



# MAJOR ELECTRICITY USERS' GROUP

30 April 2004

Mr Paolo Ryan  
Manager, Network Performance  
Commerce Commission

By email to [electricity@comcom.govt.nz](mailto:electricity@comcom.govt.nz)

Dear Mr Ryan

## **Cross-submission on Commerce Commission conference on the ODV Handbook**

1. This is a cross-submission by the Major Electricity Users' Group (MEUG) on the material and transcripts presented at the Commerce Commission Conference on the Optimised Deprival Valuation (ODV) Handbook held 14-16 April 2004. MEUG response to the three questions asked by the Commerce Commission are:
  - a) The requirement that EV tests apply to all assets should be retained;
  - b) The requirement for an optimisation test for valuing underground to overhead assets values should be retained and
  - c) The status quo treatment of valuing easements should be retained.
2. At the conclusion of this cross-submission are comments on two further issues. First, comments on the proposal by Transpower to extend the planning period for transmission assets. Second, whether following the initial reset of Electricity Line Businesses (ELB) fixed asset values, the ongoing regulatory valuation methodology should be ODV, Depreciated Historic Cost (DHC) or a choice between either.

### **Question 22. EV test**

3. The Commission has asked, "*Please review the Transpower submission in relation to the economic valuation test and provide MEUG's view on that part of the submission (Day 3 transcript, pp 448-449).*"
4. The current Handbook requires an Economic Value (EV) test for all assets. In practice valuers identify and rank likely candidate areas (eg sparsely connected rural spurs) and undertake EV tests on each of those until such point that the Optimised Depreciated Replacement Cost (ODRC) exceeds EV. Those falling below this bar are subject to an EV adjustment. Valuers also undertake EV on some special purpose assets (eg Transpower HVDC link).

5. The draft Handbook recognises<sup>1</sup>, "*EV is an integral part of the ODV valuation method.*" MEUG agree with this.
6. Rather than retaining the onus of proof on ELB to discover where the EV test should be applied, the draft Handbook gives the Commission an option to require EV tests where the Commission considers ODRC exceeds EV. There is no question that EV should be retained, the issue in the draft handbook is whether the application of EV can be improved.
7. Transpower suggest the EV test be retained for remote spur lines but abolished for large inter-connectors. These two suggestions are discussed in separate sections below with concluding comments made on the practicality of the draft handbook treatment of EV.

#### **Should an EV test apply to remote spurs?**

8. Transpower suggest bypass opportunities are most likely in sparsely connected rural spurs and they should remain subject to EV tests. Mr Thomson for Transpower also notes the incremental cost of undertaking EV tests is low (Day 2 transcript, p 172), "*The methodology that Transpower uses for testing its spur lines is, you know, there's effectively very little cost for adding in additional spur lines, so we're not sure why there's such a large scale cost.*"
9. MEUG agrees with Transpower that EV tests should remain for sparsely connected rural spurs and see no reason why the costs of undertaking EV should be high. As MEUG have stated before, if there is an issue about the cost of conducting EV then a standardised methodology could be developed to lower costs. As MEUG stated at the conference, bypass opportunities and the quality of supply (ie change from n-1) for sparsely connected rural spurs are fast evolving and that will lead to more EV adjustments in the future.

#### **Should an EV test apply to large inter-connectors?**

10. Transpower suggest EV is not necessary for assets such as the HVDC because<sup>2</sup>, "*experience shows that large scale inter-connectors have a high EV because there is no plausible alternative.*"
11. PricewaterhouseCoopers suggested the same for significant distributor assets, refer Ms Taylor (Day 2 transcript, p218), "*We understand the EV of Vector's cable tunnel, for example, exceeds its ODRC.*"
12. MEUG disagrees with Transpower and PricewaterhouseCoopers on this point.
13. For these significant inter-connector or tunnelling investments there is always room for judgement about the scale of the investment and the opportunity cost of alternatives prior to those decisions being made. Once the investments are undertaken market forces also change supply and demand patterns to enable those sunk assets to be used efficiently (provided the assets are efficiently priced into the market). With no major changes in market conditions it is not surprising the EV of the HVDC now exceeds its EV. However markets are volatile and large changes can occur, eg
  - Decreases in demand such as the possibility of Comalco ceasing operations in 2012 when current contracts expire; or
  - Significant changes in supply patterns such as Genesis proceeding to build 2X400 MW coal fired power stations at Huntly within a decade after commissioning of the proposed e3p 380 MW CCGT in 2007<sup>3</sup>.

