

14 November 2003

Gareth Wilson  
Acting Manager  
Network Performance  
Commerce Commission  
PO Box 2351  
Wellington

Dear Mr Wilson

Please find attached a submission from the Energy Efficiency and Conservation Authority in response to the Commission's issues paper of 11 September 2003 concerning the development of a handbook for the ODV of electricity line business system fixed assets.

This submission can be publicly released in its entirety.

Yours sincerely

Ray Deacon  
Policy and Strategy Group

## **Energy Efficiency and Conservation Authority Submission to the Commerce Commission on:**

### **Development of a Handbook for Optimised Deprival Valuation of Electricity Lines Business System Fixed Assets.**

**14 November 2003**

#### **Summary**

1. This submission addresses the need to consider the likely introduction of Minimum Energy Performance Standards (MEPS) for distribution transformers when identifying standard assets and their replacement costs. It also reiterates points made in an earlier submission<sup>1</sup> concerning aspects of optimisation and economic valuation. This submission argues that distributed generation and demand-side response need to be considered as alternatives to further network reinforcement in the optimisation process. It also notes that the economic valuation component of the ODV methodology is likely to become more material and the reporting of these analyses is important to signal where distributed generation may efficiently locate.

#### **Standard Asset Replacement Costs**

2. It is very likely that New Zealand will implement mandatory energy performance standards for certain classes of electricity distribution system transformers in the near future. The impact of MEPS for transformers is that only transformers that meet, or better, the energy efficiency standard may be imported into, or manufactured and sold within, New Zealand. This will set a minimum standard for transformers where MEPS applies. However, we understand that the majority of transformers currently being purchased by network companies exceed the proposed standard.
3. A MEPS will effectively remove the opportunity for line owners (and anyone else) to import cheaper and less energy efficient transformers. Thus, MEPS will effectively place a floor on the replacement cost of certain classes of distribution transformers that could be used in New Zealand in the future.
4. Australia is intending to implement MEPS for certain classes of distribution transformers in October 2004. New Zealand is looking to harmonise with Australia and so will likely introduce the same MEPS at a

---

<sup>1</sup> EECA submission to the Commerce Commission of 11 November 2002 on the Commission's review of asset valuation methodologies.

similar time. EECA recently published a report<sup>2</sup> on this issue and circulated it widely for feedback. We are currently evaluating the responses.

5. The report notes that the proposed Australian MEPS is based on the Australian Standard AS 2374.12. Although New Zealand has no standard of its own, general practice is to use the UK Standard BS 171 or International Standard IES 60076 which are very similar to the Australian standards. Thus implementation of a MEPS based on Australian standards is likely to have little impact on New Zealand electricity networks. What MEPS will do is not allow these networks (and others) to replace transformers with cheaper, less energy efficient, models, should they wish to do so in the future.
6. Should New Zealand implement MEPS for distribution transformers, the Commission will have to consider its effect when specifying replacement costs in an ODV handbook. EECA will advise the Commission of the relevant details if and when MEPS is implemented.

### **ODV Methodology – Optimisation**

7. In its previous submission, EECA stated that optimisation in the current ODV handbook is restricted to considering alternate network configuration and component sizing for existing, sunk assets. EECA considers it appropriate that the value of demand-side response and distributed generation is considered as an alternative to network investment in the optimisation process. Further investment in a network may not be the optimal or least-cost solution for the connected consumers. However, the line owner arguably bears little risk from further investments in the network. Therefore, a failure to consider these alternatives to further network investment may result in inefficient capital investment and thus not maximise dynamic efficiency.
8. EECA is not proposing that the historic network be optimised with consideration of current demand-side and distributed generation technologies. The cost of such an analysis would almost certainly be prohibitive. The focus is forward looking and the optimisation process should consider the value of these technologies against the value of new network investment from some agreed date.
9. Consideration of distributed generation alternatives is discussed in the asset management plans that line owners are required to publicly disclose under the current Electricity (Information Disclosure) Regulations 1999. Therefore, extending the analysis for inclusion in a valuation report and including demand-side initiatives may not require

---

<sup>2</sup> Minimum Energy Performance Standards for Distribution Transformers by Murray Ellis of Dialogue Consultants Ltd, July 2003 available at: <http://www.eeca.govt.nz/content/MEPS/Minimum%20Efficiency%20Regulation%20for%20Distribution%20Transformers.pdf>

significant extra compliance costs. Further, this is the sort of analysis the network would be expected to be doing as part of a prudent capital expenditure program.

### **ODV Methodology – Economic Valuation**

10. As discussed in our earlier submission, EECA considers the EV component of a valuation methodology to be important. The Commission has already identified<sup>3</sup> that the EV component of the ODV methodology may become more material in the future as the cost of alternatives, such as distributed generation, falls and EECA agrees with this.
11. The continued identification of feeders and spurs subject to EV assessment and the reporting of results in the publicly disclosed valuation reports is important for signalling where distributed generation may be efficiently located for consumers' benefit. This is particularly important given that electricity line businesses can choose not to maintain existing connections after 2013 and may look to disconnect uneconomic consumers from that date.

### **Conclusions**

12. The likely introduction of MEPS for distribution transformers will have an effect on the standard replacement cost for these transformers for the purposes of ODV.
13. The optimisation process needs to consider appropriate non-network solutions and in particular demand-side and distributed generation investments.
14. The EV component of the ODV methodology is likely to become more material as investment in distributed generation increases. Disclosure of the EV analysis in the valuation reports sends important signals about where distributed generation may efficiently locate.

---

<sup>3</sup> Paragraph 5.44 of the Commission discussion paper: Review of Assets Valuation Methodologies: Electricity Lines Businesses' System Fixed Assets, October 2002.