



**QUEENSLAND
2005 ELECTRICITY DISTRIBUTION
REVIEW**

**SUBMISSION ON QCA
PAPER ON VALUATION OF
QUEENSLAND DISTRIBUTORS**

19th November 2003

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1. Introduction

The Energy Users' Association of Australia (EUAA) is pleased to have the opportunity to comment on the Discussion Paper dated 6th November 2003, released by the Queensland Competition Authority (QCA) and dealing with the Valuation of Queensland Distributors' assets.

To repeat points which the EUAA has made before, the QCA review needs to be seen in the context of the significance that distribution charges have for energy users. These charges make up a significant component of the delivered cost of energy to the vast majority of customers, on average, comprising around one-third of their electricity charges and two-thirds of network charges. For some EUAA members in Queensland, they can be up to one-half of their total bill. In addition, the new Determination to be put in place by QCA will inevitably have an impact on the service levels that end-users receive from their DNSP for the next regulatory period, especially if a service quality regime is put into place.

As a result, the QCA Determination will have an important impact on energy users in Queensland for the foreseeable future. QCA therefore has an important obligation to end-users to ensure that network charges and service levels in the next regulatory period are competitive relative to other states and for Queensland industries competing in world markets. Ensuring that the DNSP's continue to strive for efficiency gains and deliver these to their customers is one of the main planks of energy reform and also one of the main ways the incentive-based regulatory regime applied by QCA can do this.

Electricity distribution is highly capital intensive (generally, around two-thirds of costs are capital related) and a major part of the final level of distribution charges applying in the State will depend on the QCA's choice of the initial Regulatory Asset Base (RAB) and its choice of WACC. The present Discussion Paper deals with the first of these parameters.

The EUAA is pleased to note that the QCA is conducting its own "ground-up" assessment of the RAB for the Queensland DNSPs. We have encountered problems with the RAB in other States where regulators have been constrained to retain the original RAB established (usually) by the State Government. Some of these original valuations appeared to have more to do with inflating the future stream of dividends) or potential sales prices in the case of a privatisation programme) than obtaining fair and reasonable asset valuations. In addition, the opening asset valuation has commonly been derogated from the provisions of the National Electricity Code for, in some cases, as long as ten years.

The QCA has a special responsibility to electricity users in conducting this review, due to the clear lack of competition in the Queensland distribution (and retail) sectors. The existence of one owner for the two Queensland distributors and all the generators means that the Queensland industry structure obviously falls well short of a competitive market structure.

Competition theory is full of references and analytical measures to determine whether adequate competition exists in an industry. In none of these references would just two competitors, with common ownership, be considered an adequately competitive structure. Indeed, one of the most widely used measures of market concentration (the Herfindahl-Hirshmann index, which has been widely applied to the electricity industry), would require at least five relatively equally sized competitors, to satisfy normal threshold requirements.

In the absence of a properly competitive market, the regulatory agency needs to adopt a very strong stance to attempt to ensure outcomes that can be considered to replicate the results of a competitive market. The QCA needs to be even more active and interventionist in this respect than regulators in other states who deal with an industry structure for distribution that permits a greater element of “competition by comparison”.

We trust that the QCA will take account of the view of the EUAA in determining their approach to determining the RAB and in conducting the full Distribution Review. We believe that it is clearly in the best interests of electricity users that it does so.

2. DORC Valuations

In its Final Determination in 2001, the QCA adopted a Depreciated Optimised Replacement Cost (DORC) methodology to value the majority of the assets employed by the Distribution Network Service Providers (DNSPs). SKM have been retained to provide a new DORC valuation to be used by the QCA to determine the Distribution prices to apply from 2005 onward.

The EUAA has long been opposed to the use of DORC valuations to establish an initial RAB, and we note that the Discussion Paper does to call for submissions on the applicability of DORC, so we wish to take the opportunity to repeat some of the fundamental problems with its use.

EUAA would draw to the QCA’s attention the substantial theoretical criticism of DORC as a valuation methodology.¹ Professor David Johnstone in a 1999 paper questioned, “*the validity of what has become almost axiomatic among most regulators in Australia – namely that economic theory requires existing assets to be brought on to the regulatory balance sheet at DORC.*”²

He states:

“This view has been promulgated and received by asset owners and the regulators themselves to the point that it is widely taken for granted, albeit without demonstration or authority. And yet the two theorists who have had most of substance to say about the regulatory asset valuation debate in Australia, Melbourne University economist Stephen King and Cambridge economist and accountant Geoffrey Whittington, have both concluded in their published works, and reports to regulators that DORC should not be adopted, not simply because of its administrative infirmities but because it is theoretically not acceptable”

Professor Johnstone makes the following points:

- replacement cost valuation cannot be derived out of economic theory;

¹ EUAA acknowledge that the source of many of these comments is a submission made by INCITEC to the QCA in July 2000.