<sup>1</sup> Draft Handbook, paragraph 2.59, 22 December 2003

<sup>2</sup> Transpower presentation, slide 4, 15 April 2004

<sup>3</sup> Refer presentation by Genesis to MEUG Executive Committee, 21 April 2004

14. Both of these could significantly alter the EV of the existing HVDC and will definitely be material matters in decisions about when and how the HVDC might be upgraded.
15. Other points to note regarding the Transpower suggestion follow:
- a) Transpower slide 8 compares ODRC with EV over time. As noted above the trend of ODRC exceeding EV can be expected as the HVDC link is effectively at the end of its economic life and largely depreciated. A contrast with the RC rather than DRC would be more revealing especially as the substantial replacement of the HVDC link is imminent.
  - b) In the past there has been considerable debate about the assumptions underlying the EV of the HVDC – even small changes in key assumptions such as the assumed value of water in the South Island can result in large changes in the estimated EV. Transparency is needed to ensure this valuation is robust.
  - c) The framework for calculating the EV of the HVDC is in place and the incremental cost of undertaking a new EV test should be modest.
  - d) Given the significant value of the HVDC compared to the rest of Transpower's fixed asset base, the sensitivity of the EV test to assumptions made and the modest cost of undertaking an EV on the HVDC, then MEUG recommend the EV test for the HVDC be retained. Such an EV test will also provide valuable insights for the Part F transmission investment decision processes that will need to consider HVDC upgrade proposals.
16. PricewaterhouseCoopers reference to the Vector tunnel is also illustrative of the wide range of values possible from EV. As I recall the tunnel cost about \$120m but a temporary overhead line on railways easements was constructed for about \$20m. This may be an optimisation issue rather than an EV issue; nevertheless the materiality of the difference between the two values needs to be rigorously examined.
17. One aspect of both the HVDC and Vector tunnel valuation that needs to be considered is the extent to which those assets assist the ELB to provide other contestable services. For example the HVDC towers have fibre optics cables that MEUG understands are leased out. Vector may also be using its tunnel for its fibre optics cable business or other enterprises. In valuing the HVDC, Vectors tunnel and other large high value assets, care is needed to identify and remove any cross-subsidies of contestable businesses.

#### **Practicality of draft handbook EV requirement**

18. The proposal in the draft handbook that the Commission retain the right to require an EV does not seem workable unless the Commission proposes acquiring sufficient information to make a reasonable assessment of when an EV must be undertaken. If the Commission does not have this information it is difficult to envisage how it might decide when or when not to require ELB to undertake EV. The status quo is better because the EV is universal and the onus is on the ELB and valuers to meet the requirement.
19. In conclusion MEUG recommend the status quo requirement that an EV test apply to all assets.

#### **Question 23. Handbook treatment of under-grounding**

20. The Commission has asked, "*Please provide comments on the proposal to not include in the ODV Handbook the requirement to optimise underground assets to overhead (Day 3 transcript, p 449).*"

21. The current requirement to optimise underground to overhead, if that is the least cost modern equivalent, works well because it creates strong incentives on ELB to minimise under-grounding to that which is economic (in its own right or through contributions by another party) or required by local authority by-laws. ELB have incentives to ensure that the beneficiaries of under-grounding are identified and contributions to the investment are made. ELB also have an incentive to ensure local authorities are aware of the incremental cost of by-laws requiring under-grounding and how those are treated in the existing handbook. Often Trusts of Trust-owned ELB will use dividends to contribute to under-grounding work that is not least cost but has an aesthetic or other social benefit.
22. If the Handbook is changed to remove the requirement to optimise underground assets to overhead then the above incentives will be removed. Instead ELB will have an incentive to underground as many of their assets as possible, even where the overhead alternative is clearly economic or not required by local authority by-laws. There will also be pressure to accelerate under-grounding from consumers supplied by overhead services who are paying tariffs averaged to recover and make a return on the total overhead and underground asset base. These outcomes will lead to over-investment in under-grounding compared to retaining the status quo.
23. MEUG recommend that the existing handbook requirement that an optimisation test be applied to underground assets should remain, because the proposal to remove that requirement would lead to inefficient outcomes.

