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30 May 2003

Mr EJ Hall
Chief Executive
Queensland Competition Authority
GPO Box 2257
Brisbane Qld 4001

Attention Gary Henry

Dear Mr Hall

Electricity Distribution: Valuation of Easements

ENERGEX welcomes the opportunity to provide its views to the QCA on the issue of easement valuation. Please find attached our submission and a supporting report by Ernst & Young on applicable accounting standards for the valuation of easements.

ENERGEX favours a market-valuation methodology for the valuation of easements used to delivery electricity distribution services. Market-based valuation of easements would reflect the true opportunity costs of using easements in the delivery of electricity distribution services, and remove potential distortions in investment flowing from the application of historic or zero cost methodologies.

Yours sincerely

Trevor Lee
Group Manager, Regulatory Affairs



Enquiries
Trevor Lee
Telephone
(07) 3404 1825
Facsimile
(07) 3407 4608
Email
trevorlee
@energex.com.au

Corporate Office
150 Charlotte Street
Brisbane Qld 4000
GPO Box 1461
Brisbane Qld 4001
Telephone (07) 3407 4000
Facsimile (07) 3407 4609
www.energex.com.au

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ENERGEX Limited
ABN 40 078 849 055



SUBMISSION
TO THE
QUEENSLAND COMPETITION AUTHORITY:

VALUATION OF ELECTRICITY
DISTRIBUTION EASEMENTS

MAY 2003

Contact Person: Trevor Lee, Group Manager Regulatory Affairs
ENERGEX Limited
150 Charlotte Street
BRISBANE QLD 4000
Telephone: 3404 1825

ENERGEX Limited
ABN 40 078 849 055

1. EXECUTIVE SUMMARY

In April 2003, the Queensland Competition Authority (QCA) released a paper *Electricity Distribution: Valuation of Easements* (the discussion paper) seeking the views of interested parties on the appropriate methodology for valuing easements used to deliver electricity distribution services (electricity easements).

ENERGEX endorses a market-based valuation methodology, such as DORC, as the most appropriate basis for valuing electricity easements. In its view, a market-based valuation methodology:

- accurately reflects the true opportunity cost of investments in these assets;
- provides the appropriate incentives to choose how to invest in systems to supply electricity to users, that is by traditional means or through local generation sources;
- is consistent with the price at which ENERGEX acquires new easements;
- is consistent with the valuation methodology applied to ENERGEX's other assets;
- reflects the fact that easements are similar to other assets used to provide electricity distribution services, in particular land owned in freehold by ENERGEX;
- reduces inflation risk, which is a risk that is both unavoidable and difficult for ENERGEX to manage; and
- is consistent with regulatory decisions under National Competition Policy and the Hilmer reforms, such as with airports.

ENERGEX considers that the DORC valuation approach is feasible to implement and, as indicated in the attached report from Ernst & Young, accords with sound accounting practice.

This submission discusses:

- the position taken in the *Final Determination* by the QCA on the valuation of easements;
- the nature of easements, and ENERGEX's property portfolio;
- guiding principles in the selection of an asset valuation methodology;
- an assessment of alternative valuation methodologies for electricity easements; and
- criticisms of the market value approach.

2. 2001 FINAL DETERMINATION

In its May 2001 *Final Determination on the Regulation of Electricity Distribution (Final Determination)*, the QCA:

- valued electricity easements at historic cost; and
- identified the need to undertake further work to identify the most appropriate long term approach to the valuation of easements.

This decision was taken after consideration of:

- the perceived special nature of electricity easements;
- the lack of regulatory consensus; and
- interstate concerns about resulting price impacts.

Other electricity distribution assets, including ENERGEX's land assets, were valued on the basis of depreciated optimised replacement cost (DORC).

3. THE NATURE OF EASEMENTS AND ENERGEX'S PROPERTY PORTFOLIO

Easements provide a method for a third party to acquire a limited interest in land to permit it to carry out certain activities. Electricity easements typically provide an electricity transmission or distribution company with the right to enter land and construct overhead or underground powerlines, and to restrict the construction of improvements within a certain distance of the powerlines based on safety and maintenance requirements.¹

These easement uses are supported by two standard sets of conditions, one for freehold land and one for Crown land, which are registered in the Land Titles Office. Ergon and Powerlink have comparable easement terms.²

ENERGEX holds a portfolio of over 8,500 easements.³ Around 65 per cent of these provide corridors for major high voltage lines (typically 110 kV and above, but with some 11 and 33 kV), while the remainder provide for lower voltage overhead and underground lines within estates. Easements are not generally required where lines such as 11 and 33 kV lines run along roads. However, where 110 kV lines run along roads, ENERGEX has, in some circumstances, retained easements in the front yards of houses to ensure minimum clearance distances are maintained.⁴

Easements are, in general, a necessary part of supplying electricity distribution services. ENERGEX does have some limited discretion over the siting of transformers and poles, particularly for 33 and 11 kV lines. This may allow it to reduce its easement requirements where it chooses to run longer lines along roads rather than across private property.

ENERGEX is responsible for acquiring the easements that it requires for supplying electricity to customers. This is in contrast to government agencies and departments, where this activity is performed on their behalf by the Department of Natural Resources and Mines.

In acquiring new easements, ENERGEX strives to reach voluntary agreements with land-owners and to agree on appropriate compensation. Over ninety per cent of ENERGEX's easements are acquired in this way. Failing agreement, ENERGEX has power under the *Acquisition of Land Act 1967 (Qld)*, by virtue of its constructing authority status, to compulsorily acquire easements. In the case of compulsory acquisition, if agreement cannot be reached on appropriate compensation, then the matter may be referred to the Land Court for determination.

