2003 ACCC REVIEW

OF

THE TRANSEND REVENUE CAP

An assessment of the benchmarking study included in the Transend Application

by

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Following on from conversations with ACCC staff, Headberry Partners carried out an in-depth review of the benchmarking work undertaken by Benchmark Economics (BE) on behalf of Transend (TE).

The work has been done to support the contentions in the MEG formal submission that the benchmarking work by TE is quite flawed for the use they have put it to.

From this review, a number of concerns arose which the ACCC should investigate further.

General observations:

- TE refers to the Pacific Economics Group (PEG) report on TE and ITOMS (page 14) but TE fails to share the detailed PEG report outcomes with stakeholders. This report should be made available for general review and scrutiny.

- Intriguingly, the BE work makes no reference to the ITOMS analysis and as the BE report is structured to give the indication that TE is a low cost operator, TE suggests that ITOMS is incorrect. This is in marked contrast to all the other transmission network service providers (TNSPs). Further, TE goes on to say that its reliability performance is such that lack of funding must be the cause. The Essential Services Commission (ESC) of Victoria now requires the Victorian distribution businesses to assess performance on a more detailed (feeder) basis and this has already indicated that other factors (environmental, design, etc) may be the prime causes of poor reliability, and that certain feeders are more exposed to these specific issues. Thus, causing the "average reliability" to be greatly influenced by a small number of specific causes and feeders which do not necessarily require major injection of opex or capex. It would be interesting to re-plot the TE figures in the ITOMS analysis using the claimed TE costs!

- There is a real concern that by accepting the Minister's (arbitrarily inflated) asset value, this will distort any benchmarking which uses the asset base as a comparator. Just using this new value has the potential to increase an allowance by the same proportion as the inflation amount for the asset base.

- BE provides a major explanation as to why supply capability should be used to justify the increases in capex and opex, and even asset value, and uses the concept of a road construction to substantiate its contention. The road comparison is a good one, but not for the reasons BE argue. The comparison argues that roads are not sized and generate the need for opex as an electricity transmission system is. This is not correct. A toll road gets its revenue from the numbers of cars that use the road (for numbers of cars relate MWh, for numbers of cars/hr in peak periods relate MW). Thus the peak numbers of cars sets the size of the road (2, 4 or 6 lanes which is driven by capital or asset value) and the total number of cars causes the deterioration of the road (or opex). BE argues that Transend has a larger number of connected generators which influences both asset value and opex. Again the road analogy helps. The generators connected can be related to the numbers of roads feeding to the toll way. Regardless of the numbers of feeders the same number of cars on the toll way will occur, as there is a fixed number of cars needed to transport the people (energy) to the demand centre. Thus, the road example only reinforces the basis that demand sets the size of the network, rather than the number of supply points. It is accepted that the analogy is not perfect, and that there are additional costs related to the connection of a few more power stations, but the increased number of power stations is very modest in relation to the total demand. There is little basis to change the basic comparator due to an increased number of power stations.

- TE accepts and actively takes up this concept of using supply capacity, as it seems to help support its claim for more funds.

- BE goes to considerable effort to explain that because there are so many differences between each transmission system, benchmarking is not a useful tool for regulators. They then go to extraordinary lengths to show that Transend is at the lower end of most comparisons. However, it should be remembered that if Australia is to use 'light handed' regulation, then benchmarking is the surrogate for replicating competition. It is well known that FERC and OFGEM both get very involved in the minutiae of each network service provider's application. Transend cannot have it both ways – either they accept benchmarking or in-depth analysis – consumers would support in-depth analysis as has been the trend overseas!

- BE refers to the trade off between opex and capex (BE page 7). This principle is accepted as it lies at the basis of capex for competitive enterprises, but then Transend wants both an increase in capex and an increase in opex. This same argument applied to analysis of the ElectraNet application. As rule, competitive enterprise will allow for capex if the opex saving for the capex is recovered within 1.5-2 years. If not there is no capex allowed.