#### **Question 24. Valuing Easements**

24. The Commission has asked, "*From a principles perspective, what are the arguments either for or against including easements in the ODV valuation at replacement cost? (Day 3 transcript, p 450).*"
25. The draft Handbook (paragraph A.28 to A.29) retains the existing treatment of easements, ie nil value for easements acquired prior to January 1993 and at purchase cost (ie historic cost, HC) since that date unless the cost has already been expensed.
26. Several parties have suggested Replacement Cost (RC) be used to value easements acquired since January 1993. MEUG disagrees with that proposal and recommends that the Commission retain the status quo because easements are different from other fixed assets in a number of respects.
27. The only similarity with other fixed assets is that ELB owners should expect to recover the cost of their investment including an appropriate return for risk<sup>4</sup>. There are a number of important differences:
  - a) Fixed assets depreciate whereas easements do not. Price and profit thresholds need to ensure appropriate depreciation of fixed assets consistent with the valuation methodology used (HC or ODV) and methodology specific WACC. Similarly any threshold breach inquiry and subsequent price control regime would use building blocks applying consistent depreciation and WACC assumptions relevant to the specific valuation model. As easements do not depreciate they should be treated differently. Land owned by ELB also does not depreciate.
  - b) Whereas land owned by ELB can be valued at the opportunity cost of selling that land for another use, easements have no such market. Therefore land owned by ELB should be valued at current market value but there is no such thing as current

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<sup>4</sup> Note that easement costs might also be expensed in which case they should not form part of the ODV.

market value for easements and therefore actual cost is the only other reasonable alternative<sup>5</sup>.

The difference between land and easements is important. Land, with or without any type of easement on it, has a market value because it has multiple uses. An easement on land might restrict certain activities<sup>6</sup>. In some cases an easement might enhance the value of land because of improved access undertaken by the easement holder. However, if the use of the easement by the ELB is no longer needed, there is usually no other potential user for that easement.

- c) If easements were to be valued at RC there are at least five problems. First, there is no market for buying and selling existing easements as noted above.

Second, easements are not standardised and therefore not amenable to indexing. The terms and conditions of easements can vary widely depending on access rights needed and the propensity of the landowner to holdout or not. One easement agreement need bear no relation to the next even on a contiguous easement so which is the reference point for the RC?

Third, rules will need to be designed to adjust for changes in the regulatory environment so that a RC estimate undertaken now is equivalent to the regulatory environment when the easement was acquired. Changes in the application of the RMA, the role of landowner organisations (eg Federated Farmers) in assisting protocols to evolve and occasional political threats<sup>7</sup> since 1993 have all affected actual easement costs. How a RC approach might replicate those prior year conditions would be highly subjective.

Fourth, if RC is used to value easements then the optimisation rules will also have to change to require lowest cost easements routes to be assessed. It may be that with changes in land ownership alternative easements routes might be lower cost. There would be huge implementation issues and subjective decisions if optimisation of easements were required to ensure RC of easements is lowest cost<sup>8</sup>.

Fifth, there would be perverse incentives if latest easement acquisition costs were to be used as the RC for historic easements. For example ELB would have an incentive to seek the landowner most likely to holdout for as high a price as possible, and thereby lifting the value of all easements held by the ELB. Currently ELB have an incentive to minimise easement costs otherwise they risk further regulatory intervention if easement costs rise significantly. Hence ELB will reroute easements bypassing landowners holding out for excess rents. A shift to RC will remove this incentive.

28. The Queensland Competition Authority (QCA), "Electricity Distribution: Valuation of Easements," March 2004, has released a recent report on this subject. A copy of that report is attached. The report covers similar arguments as those noted above. There are also other issues raised such how to manage the risk of price shocks if a change from HC in valuing easements is made. The QCA argue it is best to get the valuation methodology right first and then worry about how to manage price shocks in later price determinations. MEUG do not believe that approach should apply to New Zealand because there is significant uncertainty on how valuation, risk and price mesh in the regulatory regime.

<sup>5</sup> There is another issue about how consumers and the Commission can be assured that actual cost paid is the least cost – that is not considered in this submission.