In basic terms, the acquisition price of easements is based on the extent to which the easement interferes with or diminishes the value of the underlying land. Court precedents suggest that the compensation payable for an overhead line easement should be 30 - 50 per cent of the easement area in the case of broadacre rural land, and generally 50 - 80 per cent in the case of urban land. Higher compensation is payable where the easement crosses through the centre of the land rather than runs down the edge of the land, or where the easement interferes with the development potential of the land. In cases where the easement severely impacts the land, it may be appropriate to purchase the land outright.

¹ ENERGEX also has a portfolio of wayleaves. Wayleaves provide ENERGEX with a perpetual right in relation to a property lot to retain and maintain existing assets whose placement on land was consented to by the current or previous property owners. Wayleaves are not registered under the *Land Titles Act 1994 (Qld)* but are subject to limited protection under section 112 of the *Electricity Act 1994 (Qld)*, which provides that the current property owner carries the onus of proof to demonstrate that electricity assets on a property were not placed there with the previous property owner's consent. This submission does not address the valuation of wayleaves.

² The *Lands Titles Act 1994 (Qld)* specifies the nature and extent of easements, including 'public utility easements'. See, in particular, sections 82- 89.

³ One easement is required for each property lot.

⁴ In addition, a small percentage of ENERGEX's easements consist of road or track easements which enable ENERGEX to gain access to carry out line maintenance.

4. GUIDING PRINCIPLES IN SELECTING AN ASSET VALUATION METHODOLOGY

ENERGEX considers that an appropriate valuation methodology should:

- reflect the true value (opportunity cost) of the assets;
- provide appropriate signals for new investment;
- be practical to implement; and
- be consistent with sound accounting practice.

These guidelines reflect the objectives of distribution service pricing stated in the National Electricity Code, and in particular the requirement to set prices to provide for “a sustainable commercial revenue stream which includes a fair and reasonable rate of return to distribution network owners on efficient investment” (clause 6.10.2 (b)(2)). They also reflect the policies behind National Competition Policy and the Hilmer reforms.

Accordingly, ENERGEX is of the view that these principles should guide the selection of the appropriate asset valuation methodology.

5. ALTERNATIVE VALUATION METHODOLOGIES FOR ELECTRICITY EASEMENTS

The QCA's discussion paper identifies four potential valuation methodologies for easements:

- historic cost;
- indexed historic cost;
- zero cost; and
- market value.

This paper discusses each of these methodologies in turn, and considers them in the context of the guiding principles identified in Section 4.

5.1. Historic Cost

Under this approach, the value of an easement is based upon the dollar, or book cost, of acquiring the easement, including legal costs incurred in drawing up the easement, and on-costs associated with negotiating and administering the easement.

Reflect the true opportunity costs of assets

The fundamental problem with historic cost valuation is that it is not based on any economic principle. That is, it does not reflect the current opportunity costs of holding easement assets. In its *Final Determination*, the QCA rejected the historic cost valuation methodology in relation to electricity distribution assets other than easements because it does not address incompatibilities “between historical values of capital assets (and capital costs) and current values for other expenses and revenues”.

Leading commentators, such as the Productivity Commission and Professor Henry Ergas, have similarly criticised the historic cost valuation methodology:

Historical cost can produce misleading results due to the impact of changing market environments, technical obsolescence and inflation, particularly given the relative longevity of some assets controlled by GTEs. (Productivity Commission 2002, p. 39)

and:

adding a sequence of [capital] purchases at nominal prices will not measure the cumulated opportunity cost of the funds actually invested in the firm. (Ergas 2000, p. 4)

The discussion paper questions whether the deficiencies of historic cost valuation are particularly relevant given the fact that:

- easements do not need to be replaced; and
- technological innovation has a limited impact on easements.

ENERGEX would dispute the view that easements should be valued differently to other electricity distribution assets on the basis that easements do not need to be replaced. ENERGEX has little opportunity to replace other assets which are valued on a DORC basis, such as the supply system land on which substations and other electricity infrastructure is built.

It may be that easements do not depreciate in the same way as assets such as substations, transformers, poles and wires, although they may become obsolescent as the network evolves. However, the appropriate conclusion to draw from this is that easements should not earn a normal depreciation allowance. ENERGEX has never sought a depreciation allowance in respect of easements, but rather considers that it should be permitted to earn a return on the market value of its easement portfolio.

The fact is that, in the longer term, technological innovation or network evolution may have a significant impact on easements. Traditional electricity distribution relies on the distribution of electricity through poles and wires over easements. Over the longer run, for example, technological innovation in the form of local generation possibilities, can be expected to partially displace traditional electricity distribution methods, thus reducing the need for easements.

Provide appropriate signals for new investment

Valuing easements at historic cost in the next regulatory period could have significant impacts on incentives to properly manage its easement portfolio. The impact of applying historic cost would be to deny ENERGEX the opportunity costs associated with holding these easements. The effect of this would potentially be to give ENERGEX incentives to buy land rather than take an easement (as land continues to provide a return based on market value). This could be considered a realistic option for ENERGEX where the compensation for the acquisition is a high percentage of the value of the land.

Practical to implement

Implementing historic cost can be complicated by two factors:

- lack of information about actual purchase prices paid for easements acquired long ago; and
- uncertainty about past acquisition policies.

