor should have been considered a dependent variable in the regression?

The fourth point is true, but inevitably so for any model based on a limited sample.¹ Perhaps one of the most important concerns is the fact that, ideally, benchmarking analysis should take account of businesses' need to replace assets close to the end of their lives. Instead, Mountain compared the (weighted average) remaining life of assets of distribution network businesses in Victoria and South Australia with businesses in New South Wales and Queensland (finding the latter longer). NERA's concern is that what matters is the quantum of assets getting close to the point of expiry, not the weighted average age. NERA provides data comparing the distribution of asset lives for Ausgrid and SP Ausnet, which suggests that Ausgrid would need a greater capex expansion rate given its asset vintage distribution. However, the expansion rate in New South Wales is not just moderately higher than Victoria. Mountain finds that the New South Wales distributors received four times more capex per customer to replace ageing assets than Victorian businesses. If nothing else, this is an issue warranting further investigation. (Page 226)

I agree that this area warrants further study. But I disagree with the broad thrust of this point, which suggests that a comparative assessment of the weighted average remaining asset life is inferior to an analysis of the “quantum of assets getting close to the point of expiry”.

I suggest the point that the Commission seems to have missed, is that the quantum of assets getting close to expiry is not knowable with certainty. There are many things that NSPs can do to extend the life of assets, and replacement of assets can take many forms. NERA (or their network business clients) can allege when an asset is nearing the end of its life, and what needs to be spent to replace it, but this will always be a subjective allegation – and clearly NSPs have incentives to say that more assets are nearing expiry and that it will cost a lot to replace them, since this allows for more generous budgets, which managers can be expected to prefer.

As such, allegations by the asset owners (or their consultants) as to the “quantum of assets getting close to expiry” do not *necessarily* provide a superior estimate of the reasonable level of replacement expenditure, than one based on the weighted average asset age.

[While NERA is correct to point out the differences in peak demand \(page 227\)](#)

I don't understand the Commission's point. What difference does the peak demand in Australia and Britain make? In addition, the Commission should be aware that Mountain and Littlechild did not draw conclusions on relative differences in efficiency between distributors in the UK or Australia.

[There are significant drawbacks in international comparisons \(chapter 4\) and, as such, Mountain's results and figure 6.2 are interesting but flawed. \(page 227\)](#)

This is a sweeping statement. Surely the point in any comparative assessment is to weigh relative strengths and weaknesses: should we ever compare because it is complex? International comparison is perhaps more complex than national comparisons (or at least introduces additional exogenous variables), but it is not clear why this is, ipso facto, a “drawback” that means conclusions are necessarily any more or less “flawed” than domestic comparisons.

[Notwithstanding the various flaws in Mountain's research ... \(page 227\)](#)

I find this sentence high-handed and not borne out by the Commission's own assessment of the apparent criticisms of my work or the work I have done with Professor Littlechild.

This would be akin to the kind of benchmarking analysis used by Mountain (2011) and Mountain and Littlechild (2010), in that the benchmarking model would estimate revenue per customer (page 272).

To be clear neither Mountain (2011) nor Mountain and Littlechild (2010) suggest measures of revenue per connection should be considered to be “benchmarks”.

Some leading experts are pessimistic about the usefulness of benchmarking in economic regulation ... (page 279)

The paper cited has a single author, Graham Shuttleworth, whereas the sentence refers to a plurality of “leading experts”. In addition, is Mr Shuttleworth a “leading” expert ? (The PC has not referred to any other experts in its report as “leading”, is there something special about Mr Shuttleworth?)

General comments

At several points from page 225, the Commission refers only to “Mountain’s” analysis, whereas in many cases, the reference is actually to work that I undertook with Professor Littlechild. I realise it that it becomes unwieldy to cite each source specifically on each occasion, but considering the contention surrounding these works, I would like to suggest that the Commission goes the extra yard where needed, to be precise on referencing.

Finally, as a general comment, I would like to stress that I have been careful in my analysis not to allege that differences in expenditures, assets and so on are necessarily attributable to differences in productive inefficiency. In fact I have not anywhere attempted productivity analyses, and only in Mountain (2011) did I develop a panel-data assessment of the change in efficiency of NEM distributors.

The main focus of my work has been to assess relative changes in costs and so on over time (not comparisons of absolute efficiency at a point in time), and then to consider the exogenous and endogenous factors that might explain this. I have not sought to make categorical or definitive conclusions of relative efficiency. Rather the main purpose has been to test the generally accepted explanation of the difference in expenditure between government and privately owned networks as being due to exogenous factors (historic underspending, ageing assets, demand growth, higher planning standards and so on).

Bruce Mountain
16 November 2012.