

2 February 2004

Review of Gas and Electricity Regulated Retail Tariffs,
Attn: Mr Michael Seery - Programme Manager, Electricity
Independent Pricing and Regulatory Tribunal of NSW
PO Box Q290
QVB Post Office NSW 1230

Dear Mr Seery,

**REVIEW OF ELECTRICITY REGULATED RETAIL TARIFFS
COMMENTS ON ISSUES IN DISCUSSION PAPER DP70, DATED OCTOBER 2003**

Further to the Tribunal's invitation for submissions on the issues raised in this discussion Paper, Delta Electricity would like to offer comment on the Long Run Costs of electricity purchases in NSW.

In particular we would like to share with you the results of new entrant cost modelling, recently completed by Delta Electricity, and discuss some of the key assumptions and conclusions. I would also like to make reference to the differences in full retail competition ("FRC") which have arisen between NSW and Victoria

Executive Summary

Delta Electricity is of the view that the regulated wholesale electricity purchase cost presently incorporated in NSW regulated tariffs should be higher. This view is based on two arguments;

- The present regulated wholesale electricity purchase cost is below the range of estimates of Long Run Costs based on efficient new entrant generation. Pricing at a level below efficient costs may lead to cross-subsidies in favour of the regulated load, and
- There is some evidence that the current low level of the regulated wholesale electricity purchase cost is acting as a barrier to effective FRC in NSW.

These arguments are outlined below.

Overview

Comment in relation to the costs of supply of electricity needs to begin with an understanding of the nature of the load being supplied. The load used in this analysis is the NSW ETEF load, a poor load-factor load with high volatility. Delta has conducted an analysis of the least-cost solution of efficient new entrant technologies to meet that load. The analysis has been extended to derive an LRMC allowing for the current surplus reserve capacity position in NSW.

Delta has also considered the activity levels of FRC in the NSW market and compared that with those in the Victorian market as well as comparing the levels of regulated wholesale electricity purchase costs permitted in the franchise tariffs of those two markets. While not being able to establish cause and effect beyond reasonable doubt, there is an obvious correlation and conclusion to be made.

The above discussion points are developed in turn below.

Characteristics of the NSW Load Supplied Under Regulated Tariffs

The majority of the franchise load is covered by the Electricity Tariff Equalisation Fund (“**EETF**”) scheme.

The scheme’s “Whole of meter” attribute manages the following risks that are normally managed by wholesale hedging activities:

- **Load Shape:** The EETF load shape is very peaky with only 42% annual Load Factor, i.e. each 100MW of capacity serving this profile generates at only 42% of its capability (refer Attachment 1). The EETF load shape is highly sculpted with its peaks having a high correlation with higher price-risk periods.
- **Load Volume flex:** Upwards flex in volume, due typically to extreme weather in summer and winter also has a high correlation with higher price-risk periods.
- **Load Growth or decline:** The EETF scheme accommodates without penalty any load growth or shrinkage over time. The EETF load in 2001 totalled 26TWh and for 2003 this total was 24TWh.

While the EETF scheme is not the subject of this submission, some appreciation of its characteristics here is merited as any competitive arrangement must effectively compete with it. By design, the EETF arrangement is totally risk-free from the point of view of the retailer. If it were commercially available, it would be a premium-grade product. Some of the Scheme’s relevant characteristics are highlighted below:

- “Whole of meter” - discussed above
- **Counterparty credit risk** - As the EETF Fund is administered by a ministerial corporation, most persons would assume that credit risk was government-grade.
- **Call Option Value** - There is an additional benefit that accrues to those retail customers who retain a ‘right of return’ to the EETF scheme, and that is that at times of higher market prices, they can revert to a regulated tariff and switch to a competitive arrangement when the market price falls again. The EETF scheme effectively provides these customers with a cap on their electricity prices. An option such as this is a tradeable instrument with a quantifiable value. Delta estimates the value of this attribute at around \$1.30/MWh.

The EETF load is also subject to ex-post amendments. Final data is available for 2003 and Delta’s analysis is based on that year’s profile.

Efficient New Entrant Costs

Delta Electricity’s modelling of efficient new entrant costs includes for the following:

Four generation technologies, assumed to be located in NSW:

- Coal fired 660MW plant
- Natural gas-fired combined cycle 380MW plant (“**CCGT**”)
- Natural gas fired open cycle gas-turbine 100MW plant (“**OCGT-NG**”)
- Fuel-oil fired open cycle gas-turbine 100MW plant (“**OCGT-FO**”)

A likely range of key input costs for each of these technologies is assumed. These assumptions are generally in line with costs reported by ACIL Tasman in its Report to NEMMCO titled “SRMC and LRMC of Generators in the NEM” dated April 2003.

These four technologies cover a range of costs and for any particular capacity factor one will be the cheapest. A mix of these technologies will provide the least-cost to supply the EETF load,

with each technology operating at those capacity factors where it is cheapest. Generally, the ‘base’ portion of the load is most cost effectively served by coal plant and the ‘peak’ (and ‘reserve’) portions of the load are most cost effectively served with a combination of OCGT-NG and OCGT-FO plant.

Delta’s modelling explicitly includes incorporating the cost of reserve. Provision of reserve is an unavoidable aspect of operating an electricity system. The quantum of reserve provided has been based on NEMMCO’s reserve requirements over recent years, simplified as being in the range of 12-16% across the NEM. A conservative figure of 10% is assumed in Delta’s analysis (to factor in a possible reduction in reserve levels resulting from the current Reliability Panel review).