In a number of cases, ENERGEX would have acquired easements at nominal value (for example, from developers wishing to develop housing estates), while others would have been acquired in exchange for non-monetary compensation (such as an exchange of land as provided for under the *Acquisition of Land Act*). In some cases, the purchase price may not have been recorded. Further, it is unclear whether historic easement records have included transactions costs such as stamp duty and registration fees, or staff on-costs associated with negotiating for the acquisition of easements.

These types of implementation issues have influenced regulatory approaches to asset valuation. In its *Draft Statement of Principles* for the regulation of transmission revenues, the ACCC (1999) rejected the use of historic cost in asset valuations for electricity transmission assets, pointing out that very similar assets in different networks can have different historic values due to different purchasing practices and “inconsistent past accounting practices with respect to how much of an asset was capitalised, e.g. [treatment of the] high labour component”.

Consistent with sound accounting practice

The discussion paper states that historical cost is 'widely accepted' for public reporting purposes amongst competitive industries and the private sector. This may well reflect the fact that cost-based accounting standards have been around for a long period, while market-based accounting standards have been introduced only relatively recently. Further, general practice in the public sector appears to be moving toward reporting on the basis of fair value (as evidenced by the Queensland Treasury direction noted in Ernst & Young's report).

Historic cost accounting is not widely used for management or regulatory reporting purposes as it does not:

- provide any sort of guide to current values; or
- meet the attribute of 'relevance'. As the Ernst & Young report makes clear, relevance is a key characteristic of financial reporting, and is the principle that reported information is relevant in informing internal and external parties about the financial position of the entity.

5.2. Indexed Historic Cost

Indexed historic cost adjusts the historic cost valuation for inflation, using an indexation base such as the consumer price index (CPI).

Reflect the true opportunity costs of assets

Compared with the historic cost approach, the indexed historic cost approach goes some way to restoring equivalence between the recorded asset values and their values in a competitive market.

However, indexing historic cost does not overcome the fundamental problem of having no economic rationale. While it may be true that indexation could possibly maintain the relative purchasing power of the original investment, this will not provide the correct signals for dealing efficiently with the easement asset where the asset market price is well above or below the indexed value.

Provide appropriate signals for new investment

To the extent that indexed historic costs diverge from true opportunity costs, the indexed historic cost approach will generate incorrect investment signals.

Practical to implement

The indexed historic cost methodology suffers from the same type of implementation difficulties as does the historic cost methodology. In addition, applying indexed historic cost requires information on the date of purchase of an easement. For easements acquired earlier in time, this information may not have been recorded.

This methodology also requires selection of an appropriate inflator with which to index the asset value. Arguably, the CPI is not the most appropriate choice, given that it reflects changes in the price of particular consumables, unrelated to easements. Alternative escalators have been suggested by:

- the Department of Natural Resources and Mines, which inflates land assets in accordance with an index based on increases in land values for the areas traversed by the easement; and
- Arthur Anderson. In a submission to the ACCC as part of its consideration of the access arrangements for Powerlink Queensland, it recommended an indexation factor of one per cent above the consumer price index for easement valuation purposes.

Consistent with sound accounting practice

Ernst & Young's report indicates that general accounting practice for public sector companies is to permit them to adopt market valuation for non-current assets such as easements.

Where market valuation is adopted, companies are permitted to index asset values for short periods (say, 5 years) before conducting market re-valuations to ensure balance sheet values reflect current market values. Indefinite indexation is not considered sound practice since asset prices are very unlikely to continue to change in accordance with the index over long periods.

5.3. Zero Cost

Zero cost values easements at zero value. A possible justification raised in the discussion paper for adopting a zero cost valuation methodology is that easements represent a sunk and irreversible investments that do not need to be replaced.

Reflect the true opportunity costs of assets

Valuing easements at zero value has no basis in theory and would in no way reflect the opportunity costs of holding easements in a competitive market.

Provide appropriate signals for new investment

The discussion paper clearly points out that the application of a zero value methodology would create new investment distortions:

Despite the opportunity cost of existing easement [and most other network] assets being low (if not zero), it may not be appropriate to ignore costs legitimately incurred ... To deny recognition of such assets in the asset base could jeopardise future investment in the network.

Practical to implement

This approach would be simple to implement and administer.

Consistent with sound accounting practice

From an accounting perspective, it would be difficult to justify the non-recognition of existing easements, as indicated in section 6.3 of the Ernst & Young report.

5.4. Market Value

The market value approach is consistent with the DORC valuation methodology. DORC values assets on the basis of their current replacement cost adjusted for depreciation, and is optimised to remove any element of the asset which is not considered necessary to deliver electricity distribution services.

Reflect the true opportunity costs of assets

ENERGEX considers that market value accurately reflects the true opportunity cost of investments in easements. Thus, it replicates the outcomes and disciplines that would apply in a competitive market.

Market valuation is consistent with the recommendations of the Productivity Commission and with other regulatory and government decisions under National Competition Policy. As the Productivity Commission (2002, p. 45) highlighted in its assessment of the performance of government business enterprises:

Significant differences between the reported and the true economic value of assets diminishes accountability for performance, sound asset management and efficient investment. Consequently, regulators have a responsibility to ensure that the value of assets implicit in their price determinations are robust.