- BE observes that benchmarking does not reflect the differences in scale or business conditions. This is accepted. That is why a large range of benchmarks incorporating international experience is needed. Otherwise, there are always complaints about unfair treatment of the regulated business by regulators. However Transend does not comment about the unfair treatment of downstream industry or domestic consumers in evaluation of its claims for increased charges. This is the very issue made in some detail by TCCI in its submission on the TE application.

- As an adjunct to this analysis, reference was made to the submission from Aurora, and more particularly, the three Hydro submissions. Much of the work included is supported. The Hydro's submission on capex is somewhat self-serving as they support each of their new proposals for generation, but fail to point out that much of the cost for connecting the new generators should be directly borne by the generator, and not by consumers. This "user pays" concept is the same approach taken by transmission/distribution companies when they require consumers to wear the "connection costs" when they are newly connected.

- With regard to the incentive scheme, Hydro points out quite rightly that only out-performance should be rewarded, even that part of the TE reward would come from just maintaining current performance – hardly a justification for a bonus. It should be noted that if consumers pay for the capex and opex which allows TE to perform better, then TE should not be rewarded at all. There is an expectation that TE is competent and will use the capex/opex sensibly to increase performance, but this performance increase comes for the contribution of consumers.

Detailed review of Benchmark Economics Analysis of Transend Operations

- All of the base data used by BE for the analysis relates to the amounts allowed for Transend by the Office of the Energy Regulator (OTTER). None of the data relates to the new claims by Transend. Thus, the asset value, the capex usage and opex used for all of the comparisons all relate to what OTTER approved. If the current claims are introduced, the comparisons with other Australian TNSPs will show a major difference if the claimed amounts are used, particularly as capex and opex all double from current levels, and the asset value increases by over 25% from reasonable assessments. This throws a significant doubt over the major benchmarking study done to justify the increases.

- BE figures 1 and 2 are based on current levels of opex. By and large, it is considered the current levels are appropriate. If opex is doubled as proposed by TE, the comparisons become odious

- BE pages 11 and 12 get into the issue of using supply capacity rather than demand as the control. This argument is spurious, but what it does is to reinforce that the number of generators will only affect the asset value of the network, and that by a small amount overall. Furthermore BE uses the OTTER value not the new value set by the Minister. Asset value is affected by the MW capacity of the system, just as the road size is set by the peak numbers of cars. There is only a low correlation between asset value and the number of power stations connected.

- In fig 4 BE uses current opex not claimed opex, and there is a close correlation between the TE actuals and Powerlink, TransGrid, SPI PowerNet.

- BE fig 5 fails to give the comparison of what the cost/demand megawatt (MW) would be, but clearly the TE numbers will move to the high end of the scale. Intriguingly the abscissa values used for TE in both figs 5 and 6 relates to demand MW not supply MW. Following fig 6 projections might be seen as justification for doubling TE total cost, but unfortunately the Western Power transmission costs have never been challenged in open forum and have been seen as excessive for many years. ElectraNet costs have always been considered excessive. Eliminating Western Power and ElectraNet, the current TE costs sit well in comparison with the other regulated TNSPs

- In section 2.4 BE comments about economies of scale but the so-called “line of best fit” is misleading. It should go through the zero-zero point, and should follow the well recognized formula cost1/cost2 = (size1/size2) to the power 0.7 which shows doubling size results in a cost increases of 60%. When a proper scaling line is drawn through the zero, TE sits nicely on the curve (using the OTTER value) along with ElectraNet, SPI PowerNet and TransGrid. BE fails to demonstrate the origin of the numbers for table1

- Figs 8, 9 and 10 use demand MW rather than stated BE preference for supply MW, but fails to explain why. There is doubt about what the value of fig 8 is, except to show that Powerlink, Western Power and ElectraNet are stringy networks. Using demand MW is the more appropriate basis for comparison

- BE fig 9 is misleading. Analysing the ElectraNet, TE and Western Power figures shows that TE is the average of these three and if Powerlink is added TE is just under the average by just over 5%, - hardly a significant deviation!

