



QUEENSLAND COMPETITION AUTHORITY

22 MAR 2007

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**Queensland  
Government**

Office of the  
**Minister for Mines and Energy**

Your Ref:  
Our Ref: DME07-08506

16 MAR 2007

Mr Brian Parmenter  
Chairman  
Queensland Competition Authority  
GPO Box 2257  
BRISBANE QLD 4001

Dear Mr Parmenter

The *Electricity and Other Legislation Amendment Act 2006* (EOLA) was passed by the Queensland Parliament on 30 November 2006 and received assent on 7 December 2006. The EOLA contains the key legislative amendments for the introduction of full retail competition (FRC) in the Queensland electricity and gas markets on 1 July 2007.

I understand the Energy Competition Committee (ECC) has foreshadowed with representatives of the Queensland Competition Authority (QCA) additional responsibilities that the QCA will assume as part of the new regulatory regime for FRC. Consistent with this previous advice, the EOLA provides for the QCA to undertake the following functions:

- Administration and enforcement of the Electricity Industry Code and Gas Industry Code (including making and amending industry codes subject to Ministerial approval);
- Electricity pricing regulatory functions on delegation from the Minister;
- Reserve gas price regulatory function (subject to Ministerial Direction to investigate the effectiveness of competition);
- Administration of the electricity retailer of last resort scheme; and
- Provision of Ministerial Reports about QCA functions (including delegated functions) or significant events in the State's electricity market.

I expect the QCA will undertake a thorough examination of the details of these functions provided by the EOLA, and undertake all necessary preparations and allocate appropriate resources to undertake these functions.

Level 17  
61 Mary Street Brisbane 4000  
PO Box 15216 City East  
Queensland 4002 Australia  
**Telephone +61 7 3225 1861**  
**Facsimile +61 7 3225 1828**  
**Email MinesandEnergy@ministerial.qld.gov.au**  
ABN 65 959 415 158

The EOLA amends provisions of the *Electricity Act 1994* (Act) relating to the determination of notified prices and introduces a new Benchmark Retail Cost Index (Index) to replace the consumer price index for the annual indexation of notified electricity prices.

I now attach a Certificate which provides my delegation to the QCA to determine the Index to be applied to electricity tariffs that retail entities may charge non-market customers. The delegation is authorised under section 90(3) of the *Electricity Act 1994* (as amended by the EOLA).

The EOLA and the forthcoming amended *Electricity Regulation 2006* (Regulation) provide the methodology the QCA should apply in formulating the benchmark retail cost index which will be applied to electricity tariffs on an annual basis. As the amendments to the Regulation on this matter have not been finalised, I have enclosed drafting instructions which outline the intended provisions in the Regulation for the calculation of the Index. I will also provide you with a copy of the amendments to the Regulation once they are finalised.

I have previously advised bidders in the Queensland retail asset sales process of my intention to delegate this function to the QCA. As detailed in the attached letter, the policy intent of the annual indexation of electricity tariffs by the Index is to ensure existing headroom remains relatively stable. Headroom refers to the difference between the cost of supply and the current tariff level. A further policy intent is to ensure that the reversion policy does not result in retailers providing services to customers at a loss.

With regard to this latter policy intent, I note that it is to apply where retailers have acted reasonably in providing retail services to customers, and is not intended to protect retailers from any losses attributable to an incorrect assessment of the profitability of a customer or a change in the circumstances of the customer or retailer that is not related to changes in the cost of electricity supply reflected in the Index.

The attached Certificate imposes conditions on the QCA when undertaking the delegated function which are consistent with these Government policy objectives. Accordingly the QCA must consider the Government's policy objectives when determining the electricity prices that retail entities may charge non-market customers.

I also advise that I may impose further conditions on this delegation at any stage. Advice of any further conditions will be provided to the QCA in writing.

Notified prices are to be gazetted at least one month prior to 1 July each year. In ordinary circumstances, I expect to be advised of the index to be used in the calculation of notified prices no later than 15 business days before 1 June to enable me to gazette notified prices by the prescribed date. If there is a likelihood this requirement cannot be met, please contact me to discuss alternative arrangements.

I intend to provide a copy of the attached Certificate to electricity retailers holding a retail licence in Queensland, along with representatives of consumer groups that have participated in the development of the policy and legislative framework for FRC. The delegation will be provided individually to these parties to ensure all stakeholders are aware that the responsibility for calculating the Index has been formally delegated and provide information regarding the process for determining notified prices for the 2007-08 year and beyond.