Provide appropriate signals for new investment

The application of a DORC approach would remove potential discouragement to invest in easements due to the artificially low valuation of the easement. Further, it would provide appropriate incentives, including, for example, the choice of whether to supply electricity to

users by traditional poles and wires means or through local generation sources that rely less heavily on easements.

Practical to implement

A market valuation for easements could be determined in a practical sense on the basis of:

- land values for a range of areas. Land values provide a good guide to the valuation of easements, as easement values are typically determined on the basis of their impact on the land which they traverse;
- comparison with the prices paid by a range of organisations in acquiring new easements. The Queensland Department of Natural Resources and Mines acquires easements for a number of government departments. Local Councils, and electricity, gas, power, telephone, water, drainage, and sewerage utilities also acquire easements, and information would be available through these organisations, and publicly through the Land Titles Office; and
- Land Court precedents on the appropriate compensation payable for easement resumptions.

There are a significant number of valuation experts in Queensland capable of providing independent market assessments of easement values.

ENERGEX undertakes similar valuations in determining the value of a range of other electricity distribution assets. For example, while there is an open market for the purchase of many electricity assets (such as wires, poles, and transformers), installation adjustment factors, rates of depreciation, and optimisation issues introduce significant difficulties into asset valuation exercises.

ENERGEX considers that once a proper market-based valuation was performed on its easements, it would be reasonably straightforward to adjust this valuation at each regulatory reset through a reassessment of market conditions. This valuation process would be no more complicated for easements than for a range of other electricity distribution assets.

Consistent with sound accounting practice

As discussed above, the Ernst & Young report indicates that public sector entities commonly adopt fair value methodologies including the DORC methodology, to value assets. This approach best meets the attribute of relevance.

6. CRITICISMS OF A MARKET VALUE APPROACH

The QCA's discussion paper raises a number of arguments as to why a market value approach may not be appropriate for the valuation of easements, specifically:

- easements do not depreciate, rendering the application of market value invalid;
- easements have limited alternative economic use;
- use of a market valuation may result in price shocks;
- determining market value can be subjective and costly; and
- an increase in underlying property values is unlikely to result in an efficiency gain but may result in a windfall gain to the network owner.

ENERGEX considers each of these in turn.

6.1. Easements do not depreciate

It is unclear that the fact that easements do not typically depreciate indicates that the application of market value is invalid.⁵ ENERGEX's land assets are valued at market prices, even though they typically do not depreciate. The current approach leads to the odd result that ENERGEX is permitted to earn a return on the market value of land on which substations have been built, but a return on historic cost of easements carrying feeders from that substation (even though the easements are just as vital in the supply of electricity as the substation land).

The appropriate distinction between assets such as easements and land (which do not typically depreciate) and assets such as overhead wires (which do depreciate), is that depreciation allowance may not be appropriate in respect of the former.

6.2. Limited alternative economic use

Easements have limited alternative economic use only in the sense that once an easement interest is created over land, its key value would be as a corridor for distribution services. This is true for almost all of ENERGEX's network assets. Once a substation is installed or overhead lines are strung, the investment tends to be relatively immovable and thus effectively sunk. If ENERGEX were required to move the substation or overhead lines, it would not receive much more than scrap value.

In a broader sense, easements have considerable alternative economic use. Easements can significantly restrict the use of the land through which they traverse. Freed of the easement, this land could be used for more productive purposes. The compensation payable for acquiring easements reflects the cost of the restrictions which easements place upon land.

6.3. Price shocks

Price 'shocks' occur in real world markets, and may affect investors just as much as consumers. That said, revaluing easements at market value would not have a significant impact on final prices for electricity users. For the purposes of the *Final Determination*, the QCA assessed the impact of revaluing easements at DORC compared to historic cost. It found that the value of easements would rise from \$57.1 million to \$155.3 million, increasing ENERGEX's asset base by 3.6 per cent, and raising final prices to users by 0.6 per cent.⁶

In the overall context of electricity prices, and changes due to increases in inflation and adjustments under the revenue cap to reflect volume growth, it would be difficult to argue that this increase represented a price shock to consumers. Indeed, at the time of the last regulatory price determination, the QCA stated that any increases due to valuation of easements at DORC would be 'relatively minor', and, if thought necessary, could be further reduced through transitional measures.

6.4. Determining market value can be subjective and costly

As discussed above, market values can be determined based on independent and objective information relating to recent easement acquisitions and changes in the value of land traversed by easements. Valuation experts provide independent verification of market values. In any event, a 'subjective' valuation which reflects the true value of an asset is preferable to a historic cost which has no relationship to current values.

⁵ Easements may change in value for all sorts of reasons, including due to the impact of technological innovation or the evolution of network requirements.

⁶ Based on the assumptions stated in the *Final Determination* of a WACC of 8.05 per cent, and distribution charges equal to 40 per cent of final charges.

6.5. Windfall gain to the network owner

It is not clear that obtaining a return based on the market value of easements is a windfall gain. Obtaining a return based on the market value of assets could be seen as a legitimate property right of business to recover the true costs of doing business. Market valuation of easements reflects the prices that a new market entrant would be required to pay.

7. CONCLUSION

Based on an assessment of different valuation approaches, ENERGEX supports the market valuation of easements using a DORC methodology. This enables easements to be valued at their true opportunity cost, provides appropriate investment signals, and is practical to implement. It also accords with the fair value accounting practices widely used in public sector companies.