<sup>6</sup> For example excavating for a new gold discovery on land under the easement, though the landowner would probably find it worthwhile to find and pay to relocate services to a new easement

<sup>7</sup> Eg TranzRail attempt to charge for services crossing Crown lease of the rail corridor

<sup>8</sup> Eg transmission lines could follow public highways thereby reducing easement cost, but creating higher externalities such as accidents not borne by electricity industry. The Waikato river water pipeline to Auckland is an example or routing infrastructure down highways for expediency and avoidance of easement costs.

Hence while MEUG do not agree with the conclusion reached by the QCA that an indexed HC be used to value easements, the report is useful in highlighting issues to be considered.

29. Finally MEUG note that Transpower slide 17 states valuation costs are, "up to 50% for major transmission upgrades." There are three points to note:
- a) If these are upgrades rather than an entirely new line, why is the cost so high?
  - b) For such high costs Transpower should provide more information on what changes have occurred that have led to this, eg have land values been increasing? RMA costs increasing? Fewer alternative routes? Change from the Crown being the major counter-party for land access or changes in which other Crown entities manage easements? Are the incentives on ELB staff negotiating easements aligned with the objective of ensuring least cost?
  - c) The factors that have led to the high easement costs above also illustrate why an indexing or RC approach is impractical, ie because there are so many factors at any one time affecting individual easement arrangements that it is unlikely an adequate index or RC approach can be designed.

#### **Extending the planning period for transmission assets**

30. The draft ODV Handbook has proposed extending the planning period for transmission assets from ten to 15 years. Transpower has proposed that the period should be extended to 35 years, arguing that a shorter planning period reduces investment in new assets.
31. It may be true that a shorter planning period reduces investment in new assets, but this is not necessarily a bad thing. Unless the results of a long planning horizon are tightly monitored and critiqued, the outcome can be over-investment and stranded assets in the future, to the cost of the country as a whole. Once the planning period extends beyond 15 years, the number of alternative feasible generation location and load growth scenarios multiplies enormously. This uncertainty increases the value of investing more conservatively today and, conversely, increases the risks associated with making large lumpy investments that cannot easily be modified in the future. Real options analysis is a way of placing a value on retaining or expunging future investment flexibility. A transmission investment planning methodology that assumes continued demand growth without considering alternative means of meeting consumer requirements will lead to a biased result.
32. If the Commerce Commission (or the Electricity Commission) can ensure that independently verified real options analyses of Transpower's investment plans will be undertaken, then a planning period longer than 15 years may be reasonable. Without this safeguard, we believe that the potential costs to the nation of a longer planning period would be likely to outweigh any advantages. Hence, in the interests of consumers and until real options analysis or other techniques are in place (eg as part of the Part F processes), we recommend that the Commerce Commission confirm its current proposal to extend the planning period for transmission investments from ten years to 15 years.

#### **After the initial value reset, is a choice between DHC and ODV correct or should ODV only be retained?**

33. MEUG has previously expressed concern about the proposal to offer a choice between DHC and ODV once an initial valuation reset has been made. Theoretically MEUG accept that a regulatory monitoring and compliance regime using either could be designed which would make ELB and consumers indifferent between ODV and DHC. That begs the question: "Why give ELB the choice, why not choose one or the other?" Given the level of experience acquired using ODV to date, MEUG would prefer to retain ODV rather than shift to DHC. A lack of precision about the linkages in the threshold-assessment-control regime

(eg between valuation methodology, WACC and pricing) makes it likely that shifting to an entirely new DHC regime would benefit ELB that have the resources to find and take advantage of loopholes in the new regime more quickly than the Commission could close those loopholes.

34. Apart from the practical problems associated with changing to a new valuation basis, there are other arguments that ODV should be retained as a discipline on lines companies, particularly Transpower, given its current plans to embark on an expensive investment programme. The critical element of ODV compared to DHC is the EV test. In paragraphs 3 to 19 of this submission MEUG explain the benefits of retaining the EV test.
35. The fact that some ELB are keen to switch to DHC indicates where they think their own advantage lies. MEUG believe that consumers deserve to continue to receive the protection of the proxy commercial discipline (albeit imperfect) that ODV affords them.

Yours sincerely



Ralph Matthes  
Executive Director