² The Professor David Johnstone, *Comments on Tobin’s and the Supposed Economic Justification for Replacement Cost (DORC) Regulatory Asset Valuation: Energy Markets Reform Forum Submission to IPART Inquiry on AGLGN: 23 August 1999*, page 1

- DORC valuations are unauditible, hinge on multiple subjective and at worst, arbitrary judgments, and hence cannot be reproduced by an independent valuer;
- Asset owners who are granted a tariff stream based on supposed DORC are, in fact, being invited to value their assets as if they are new and to be paid a return (tariff stream) as if they had just brought their assets at their true current ORC;
- In allowing tariffs based on DORC, regulators build in the facility for pervasive overstatement of asset replacement costs without the slightest risk of a new entrant;
- DORC is not necessary to ensure continued optimal asset use or to prevent asset duplication;
- DORC valuations harm downstream competitiveness; and
- DORC valuations provide existing asset owners with a “free lunch” in economic terms.

Professor Stephen King has previously referred to the links between the valuation of sunk assets and the allocative efficiency of final consumption. He states that to the degree that regulated asset valuation feed into uniform prices that exceed marginal cost (congestion adjusted short run marginal cost), either directly or further down the production chain, then the deviation of price from marginal cost will lead to a reduction in trade from the economically efficient level. This is the economist’s ‘allocative inefficiency’ or ‘dead weight loss’. It represents a decrease in gains from trade from the production and consumption of the relevant product or service compared to the best achievable level of gains from trade.

This static trade off between asset valuation and allocative efficiency suggests (according to Professor King) that regulators should err on the side of lower asset valuation for sunk assets. In particular, noting the range of possible valuations between the ‘exit’ valuation and the ‘bypass’ valuation, the potential for allocative inefficiency suggests that the regulator should use the ‘exit’ valuation (scrap value) as a starting point for the economically efficient operation of the system. A higher asset valuation will tend to reduce allocative efficiency and may therefore limit the potential for downstream competition.

This is a very important message for Queensland given the dependence of the State on industries operating in internationally competitive export markets and the Government’s stated desire to attract more such industries. We note that there are many projects in areas such as Gladstone and the ‘trade coast’ that are energy intensive export competing industries, for example. The use of methodologies prone to ‘asset inflation’ will damage these industries and Queensland’s ability to attract them.

Professor King has also stated that there is no significant economic argument to support DORC.

The essential argument for DORC is that tariffs based on it are the maximum sustainable without another provider being able to duplicate existing assets and set lower tariffs. Being the maximum of such tariffs, they are at the level that an economically rational asset owner would set in both the short and long term. DORC is therefore supposed to build in (stimulate) market discipline.

There is, however, no genuine market discipline. This is because, in real life, a potential entrant would have to pay full (undepreciated) RC to duplicate or bypass existing assets - there is no second hand market to which a potential competitor can buy a used (depreciated) electricity

grid. Hence, so long as the DORC value accepted by the regulator is less than actual (true) ORC, the existing grid has no threat of competition. This allows already depreciated (used) assets to be valued up to their true ORC, and hence tariffs to be at a level consistent with all infrastructure being new.

As stated above, asset owners who are granted a tariff stream based on supposed DORC are, in fact, being invited to value their assets as if they are new and to be paid a return (tariff stream) as if they had just brought their assets at their true current ORC.

We also note the some regulators have expressed reservations about the application of full DORC asset values and the fact that this provides an outcome which does not balance the interests of infrastructure owners and users.³ An independent consultant's report prepared for the EUAA several years ago also makes the point that DORC valuations are not in the interests of energy users.⁴

EUAA strongly recommends that the QCA note the considerable theoretical and practical opposition to the use of DORC and its adverse implications for downstream competitiveness and investments. The EUAA notes that other regulators, including many overseas and IPART (up until its 1999 electricity distribution price determination), did not prefer DORC valuation methods. We urge the QCA to investigate and carefully assess this matter before proceeding with a DORC valuation approach.

3. Comments on Matters raised in the Discussion Paper

There are some 13 matters proposed for comments in the Discussion Paper. The EUAA has elected to concentrate on those which are of major importance to end-users and where we believe that our comments will be of value to the QCA. On the matters not addressed, it is simply that EUAA either has no view or that our comments would not be of great value to the QCA.

The numbers in the brackets following the headings are the numbers used in the Discussion Paper.

3.1. Determination of Standard Asset Lives (2.4)

Comments are sought on:

- proposed increases in standard lives for some assets to reflect current practices and opinions in the Australian electricity supply industry;
- continued application of a minimum remaining life concept and, if this concept is valid, what quantum can be justified;
- the adoption of different lives for similar assets in different climatic zones; and

³ For example, IPART determinations in the latter part of the 1990's regularly and consistently made this point and set asset values at a 'discounted' DORC.

⁴ *Energy Utility Asset Valuation - Impact on Users*, Report to the EUG by the South Australian Centre for Economic Studies, (July 1998)

- allowing the adjustment of remaining life to reflect major refurbishment aimed to extend the asset life.

EUAA sees little problems with the approach to asset lives being proposed, and supports the alignment of asset lives used in Queensland with those used in the other States.