ENERGEX considers that there are no sound principles to rely on to value easements differently to the DORC methodology adopted to value other electricity distribution assets. The overall policy intent behind National Competition Policy and the Hilmer reforms was to replicate the incentives for efficient resource use that apply in workably competitive markets. Part of these incentives is to employ assets for their highest use, which occurs when these assets are valued at their true opportunity cost. Market-based valuation methodologies for assets used in electricity distribution services provide these incentives for highest use.

In addition to the arguments on principle and policy, ENERGEX also notes that:

- a depreciation allowance is not being sought in respect of ENERGEX's easements;
- easements have considerable alternative economic use, reflected in the greater use which could be made of land freed of the easement restrictions;
- valuation of easements at market value would not impose price shocks, although ENERGEX would be prepared to consider transitional arrangements to phase in a market-based value for easements should the QCA prefer this approach;
- market-based valuation of easements can be achieved cost-effectively and objectively, based on independent market data. ENERGEX would be willing to work with the QCA to determine an appropriate means to value such assets; and
- market-based valuation of easements provides a return on true costs of doing business. There is no windfall gain.

Accordingly, ENERGEX submits that easements should be valued consistently with its other electricity distribution assets on a DORC valuation basis.

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30 May 2003

Mr Trevor Lee
Group Manager, Regulatory Affairs
ENERGEX Limited
GPO Box 1461
BRISBANE QLD 4001

Dear Mr Lee

Accounting Aspects of Easements Valuation

You have asked us to provide ENERGEX Limited (“ENERGEX”) with a report discussing the valuation of easements from an accounting perspective, and in particular to identify the applicable accounting standards for the valuation of easements that are relevant to ENERGEX as an incorporated entity and as a state government-owned business.

You have not asked us to review the implication of the Australian Accounting Standards Board’s (“AASB”) International Accounting Standards Convergence program, which is likely to have a significant effect on the financial results of many businesses in the near future. The convergence program will result in ENERGEX preparing restated financial statements under International Accounting Standards (IAS) from 1 July 2004 to be included in the financial report for the financial year commencing 1 July 2005. The changes to IAS will also require retrospective adjustment to reflect the financial statements as if they had always been prepared in accordance with IAS.

1 Executive Summary

ENERGEX applies the Queensland Treasury “Non-Current Asset Accounting Guidelines” when complying the legally binding accounting standard AASB 1041 to record the carrying values of all land, buildings, infrastructure and heritage and cultural assets at fair value.

As ENERGEX currently classifies easements as part of the electricity “supply system” asset class, it is obliged to value them at fair value as part of the valuation of the entire supply system asset class.

The Depreciated Optimised Replacement Cost (“DORC”) method of valuation is commonly used in the public sector as a surrogate for fair value. We believe that a DORC valuation of easements held by ENERGEX can feasibly be undertaken.

The difficulty of valuing some assets, for example easements, is sometimes put forward as a reason for not revaluing the assets. We have identified that other entities have included in their financial report assets that may be regarded as being difficult to value, for example, art collections.

2 Background

ENERGEX's electricity distribution services are regulated by the Queensland Competition Authority ("QCA") through a revenue cap framework, which imposes a maximum limit on the revenue that may be earned from the provision of these services. The current regulatory period expires at the end of June 2005.

The revenue cap includes an allowance for a return on the assets used to provide regulated electricity services. This allowance is based on the value of the assets used to deliver electricity services. While the majority of regulated assets are valued on a depreciated optimised replacement cost (DORC) basis, easements used in the delivery of electricity distribution services have been valued at historic cost for regulatory purposes.

In its *Final Determination on the Regulation of Electricity Distribution* (the Final Determination) published in May 2001, the QCA indicated that it would undertake to identify a more appropriate long-term approach for the subsequent regulatory period. Accordingly, in April 2003, the QCA released a discussion paper seeking comment by interested parties.

3 Review of Accounting Requirements Applicable to the Valuation of Easements

3.1 Accounting by Government Owned Corporations

As an incorporated company, ENERGEX is required to comply with the financial requirements of the Corporations Act. The Corporations Act requires ENERGEX to comply with the AASB series of accounting standards.

The AASB accounting standards have the force of law, and there are heavy penalties for companies not complying with those standards.

ENERGEX has also chosen to comply with "Non-Current Asset Accounting Guidelines for the Queensland Public Sector", as published by Queensland Treasury in May 2001.

3.2 Fair Value Basis

One of the AASB standards ENERGEX is required to comply with is AASB 1041 "Revaluation of Non-Current Assets" (July 2001).

Under AASB 1041 and the previous version issued in December 1999, entities are permitted to record the balance sheet carrying values of classes of non-current assets at either cost or at revalued fair value amounts.

AASB 1041 defines “fair value” as “the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm’s length transaction”. Under AASB 1041 an asset’s fair value is measured having regard to the highest and best use of the asset for which market participants would be prepared to pay.

AASB 1041 defines “class of non-current assets” to be:

“a category of non-current assets having a similar nature or function in the operations of the entity, which category, for the purpose of disclosure in the financial report, is shown as a single item without supplementary dissection”

For ENERGEX, the class of asset would be the supply system, which under ENERGEX’s accounting policy includes easements (refer Note 16, 2002 financial report).

If a business chooses to revalue a class of non-current assets to fair value, it needs to keep that carrying value up-to-date by ensuring that the carrying value of that class does not materially differ from fair value.

AASB 1041 relaxes the requirement for regular revaluations by permitting (commentary paragraph 5.1.11) the use of an index to increase or decrease carrying amounts, if the use of such an index means that the carrying value is not materially different to fair value. The application of indexing must be reasonable in the circumstances, i.e. used for assets that have stable fair values.

