

Queensland  
Government

Department of  
Innovation and Information  
Economy

Office of Energy

Mr Gary Henry  
Queensland Competition Authority  
GPO Box 2257  
BRISBANE QLD 4001

Dear Mr Henry

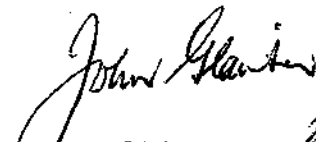
**Re: Submission – Electricity Distribution: Valuation of Easements**

I refer to your letter of 4 April 2003 notifying my office of the release of a Queensland Competition Authority discussion paper concerning the valuation of easements for electricity distribution.

The Office of Energy has prepared a submission on this matter, which I have attached to this letter for your consideration.

Should you have any questions in relation to this submission please do not hesitate to contact my office.

Yours sincerely

  
Dr John Glaister  
Executive Director  
Office of Energy

26/5/3

encl

## Office of Energy Submission Electricity Distribution: Valuation of Easements

This submission forms the views of the Office of Energy (OE) on the issue of the methodology to be applied in the valuation of easements for regulatory purposes.

### Easement Characteristics

Easements have unique characteristics that may provide the justification for different valuation treatment to system assets. Some have linked the value of easements to the value of the land they are held over. It is possible that this is the case, however, the relativity is likely to vary depending on the absolute value of the land. Nonetheless, there are those who argue that there is a strong case to treat land itself differently to system assets due to its characteristics. This merely strengthens the argument that it is appropriate to treat easements differently to the balance of the asset base.

### Indexed Historical Cost

Indexed historical cost is the actual cost of acquiring an easement, adjusted for inflation. This is a simple calculation method, which is easy and inexpensive to administer if records exist. The QCA states that an advantage of historical cost valuation (i.e. not indexed) is –

*“it acknowledges the investment made and provides compensation to the owner of the investment by providing a rate of return on the investment.”*

However, this is entirely incorrect. The amount invested historically in non-depreciating assets does not reflect the real level of investment due to reduced purchasing power of money. Also, the return on the investment is derived through the ability of the business cash flow to provide sufficient cash to compensate for the risk-adjusted level of investment. This is the concept of *economic value* and it is aligned with the indexed historical cost approach.

Economic value provides useful insight in ascribing value to easements. The concept's origins lie in the work of Alfred Marshall in 1890, who developed the notion of economic profit and Irving Fischer in 1930. There has been further academic work on the subject area in the 1950s and 1970s by Hirshleifer. Prominence was given to the subject by Rappaport with the 1986 publication *Creating Shareholder Value: the new standard for business performance*.

Economic value focuses upon real cash flows to and from the business. The return the business requires is calculated by multiplying the cash invested by the cost of capital. If this amount plus an appropriate amount for depreciation of depreciable items equals the adjusted cash flow, the economic return equals zero. That is, the business has earned sufficient cash profit to compensate it for its risk-adjusted investment. The tables below demonstrate the basic calculations of the method described above.

		Adjusted Cash Flow
(Cash Invested	Cash flow from operations	– Economic Depreciation
+ Inflation Adjustment)	+ (Interest x (1-tax rate))	– Capital Charge
x Cost of Capital	<hr/>	<hr/>
= Capital Charge	= Adjusted cash flow	= Economic Return

From the economic value perspective, indexed historical cost provides a sound basis for valuing easements. It recognises the amount of cash invested in the business in current dollars. However, if the asset in question is valued by the market higher than the real investment, this is superior because it represents the opportunity cost of capital. This is most likely with land because it appreciates in value. With easements, this may also be the case in some instances where the host land is particularly valuable. However, since many easements are hosted by relatively low valued land and the cost of the easement includes all establishment costs, it is more likely that indexed actual cost will represent the higher value. This methodology can also be applied to easements that were established without compensation to the land holder.