Should you have any enquiries regarding this delegation, or any other matters relating to the introduction of FRC on 1 July 2007, please contact Kate Ryan of the Department of Mines and Energy on telephone 07 3224 8296 or email [kate.ryan@energy.qld.gov.au](mailto:kate.ryan@energy.qld.gov.au).

Yours sincerely



**GEOFF WILSON MP**  
**Minister for Mines and Energy**

**Certificate of Delegation**

Under section 90(3) of the *Electricity Act 1994* (as amended)<sup>1</sup>

**Delegation**

For the purposes of sections 90(1) and 320 of the *Electricity Act 1994*, from the date of this certificate, I delegate to the Queensland Competition Authority (“QCA”) the following functions and powers:

1. Calculation of the benchmark retail cost index under Subdivision 3 of Chapter 4, Part 2, Division 3 of the *Electricity Act 1994* (as amended); and
2. Fixing of future principles for benchmark retail cost element under section 95 of the *Electricity Act 1994* (as amended).

**Exceptions to delegation**

For the avoidance of doubt, this delegation does not include:

1. The power to add, remove or change a tariff in the existing tariff schedule;
2. The function and power under section 90(1)(c) to decide the prices or decide the methodology for fixing the prices that a retail entity may charge its non-market customers for charges or fees relating to customer retail services (except to the extent that the benchmark retail cost index (“**index**”) will be used to adjust such prices as already exist in the tariff schedule from time to time);
3. The function and power under section 90(1)(d) to decide the prices or decide the methodology for fixing the prices that a retail entity may charge its non-market customers for other goods and services prescribed under a regulation;
4. The function or power under section 90(7) to publish, by gazette notice, the prices (including, to avoid doubt, the decision relating to GST matters in sections 90(6) and 90(8)); and
5. Subject to condition 4 to this delegation, the obligation to ensure that the prices (as indexed) are gazetted at least one month before the relevant tariff year starts.

**Conditions of delegation**

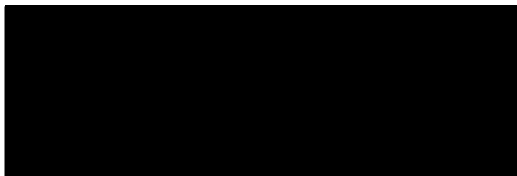
This delegation is subject to the following conditions:

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<sup>1</sup> In accordance with section 320(2) of the *Electricity Act 1994*, all references to the Act in this instrument of delegation are references to the Act as amended by the *Electricity and Other Legislation Amendment Act 2006* whether or not those amendments have commenced on the date this delegation is given

- 1 The QCA must consider the following policy objective of the Queensland Government when exercising the delegated powers and functions:
  - (a) the annual indexation of electricity tariffs by the index should ensure that existing retail headroom in the tariffs at the date of this delegation (as modified by condition 2 below) remains relatively stable; and
  - (b) the policy of enabling small market customers to revert to notified prices should not result in a retail entity providing customer retail services to non-market customers at a loss.
- 2 In order for the Minister to carry out the functions required under sections 90(5) and 91D of the Electricity Act 1994, the QCA must calculate the index for the relevant tariff year and the preceding tariff year – unless the index has already been provided for the previous tariff year and there have been no changes to the methodology used to calculate the index.
- 3 The QCA must recalculate Ergon Energy's Aggregate Annual Revenue Requirement ("AARR") for the access arrangement covering the period 2005/06 to 2009/10 by Net Present Value ("NPV") smoothing the actual AARR to determine annual revenue requirements which increase annually by the same percentage each year of the access arrangement covering the period 2005/06 to 2009/10. The resultant smoothed revenue requirements should be used to calculate the benchmark retail cost index for the following tariff years: 2007/08, 2008/09 and 2009/10.
- 4 The QCA must complete the delegated activities for each tariff year no later than 15 working days (or another date agreed with the Minister) prior to the date on which the Minister must gazette notified prices under section 96 of the *Electricity Act 1994*.
- 5 Any other conditions formally notified by the Minister from time to time.

This delegation may be revoked or amended by the Minister for Mines and Energy, Queensland at any time.



**GEOFF WILSON MP**  
**Minister for Mines and Energy**

**Date:**

## Methodology of Annual Indexation of Notified Prices

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### 1. Background

Section 90 (3) of the Electricity and Other Legislation Amendment Act 2003 (EOLA) provides for the Minister to delegate to the Queensland Competition Authority (QCA) all or any of the Minister functions under section 90 (1).

The Minister has issued a certificate of delegation to the QCA (attached) which delegates to the QCA the functions described under Chapter 4, Part 2, Division 3 of the Act.