Many companies that revalue often conduct a formal independent valuation every 3 or 5 years and use an index in the intervening period. We understand that the practice at ENERGEX is to obtain valuations every 5 years, and to use indices in the intervening period to ensure that the carrying value of the class of assets is not materially different to fair value.

3.3 Use of fair value by Government Owned Corporations

As stated above, ENERGEX has chosen to comply with “Non-Current Asset Accounting Guidelines for the Queensland Public Sector”, as published by Queensland Treasury in May 2001.

The attribute of relevance is a key qualitative characteristic of financial reporting. The “Non-Current Asset Accounting Guidelines” adopt the policy that relevance, for the most part, will be achieved by valuing non-current assets at their fair value, as defined in AAS 38 Revaluation of Non-Current Assets (now AASB 1041) rather than at historical cost.

The Guidelines (section 4.1) applied by ENERGEX require that they record at fair value all land, buildings, infrastructure and heritage and cultural assets. This requires that assets included in the above classes be regularly revalued to fair value as part of the valuation of that class.

ENERGEX classifies easements as part of the electricity “supply system” infrastructure asset class. This practice has been accepted by ENERGEX’s auditor, the Queensland Audit Office. Accordingly, under AASB 1041, ENERGEX is required to value easements in accordance with fair value with other supply system assets.

3.4 Determining fair value by Government Owned Corporations

As stated above, AASB 1041 defines “fair value” as “the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm’s length transaction”.

Under the “Non-Current Asset Accounting Guidelines” Section 4.2.4, “For-Profit Entities” will usually determine fair value as the lower of the cost of a modern equivalent (depreciated current replacement cost) or the cost of reproducing the asset’s future economic benefits (depreciated current reproduction cost). There is a limitation in the Guidelines that the sum of the asset values should not exceed the net present value of the cash flows of the operation of which they form a part.

The following is an extract from the Guidelines for the two methods:

Depreciated Current replacement cost

Depreciated current replacement cost is the cost per unit of future economic benefit of the most appropriate modern replacement facility, adjusted for any differences in production capacity and useful life. For example, a modern power station might generate twice the annual megawattage of an existing station. The existing station would be valued at one-half the cost of a new station, adjusted for the remaining useful life.

Depreciated Current reproduction cost

This is the cost of reproducing or replicating the future economic benefits of the asset.

Where the remaining future economic benefits from the asset are assessed as having changed, this should be taken into account in the revaluation. For example, if an asset has been damaged, or its estimated useful life is revised, an adjustment should be made to the asset’s value to reflect the reduction in future economic benefits.

Reproduction cost should exclude, where feasible, the cost of reproducing features of the asset that do not contribute to its service potential. Similarly, where the existing asset is being only partially used, and the current service delivery could be delivered with buildings of a lower size or cost, the severable excess capacity should be valued at its market selling price, if feasible, rather than its reproduction cost.

When an asset is revalued by reference to its current replacement/reproduction cost, the gross value of the asset should be restated at its current replacement/reproduction cost (as determined above) and accumulated depreciation should be restated on the basis of this new gross value.

Although the Guidelines do not use the term “optimised”, the guidelines require adjustment of the replacement cost for “any differences in production capacity and useful life.”

The resulting valuation method is often referred to as “depreciated optimised replacement cost” or DORC.

3.5 General Accounting in Australia – Fair values

Financial reports in Australia are generally prepared on what is known as a modified historical cost basis. This basis generally uses historical cost, but has been modified to include market values. Examples where market (or fair) values are required to be used in Australian accounting standards, in addition to the alternative permitted under AASB 1041 described above include:

- Superannuation funds (AAS 25);
- General insurance activities (AASB 1023);
- Life insurance businesses (AASB 1038);
- Self-generating and regenerating assets (AASB 1037). SGARAs include forests, crops, orchards, fisheries, livestock and their live produce;
- Foreign currency (to use spot foreign currency exchange rate) (AASB 1012);
- IAS 39 “Financial Instruments: Recognition and Measurement” which in a revised form is proposed to become an Australian accounting standard in the near future. Financial instruments that would be fair valued include derivatives, financial assets and liabilities “held for trading” and financial assets “available for sale”; and
- An alternative to use fair value, IAS 40 “Investment Properties” which in a revised form is proposed to become an Australian accounting standard in the near future.

4 Application of Accounting Principals to ENERGEX

ENERGEX, by applying the “Non-Current Asset Accounting Guidelines” applicable for the Queensland Public Service, is required to revalue infrastructure assets at fair value.

ENERGEX revalued its electricity supply system as at 31 December 1999 based on a physical revaluation and independent expert advice from consulting engineers. The valuation was based on depreciated optimised replacement value.

Therefore, ENERGEX should have obtained a valuation for the easements, using the DORC basis, along with the rest of the electricity supply system assets as at 31 December 1999. However, we understand that due to the constraints imposed by the policy adopted regarding the use of regulated asset base as a surrogate for recoverable amount as described in Section 5.3 below, this did not occur.

In order to comply with the requirement to keep the balance sheet carrying values up-to-date, ENERGEX has subsequently indexed its December 1999 valuation. ENERGEX is expected to conduct a formal revaluation of its supply system assets, including easements, by December 2004.

5 Recoverable Amount

This section has been included because ENERGEX may have limited the valuation of the carrying value of the supply systems to a value less than fair value. Under AASB 1041, the carrying value of revalued assets should be at fair value.