- In BE figs 11 and 12, there is use of the supply side MW again and the OTTER numbers. Converting these graphs to using demand side MW and the TE claimed amounts results in a totally different picture.

- BE states that asset value (and capex) is the leading cause for low reliability as measured by minutes off supply. Competitive industry recognizes that opex is more related to downtime. Other electricity supply authorities say outages are more often caused by environmental issues (eg dust, salt, rain, storms, even possums, etc)

- Figs 13 and 14 are quite misleading, and the discussion tends to cast doubt on the use of “minutes off supply” as an appropriate measure. For the discussion to have validity, the minutes off supply need to be calculated with (say) the top five customers excluded. Consumers have varying views as to the “reliability” of the TE system. For fig 14, if the $/km is adjusted for the amounts TE is claiming then the figure would show that TE relative performance is even worse than these charts imply and that TE performance should have to be similar to TransGrid and Western Power. This indicates an inappropriateness in relating reliability to asset value.

- Fig 15 uses OTTER opex and supply side MW. If demand MW and TE claimed opex are used, the chart demonstrates a totally different conclusion. In the second fig 15 (read 16) use of TE claimed opex again puts a different complexion on the conclusion BE implies.

- In 3.2.1 under the dialogue on “capex”, BE states that the Powerlink numbers need to be treated differently but BE could have added the network augmentation allowance ACCC awarded VENCorp to generate a useful comparison. When this is added the SPI PowerNet amount on figure 17 moves closer the trend line but still remains below it. If the claimed TE capex allowances and demand MW figures are used, again a very different story is demonstrated by these graphs.

- BE alleges that age of the generation assets gives an average age of the transmission networks. TE provides its age data directly in its submission and this matter was addressed in the Major Employers Group (MEG) submission in some depth. However the data provided by TE in its submission creates doubt as to the conclusions BE draws.

- Figs 19 and 20 use OTTER awarded values and there is a reasonably high correlation with the other networks. If BE had used supply MW (as it has in other comparisons) and the claimed TE amounts, the correlation would indicate TE moves to a less comparative position.

- BE then goes on to say that opex increases with energy density. BE fails to mention that equipment operating near its **current** carrying capacity probably requires more opex. To relate energy only to line length eliminates the benefit of operating at higher voltage gives any carrier. However asset value does recognize the higher costs associated with higher voltage and the cost trade of between high current/low voltage and low current/high voltage for the same energy transfer. Equally if the benchmark of opex to asset value is used, it should be recognized that the impact that artificially inflating the asset base would allow the unearned inflation of opex allowance

- BE fig 21 and table 3 revert to the use of demand MW rather than the BE preferred capacity MW. A line of best fit on fig 21 has TE sitting comfortably on it – Western Power is the odd one out. Using the TE claim for opex has a major change of implication of fig 21 to TE claims. If supply capacity is used for table 3, a totally different ranking emerges but there is doubt as to what benefit this table serves.

- BE alleges that TE load factor needs to be adjusted to reflect the generation installed and that more generators connected effectively reduces the implicit load factor. This concept discounts the impact of generator location. For example if a new generator was connected to the TE network between Palmerston and Georgetown, there would be an ostensible reduction in the apparent load density as assessed by BE with a very modest increase in TE assets.

- BE provides fig 22 to argue that the TE load duration curve is unusual. Comparing it to say the SPI PowerNet or ElectraNet load/duration curves excluding the high demand for 1% of time exhibited in SA and Victoria shows a much closer correlation to the TE curve with a similar large differential to the installed capacity.

- The real (as measured conventionally) high load capacity TE exhibits achieves the aims BE discusses in the section under load factor in section 3.2.2. Fig 23 clearly shows that with its high load factor the current OTTER opex to MW demand ratio is about correct (NB fig 23 incorrectly indicates supply MW is used for calculating the ordinate figures). If TE claimed amounts for opex are used then TE will be shown as claiming an excessive opex.

- The derivation of table 4 is not provided but appears to be based on the system installed capacity. As mentioned system installed capacity can be increased without increasing transmission assets and this locational impact needs to be accommodated in any analysis.