## **Market Value**

As mentioned above, the market value of an easement would represent a superior valuation method where this is higher than the indexed historical value, due to its recognition of the opportunity cost of the investment. The problem with this is that there is no directly observable market for easements. However, it may be possible to obtain market values for easements using an 'Unimproved Valuation Approach'.

The Department of Natural Resources and Mines periodically updates the unimproved value of land in Queensland.

*"The valuations are made on an unimproved basis under the Valuation of Land Act 1944. Unimproved value means the amount a parcel of land could be expected to sell for at the date of valuation, assuming that no improvements exist on the land. "Improvements" refers to things like houses, fences, levelling, filling, etc.*

### ***Preparing a "basis"***

*A registered valuer investigates properties which have been sold. It has been found that sales of vacant or lightly improved properties provide the best basis for comparison. The unimproved value is then calculated by deducting from the sale price the value of improvements such clearing, filling, earthworks and buildings .*

*Any market movement is then derived by comparing the calculated unimproved values with existing unimproved values."*

(Department of Natural Resources and Mines<sup>1</sup>)

It could therefore be expected that the value of land through which an easement runs, could be compared to similar land not burdened with easement rights, to derive a value for the easement. Put simply, the difference between the value of land with an easement and the value of similar land without, should be the value of the easement. Presumably, rural land with easements should not have a value too different to land without. Whereas, land encumbered with easements in urban areas would be expected to be valued much lower than otherwise, especially if it precludes improvements or subdivision.

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<sup>1</sup> [http://www.nrm.qld.gov.au/property/valuations/unimproved\\_valuation.html](http://www.nrm.qld.gov.au/property/valuations/unimproved_valuation.html)

The key problem with this method (and any other method of market valuation) is that it is probably the highest cost valuation exercise. Although some amount of subjectivity can be included in the valuations, this approach does provide a consistent and independent approach.

In the QCA discussion paper it seems that a linkage is drawn between the market value of land and the value of the easement. An SKM report cited in the paper implies that the deprival methodology should not be applied to Easements because it would windfall gains to distributors. A linkage between land value and easement value should not be automatically assumed because the easement does not represent ownership. The unimproved valuation approach described above should provide a delinked methodology and could form the basis for an optimised replacement cost methodology which does not introduce price shocks.

### **Price Shocks**

If it is determined that the present methodology for valuing easements is technically incorrect, OE is mindful that any change does not produce price shocks to customers, or disadvantage them relative to other jurisdictions.

In terms of price shocks, the QCA has dealt with this type of problem previously through glide path adjustments to revenue caps. OE would expect that the QCA will take a similar approach in this case.

In its discussion paper, the QCA states that IPART has adopted historical cost as a valuation methodology for NSW distribution networks. IPART has indicated that this decision is more to do with uncertainty with the regulatory treatment of easements and the unacceptable price shock that would occur from implementing deprival value. If distribution networks in other jurisdictions also recognise historical cost, Queensland customers will be faced with higher relative distribution costs if the QCA chooses a methodology that contributes higher easement values to asset bases. However, the ACCC has applied the indexed historical cost method in a number of transmission determinations and this could form a basis for future distribution determinations.

### **Conclusion**

The Office of Energy believes that the most appropriate valuation methodology for easements is indexed historical cost. It is simple to calculate, transparent and conforms to current asset roll-forward of assets methods. In addition, it is consistent with the concept of economic value.

Although market value of easements is technically superior when it provides a value higher than indexed historical cost, its key disadvantages are it:

- is more costly and time consuming to undertake;
- contains elements of subjectivity; and
- is expected to provide a higher valuation in only a small number of cases.

In addition, there remains some contention as to the method of determining market value, or indeed, whether it is appropriate at all.

OE expects that recent determinations by the ACCC should set a basis for indexed historical cost and therefore, jurisdictional regulators will adopt this methodology as well. However, it is concerned that any increase in easement values be smoothed to limit price shocks and short-term investment disincentives from relative distribution price differentials between jurisdictions.