5.1 General Accounting in Australia – Recoverable Amount

There is a general requirement in AASB accounting standards that the balance sheet carrying values of assets should not be overstated. There is a specific requirement in AASB 1010 “Recoverable Amount of Non-Current Assets” (December 1999) that the balance sheet carrying values of non-current assets should not exceed their recoverable amount.

This limits the valuation of assets to the amount that may reasonably be recovered from their use or subsequent disposal.

The recoverable amount test under AASB 1010 does not technically apply to assets revalued to fair value under AASB 1041, as fair value should already take into account the effect of expected future recoveries (discounted).

However, given that DORC is a surrogate for fair value, it is a prudent practice to compare the DORC value to a recoverable amount. Section 5.2 below discusses likely future developments with regard to the determination of recoverable amount.

When considering the carrying value of long-lived assets, the time value of money as represented by the discounting of future cash flows becomes significant.

Neither AASB 1010 nor its predecessor AASB 1010 “Accounting for the Revaluation of Non-Current Assets” (June 1996) require discounting of future cash flows. There is currently no other Australian standard providing detailed guidance for determining recoverable amount. However, many organisations either discount or consider the effect of discounting when determining recoverable amount.

5.2 Future requirements – recoverable amount

We regard the proposed International Accounting Standard IAS 36 “Impairment of Assets”, included in Exposure Draft ED109 issued by the AASB in December 2002, as representative of the current thinking of the AASB with regards to asset impairment and determination of recoverable amount. ED109 is a request for comment on:

- IASB ED 3 “Business Combinations”,
- IASB ED of proposed amendments to IAS 36 “Impairment of Assets”;
- IASB ED of proposed amendments to IAS 38 “Intangible Assets”; and,
- AASB added material.

IAS 36 (proposed) is based on IAS 36 which was issued in April 1998.

The Australian Accounting Standards Board had previously released an Australian Exposure Draft ED104 “Impairment of Assets”, based on IAS 36 “Impairment of Assets”, in March 2002.

IAS 36 (proposed) (paragraph 5) defines recoverable amount of an asset or a cash-generating operations as “the higher of its net selling price and value in use”.

In situations where there is insufficient information available to calculate a “net selling price”, the “value in use” must be calculated and this value will serve as the recoverable amount.

IAS 36 (proposed) also provides guidance on:

- assessment of future cash flows;
- determination of the discount rate; and,
- recognising and measuring an impairment loss.

5.3 Recoverable Amount – Infrastructure Assets

In its 2002 financial report, ENERGEX states that “the resulting valuation (of the electricity system using indices from the previous revaluation) does not exceed the asset base allowed for by the regulator”.

It appears that ENERGEX may be using the regulated asset base as a surrogate for recoverable amount. As noted above, there is currently no Australian standard that provides detailed guidance on the determination of recoverable amounts.

The current approach by ENERGEX may not meet the requirements of the proposed “Impairment of Assets” standard (based on IAS 36 and included in ED 109). By using the asset base allowed for by the regulator, ENERGEX does not appear to be including the potential benefit of future efficiencies that it is entitled to retain under the regulatory pricing arrangements. Such efficiencies, through reduced future cash flows, may be able to be included in the assessment of future cash flows in the determination of recoverable amount, depending upon how the requirements of ED 109 apply to ENERGEX.

Therefore, ENERGEX may have a higher (or even a lower) recoverable amount under ED 109 from the asset base allowed by the regulator.

It was not part of our brief to determine whether the DORC valuation as at 31 December 1999 exceeds the regulated asset amount, or whether the regulated asset amount exceeds the indexed DORC valuation.

6 Valuation of Easements at Historical or Indexed Historical Cost Amounts

The following are valuation methods discussed in the QCA Discussion Paper “Electricity Distribution: Valuation of Easements” (April 2003). We have provided commentary as to the suitability of these methods as they relate to the accounting for easements by ENERGEX.

6.1 Historical Cost

Historical cost valuation of easements is suggested as a possible valuation method by QCA on the basis that it is relatively inexpensive to establish and simple to administer, as long as asset registers are complete and data is comparable across assets and time.

Section 4.1 of the “Non-Current Asset Accounting Guidelines” applied by ENERGEX require that they record at fair value all land, buildings, infrastructure and heritage and cultural assets. As ENERGEX includes easements as part of the supply system asset class, ENERGEX is required to record easements, as part of the supply system, at fair value in its financial report.

Therefore, the adoption of historical cost would not be consistent with ENERGEX’s accounting policy to revalue infrastructure assets to fair value, and therefore would not be in compliance with AASB 1041.

As stated above, it was not part of our brief to review the method ENERGEX used to determine the fair value of the easements in prior periods.

6.2 Indexed Historical Cost

Index historical cost is suggested by QCA as a way of preserving the purchasing power of the original investment (historical cost) of easements.

The accuracy of an indexed historical cost amount is dependent upon, among other things, the appropriateness of the index used. Given the movement in Queensland land prices experienced in recent years, a Consumer Price Index (CPI) index is unlikely to be an appropriate proxy for the movement in the values of easements.

We believe that the DORC based fair value of easements is more likely to increase based on an appropriate Queensland specific area-based property index. This index information could be obtained from the Department of Natural Resources and Mines which performed independent valuations of the land, buildings and infrastructure assets for the Department of Innovation and Information Economy, Sport and Recreation Queensland in the 2001 – 2002 financial report.

