Counties Power Limited

Submission to the Commerce Commission on

Draft Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Lines Businesses

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5 February 2004

Planning Periods

Many submissions on the previous Issues Paper argued for longer planning periods on the basis that the existing planning periods in the ODV handbook encourage a sub-optimal investment philosophy. Counties Power submits that this is a valid concern and longer planning periods are appropriate.

The Draft Report on the handbook development by PB Associates (23 December 03) states that:

> *"There is no fundamental reason why the valuation planning period should align with the optimum engineering planning period. For a regulator, the selection of a planning period should be determined by a view on the way the planning risk should be shared between the owners of an ELB and its customers"*

Counties Power believes that on a purely theoretical basis the above argument may have some merit, yet in the context of how the ODV rules are interpreted and applied in practice we believe strongly that the above approach is fundamentally flawed. The reason for this is that in general the interpretation of the ODV rules by senior Executives and Directors of NZ line companies aligns more with a philosophy that the ODV rules propose what is "appropriate" and that if anything gets optimised out of a network then the planners are "off policy". It is in practice impossible to separate engineering and other drivers. ELB planning behaviour is therefore substantially influenced by ODV rules. Short valuation planning periods in a long term infrastructure industry is consequently highly likely to result in sub-optimal engineering and economic outcomes.

Counties Power therefore submits that in terms of how the ODV rules are interpreted in practice there is compelling reason why the valuation planning period should align with the optimum engineering planning period.

Voltage Conversion

Electricity infrastructure assets have high capital costs and long lives. As a trust owned ELB Counties Power operates on the philosophy of minimising lifecycle costs and selecting planning periods and voltage levels so as to minimise total customer costs over time, while fully taking into account the time value of money. In line with the philosophy of lowest total customer costs over time Counties Power has initiated an 11kV to 22kV voltage conversion program, and is surprised that voltage conversion is not more widely employed by other ELBs. Counties Power believes that one of the prime reasons why voltage conversion is not more widely employed is because the interpretation of the ODV methodology encourages line companies to run networks constrained or very close to constrained, and thereby inhibits investment in areas of long term development and gain, such as voltage conversion.

As it is one of the aims of the government to promote efficiency it is encouraging that the quality of supply criteria in the draft handbook make reference to levels of electrical losses. Losses and the cost thereof are relevant in evaluating voltage

conversion programs. For example by increasing the voltage from 11kV to 22kV the line losses are reduced by 75% and increasing the voltage from 33kV to 110kV the line losses are reduced by 91%, for any given load and conductors.

The capacity of a voltage constrained rural distribution feeder can be quadrupled by converting from 11kV to 22kV while not altering the conductor size. In Counties Power's experience the incremental cost of upgrading a rural distribution feeder from 11kV to 22kV is relatively small (typically less then 5%). The net result is therefore a very large increase in line capacity for a small incremental cost.

This significant increase in line capacity is a very efficient and effective means of providing for future load growth. In addition, this increase in line capacity has significant benefits for being able to accommodate the connection of Distributed Generation at distribution level.

Counties Power therefore submits that if the Government is serious about the long term efficient distribution of electricity, and the facilitation of Distributed Generation, then the investment constraints created by such issues as price control and short term planning periods must be addressed. It is essential that the new ODV Handbook does not perpetuate this disincentive to the growth of an efficient power system.

In particular Counties Power submits that:

1. The valuation planning periods need to be brought into line with the optimum engineering planning periods, and
2. That any infrastructure resulting from a methodology and engineering principal that legitimately sets out to minimise customer costs over time should not result in value of that infrastructure being "optimised out" of the ODV. (To do otherwise is to misuse the concept "optimise" which in this context means *"to plan or carry out (an economic activity) with maximum efficiency".)*

Government Objective vs Current Suite of Proposed Rules

Counties Power fully supports the Government's overall objective; to ensure electricity is delivered in an efficient, fair, reliable and environmentally sustainable manner to all classes of consumer and to promote the long-term benefit to consumers. However, the proposed price control regime and proposed ODV Rulebook, with short valuation planning periods, do not appear to align with the Governments overall policy objective. In these aspects the current suite of proposed industry rules appear to actually undermine the overall Government objective.

Transmission Costs

Counties Power adopts a philosophy of minimising the total customer costs over time, irrespective of whether these costs form part of the transmission or distribution chain. An example is that Counties Power recently found the need to increase the zone

substation capacity at Pukekohe could be more cost effectively achieved overall by taking supply to the zone substation at 110kV as opposed to 33kV. In other words the increased long term cost to Counties Power was less then the avoided long term Transpower costs. (Effectively achieved by removing the 110kV / 33kV transformation step)

The above scenario is not well catered for in the Draft Handbook and Counties Power submits that it should be explicitly covered that if an ELB installs network assets that can be shown to optimise the total costs to customers (for example by reducing future Transpower costs) then there is no need to "optimise out" a portion of these ELB assets. In this context it is interesting to note the wide range of voltages that ELBs take supply from Transpower at (ranging from 110kV to 11kV). If the ODV process does not have the correct incentives for the ELBs to optimise the total cost to customers then there is the possibility of perverse outcomes such as ELBs taking supply at lower voltages from Transpower to simply shift Zone substation assets off of the ELB balance sheet onto the Transpower costs which are then "passed through".