On the subject of minimum remaining lives, EUAA supports the current Queensland practice of applying a minimum remaining life of 3 years for assets in service at the valuation date with operational lives greater than the standard life.

EUAA also supports the proposed approach to major refurbishments, provided any extension is reasonable, based on work done, and consistent with the approach taken otherwise.

3.2. *Optimisation Process (2.4)*

Comments are sought on:

- the “incremental” versus “greenfield” approach to optimisation;
- the use of economic versus technical feeder ratings;
- the use of planning horizons to assess capacity optimisation;
- the assumed level of service quality/reliability; and
- optimisation of non-system assets.

EUAA accepts that the “incremental” approach to optimisation is appropriate for distribution networks.

We have some doubts over the use of “economic” feeder ratings, which fall well below conductor ratings. While it is undoubtedly true that some feeder ratings are limited by voltage drop and motor start conditions, most of the feeders in urban areas will have a capacity limited by thermal ratings. It is more appropriate to use “technical ratings” most of the time and to treat the exceptional cases on their merits, than to apply “economic ratings” to all feeders.

EUAA has not objection to the assumption, for asset valuation purposes, that present levels of reliability and security should be used and can be assumed to be maintained. The Queensland statistics show a level of performance which is about the Australian average, with worse performance in the Ergon area compared to that of Energex, as might be expected, given differing network characteristics.

3.3. *Staged Development of Assets (2.7)*

Comments are sought on:

- whether staged development is a significant feature of the development of a distribution network; and
- if staged development is a significant feature, whether the DNSP should be compensated for the additional costs associated with staged development.

EUAA holds the view that staged developments are to be considered unusual in the development of distribution networks and that DNSPs should not be compensated for supposed additional costs of staged developments.

3.4. *Asset Lives (2.7.4)*

Comments are sought on:

- valuation of land based on sales in the current real estate market, and “current purpose” and not market value for another purpose; and
- asset lives for buildings.

EUAA believes that the QCA should continue to rely upon the unimproved capital values as determined by the DNRM as the value of land. To do otherwise is to introduce an additional degree of subjectivity, which is highly undesirable.

3.5. *Allocation of Shared Assets (2.7)*

Comments are sought on the alternative approaches to the allocation of the value of shared assets between regulated and non-regulated businesses.

EUAA supports the approach of apportioning the asset value between regulated and non-regulated activities. To do otherwise again introduces a degree of subjectivity on forms of internal charging which is undesirable.

3.6. *Interest During Construction (2.7)*

Comments are sought on whether financing charges should be included in the asset valuation, where relevant.

EUAA agrees that interest during construction is not appropriate for valuations of distribution assets.

3.7. *Depreciation Methodology (2.7)*

Comments are sought on the appropriate depreciation methodology to be employed in the current valuation.

EUAA agrees with the position of the ACCC in its *2003 Review of Draft Statement of Principles for the Regulation of Transmission Revenues*, that straight-line depreciation is preferred because of its simple implementation. All other methods of depreciation are either unnecessarily complex or difficult to justify.

3.8. *Valuation of Easements (2.7)*

While no comments are sought on this matter, and reference is made to the fact that QCA is shortly to issue a determination on this matter. EUAA takes this opportunity to record that we are opposed to the application of DORC valuations to easements, and we believe that the only acceptable valuation methodology is to value easements at the actual, verified cost of acquisition.

We note also that many easements, including some provided by Queensland EUAA members, are provided at no cost to the DNSPs and thus need to be valued at zero.

We understand that valuation of easements at actual cost is the current QCA practice, and we urge the QCA to retain that approach in their forthcoming determination.

3.9. Recognition of Capital Contributions (2.14)

Comments are sought on the appropriate approach to recognise capital contributions paid for customer connections.

There is a conflict between methods that can be used for asset valuation purposes and those which need to apply to particular customers on an ongoing basis. EUAA would not like to see any precedent created by the use of a simplified approach to capital contributions for the purposes of valuing assets absolving the DNSPs from the responsibility to create and maintain adequate historical records of capital contributions.

EUAA members in other States have encountered great difficulty in ensuring that they obtain full credit for past capital contributions, with DNSPs often claiming that inadequate records prevent them from dealing with specific cases.

EUAA puts forward the following set of principles for consideration by QCA, born out of the experience of our members:

- DNSP's should not get a return on assets funded by others;
- DNSP's can claim operations and maintenance expenditure if they operate and maintain the assets — but not otherwise;
- DNSP's must keep appropriate records of any capital contribution for a minimum period (7 years minimum)
- If network capacity is scarce, signals need to be sent to all consumers, not just to the last one to be connected;
- If other customers start to use assets paid for by a capital contribution — then the original contributor needs to get an appropriate refund;
- A dispute resolution procedure needs to be provided (Ombudsman, panel of experts, etc)

EUAA members and other Queensland energy users have advised EUAA that they are wary of the treatment of past capital contributions. Major companies have often been called upon to contribute capital for expansions of networks associated with their loads. It is important that any such past capital contributions be subtracted from any DORC valuation and given full credit in the process.

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