The overriding requirement for ENERGEX is that infrastructure assets (including easements) are carried at fair value. We believe that over time the cumulative effect of using approximations through the use of indexes may result in material differences between indexed historical cost and fair value.

We believe that regular DORC valuations, which ENERGEX undertakes every 5 years, would be required to ensure that the carrying value of infrastructure assets (including easements) was not materially different to fair value. In the event that indexing was used in intervening periods, indexation would need to be applied to the revalued amount.

Therefore, in the long term, it is unlikely that indexed historical cost, without regular adjustments to fair value, would be consistent with ENERGEX's accounting policy to revalue infrastructure assets to fair value, and therefore would not be in compliance with AASB 1041.

6.3 Zero carrying value

QCA suggests zero carrying value on the basis that easements represent sunk and irreversible investments that will not need to be replaced.

We expect that an amount will have been allocated to easements as part of the allocation process used to record the acquisition of the electricity business.

As stated above, it was not part of our brief to determine how ENERGEX accounted for easements in prior periods.

Using the principles of Urgent Issues Group (UIG) Abstract 7 "Accounting for non-current assets – derecognition of intangible assets and change in the basis of measurement of a class of assets", ENERGEX would not be permitted to "derecognise" easements by applying a carrying value of zero to them.

The adoption of a zero value for easements would appear not to be consistent with ENERGEX's accounting policy to revalue infrastructure assets to fair value and therefore would not be in compliance with AASB 1041.

7 Interaction of Regulated Asset Base and Accounting Fair Values

The regulator may choose to adopt asset values for regulatory purposes that are different to the carrying values used in ENERGEX's financial report. In the same way businesses are permitted to value assets in their balance sheet at a value different to those used for tax purposes.

Having said that, there is a requirement that the carrying value of assets should not exceed the amount that may be reasonably recovered from their use or disposal, i.e. its recoverable amount.

Therefore, if the regulator does not use fair value of easements in the regulated asset base, then this may impact on the determination of recoverable amount. If the principles of ED 109 for the proposed Australian standard on impairment and the determination of recoverable amount is adopted, recoverable amount would be affected by the cash inflows (revenue cap based on the asset base determined by the regulator), the cash outflows (possibly including the effect of efficiencies) and an appropriate risk-adjusted pre-tax discount rate.

Given that the DORC valuation method uses replacement cost to determine fair value, a comparison of the DORC value to discounted cash flows (e.g. recoverable amount under ED 109) is a reasonable method to cross-check the DORC value derived.

8 Other Assets Difficult to Value

As stated above, the “Non-Current Asset Accounting Guidelines” require ENERGEX and other agencies covered by the Guidelines to record at fair value all land, buildings, infrastructure and heritage and cultural assets.

The difficulty of valuing some assets, for example easements, is sometimes put forward as a reason for not revaluing the assets.

We note that other entities had included in their financial report other assets that may be regarded as being difficult to value. Examples include:

- Wild Dog Barrier Fence (Queensland Department of Natural Resources and Mines – 2002 / 2002 Financial Report); and,
- Cultural assets and collections (Financial Report for the State of Victoria 2001-02, page 43):

The value of other non-current assets increased by \$1,331 million (see Note 19), primarily due to revaluations of \$1,222 million in the State’s cultural assets by the National Gallery of Victoria (NGV). The revaluation is the first for five years and is based on an art collection totalling approximately 66,000 separate pieces of art.

The valuation policy with regard to cultural assets and collections is extracted from Note 1 below:

(vii) Cultural assets and collections

Cultural assets and collections, including heritage assets, are defined as those non-current physical assets that the State intends to preserve because of their unique historical, cultural or environmental attributes. These assets include items such as the Royal Botanical Gardens Herbarium, State Library, Government House, Parliament House, historic houses, monuments, certain museum exhibits, art collections, archival collections and other items of cultural significance.

All cultural assets and collections are generally recognised at fair value as determined by reference to their estimated current value. In particular, heritage assets and collections that generate substantial revenues are valued at the greater of current market buying price and net present value. All other heritage assets and collections are valued at estimated written down replacement cost. All natural heritage assets and collections are valued at estimated realisable value or net present value, whichever is the higher.

9 Conclusion

This advice is limited solely to the facts and information provided by ENERGEX and specific advice should be sought in all other circumstances. This advice relates to accounting standards issued to date and in effect for 30 June 2003 financial years.

In our opinion, ENERGEX is required under the “Non-Current Asset Accounting Guidelines” and AASB 1041 to regularly fair value all land, buildings, infrastructure and heritage and cultural assets. We believe that this includes easements.

In our opinion, the depreciated optimised replacement cost (DORC) method of valuation, required by the Guidelines, is commonly used in the public sector as a proxy for fair value. We believe that it is feasible to conduct a DORC valuation of easements held by ENERGEX.

We note that other assets that may be regarded as being difficult to value had been valued at fair value, and those values included in the relevant entities’ financial reports.

10 Limitation on use of this advice

This report has been prepared at the request of ENERGEX in accordance with the terms of engagement agreed between it and Ernst & Young. The report is not to be used by any other party for any purpose nor should any other party seek to rely on the opinions, advices or information contained in this report. We recommend that parties seek their own independent advice.


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If you have any queries in relation to the above advice, please do not hesitate to contact David Hardidge (07) 3011 3104 or Mike Reid (07) 3243 3696.

Yours sincerely



Ernst & Young