Retailers purchase the majority of energy in relation to their franchise load under the NSW Government’s ETEF scheme (there is an allowance for purchases from certain pre-existing generation projects and embedded generation, however the ETEF scheme covers the great majority of energy, all of the flexible aspects of the arrangements, and would necessarily be required to cover any load growth).

Delta has conducted modelling of the efficient new entrant cost of supply to the ETEF load and concluded that with 90% confidence this cost should lie in the range \$49.80 to \$55.20/MWh with a median figure of \$52.20/MWh (all prices are “Volume-weighted” averages (“VWA”)). This compares with the retailers present purchase price under the ETEF arrangements of \$45.29/MWh.

If a constraint is added that the NSW Governments’ greenhouse emissions targets are to be met, then the model requires more CCGT generation which adds about \$0.93 to the median Long Run Cost.

Extension of Efficient Cost Analysis to Long Run Marginal Cost Determination

The Tribunal has specifically requested comment in relation to the Long Run Marginal Cost (“LRMC”) of supply to the FRC load. However, it is noted that a LRMC analysis can be sensitive to assumptions on the size of load increments, due to the “lumpiness” of capital investment. Accordingly, Delta has averaged results over a range of increment sizes to derive the results tabulated below for LRMC over the next three years (to match the review period):

Year	LRMC (\$/MWh VWA)
2006/07	52.12
2005/06	53.34
2004/05	51.55
Average	52.34

Impact on Effective Full Retail Contestability

Delta has limited knowledge of the retail market, however the market intelligence Delta has on the subject suggests that the present level of retail tariffs to small customers is impeding a higher level of FRC activity. Delta is also able to provide some high-level analysis based on published data as follows.

At the present time only NSW and Victoria have implemented Full Retail Contestability for all customers. The most recent information to hand on small (<160MWhpa) customer transfers to competitive arrangements is as follows:

	NSW	Victoria
Total residential customers ¹	2,661,016	1,942,595
Small Customers Transferred through NEMMCO’s MAS ²	168,798	312,785
Transfers as % of Total Res. Numbers	6.34%	16.10%
Small Customers exercising Choice ³	493,467	N/A

Notes:

1. Source "Electricity Australia 2003" ESAA
2. NEMMCO Website to December 2003
3. NSW Ministry of Energy and Utilities – to 30 November 2003, includes gas customers

Note that small customers transferring to competitive supply arrangements with their host retailer do not have to be processed through NEMMCO's MAS, however, transfers to a non-host retailer must be processed through MAS. Consequently, NEMMCO's MAS data understates the total level of FRC competitive arrangements. In NSW, an understanding of the total of competitive arrangements with host retailers plus transfers to other retailers is given by the bottom line in the above table. It indicates that the majority of customers opting for a competitive arrangement have done so with their host retailer.

Two observations can be drawn from the above:

- the level of FRC activity (transfers to a non-host retailer) is significantly higher in Victoria compared with NSW, and
- within NSW, the level of FRC activity of switching to a competitive arrangement with the host retailer is about twice that of switching with a non-host retailer.

While there are many other differences in the competitive environment between the two States, there has been a substantial difference between the allowable energy purchase cost embedded in regulated retail tariffs. In NSW the regulated tariffs are underpinned by IPART'S estimated LRMC and green energy compliance costs and IPART's 2002 mid term review increased the range of electricity purchase costs to \$39 – \$59/MWh (real 2001 dollars). In Victoria, the ORG (now the Victorian Essential Services Commission) in its December 2001 Special Investigation into Electricity Retailers Proposed Price Increases determined the indicative range of "hedging cost" based benchmarks for the energy only (i.e. with no allowance for green compliance) cost component as \$65 - \$76/MWh (real 2001 dollars).

An application of the ORG's hedging cost benchmark methodology in NSW now would be likely to result in prices at least similar, and probably higher than those for Victoria as the forward market for flat hedges over the next three financial years values a NSW hedge on average about \$1.07/MWh higher than the Victorian equivalent.

Within NSW, the difference between the levels of FRC activity between host and external retailers indicates that there is likely to be a strong incumbent advantage to the host retailer. Delta assumes that, for the majority of customers, the "headroom" between the present regulated energy costs and competitive energy purchase costs is insufficient to permit non-host (eg interstate) retailers to overcome their higher cost of customer acquisition and transfer.

It seems likely that the difference in FRC activity between the two States is a result of the different levels of allowable energy purchase costs.

Further, as FRC programme costs are likely to be relatively fixed (i.e. not varying in relation to the size of the customer) it is likely that those costs, when amortised across customer consumption, may not be recovered for other than the larger customers. Accordingly, FRC programmes targeted towards the average customer may not be financially feasible, especially in the event of any lift in market prices.

Conclusion

Delta submits that the regulated wholesale electricity purchase cost should increase because:

- the present level is below the likely range of costs (on both LRMC and hedging cost measures), and
- The regulated wholesale electricity purchase cost may be having an anti-competitive effect by limiting the ability of retailers (especially "non-host" retailers) to offer competitive alternatives to the majority of franchise customers.

Delta would be pleased to provide any clarification of the above or any further assistance required. In particular, we would be happy to share with you our range of assumptions and further details of our modelling of efficient new entrant costs and LRMC. If you would like to

discuss these matters further please contact Phil Colebourn (02 9285 2751) or Frank Hutchinson (02 9285 2756).

Yours sincerely,

Tim Baker
General Manager Marketing

Attach.

ATTACHMENT 1

ETEF LOAD DURATION CURVE FOR CALENDAR YEAR 2002