Division 3, Section 91 B (1) requires the annual indexation of tariffs in the current tariff schedule which will continue to apply in the next tariff year (relevant tariff year). Indexation under this division applies to customer retail charges and DUOS charges, which is delegated to the QCA.

Division 3 sets out the methodology the QCA must adopt to calculate the benchmark retail cost index which is to be used to index tariffs to apply in the next tariff year. The policy intent of the requirement for the annual indexation of prices by the benchmark retail cost index is to ensure that tariffs are adjusted annually by changes in the cost to supply electricity to customers.

In Division 3 there is provision for several matters to be prescribed in the Regulation.

The purpose of prescribing these matters in the Regulation is to give the QCA further direction about how the index should be calculated. As specified by the Minister's delegation notice to the QCA the Queensland Government had two objectives which the QCA must consider when exercising the delegated powers. These are to ensure the existing retail headroom in the tariffs at the date of the delegation are substantially maintained to ensure effective competition and that small customer reversion to regulated tariffs should not result in a retail entity incurring a loss for those customers.

Therefore if tariffs are indexed annually to reflect the changes in the actual cost of supply to customers these policy objectives should be met.

The matters to be prescribed in Regulation are intended to remove any ambiguity which the QCA may be faced with when undertaking the calculation of the retail benchmark index so that the index does truly reflect the costs of supply. If this is the case the outcome should support the Government's objectives.

The Regulation should also enable reasonable transparency in the calculation of the benchmark retail cost index so that any interested party should be able to undertake a reasonable estimation of the future increases in notified prices.

Section 91 (D) provides that each tariff must be indexed by applying the following formula:

$$T_y = T_{y-1} \times B_y / B_{y-1}$$

Where-

$T_y$  is the tariff component for the relevant tariff year.

$T_{y-1}$  is the relevant tariff component for the preceding tariff year.

$B_y$  is the benchmark retail cost index for the relevant tariff year, as worked out under subdivision 3.

$B_{y-1}$  is the benchmark retail cost index for the preceding tariff year.

Subdivision 3, section 91 (E) sets out how the QCA should work out the benchmark retail cost index for the relevant tariff year. The formula for the benchmark retail cost index, expressed in c/kWh, for the State, is:

$$B = R / L$$

Where –

*B* is the benchmark retail cost index for the *tariff year*.

*R* is the total benchmark retail cost for the *tariff year*.

*L* is all of the NEM load of the State for the previous calendar year, as determined in 2.1 below.

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## 2. Matters to be Prescribed in the Regulation

### 2.1 Working out the NEM Load

The denominator in the formula for the benchmark retail cost index is “L” which is defined as “all of the NEM load of the State for the year”. To work out the NEM load the QCA is to quantify the total of the loads for the State supplied at each transmission connection point to a supply network. Ostensibly “L” is straightforward for the QCA to work out as the definition of “transmission connection point” is defined under the National Electricity Rules and the quantification of load supplied to these points is available from data published by the National Electricity Market Management Company (NEMMCO).

However, the calculation of the benchmark retail cost index may be biased in a particular tariff year, when new customer loads are commissioned (or decommissioned) and these customers are connected directly to the transmission network. This is because the increase in load is not accompanied with increased distribution system expenditure (because the customer is connected directly to the transmission system and bypasses the distribution system).

Distribution expenditure is a large component of the calculation of “R”, the total benchmark retail cost for the year, the denominator in the calculation of the benchmark, “B”. Consequently, in the circumstance where a new load is directly connected to the transmission system, the calculation of “B” will be a lower number than in the absence of the directly connected load.

This matter can be addressed by prescribing in the Regulation that the QCA should calculate “all of the NEM load of the State for the year” based on the NEM load delivered from the transmission connection network which flows through the distribution system to customers.

For consistency purposes, the period for measuring ‘L’ should be the same from year to year. Therefore, NEM Load for a prospective tariff year will be the twelve months of data to 31 December in the calendar year immediately prior. Eg for tariff year 2007/08 NEM load data will be measured from calendar year 2006.

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### 2.2 Consultation Arrangements for the Calculation of the Total Benchmark Retail Cost

Section 91 (G) provides for the QCA to determine the “total benchmark retail cost” referred to in section 91 (E) and which is defined as the “for the relevant tariff year the estimated total cost of supplying customers in the State”.

The total cost is the total of each of the following components as fixed by the QCA:

- (a) the cost of energy
- (b) network costs
- (c) retail costs
- (d) any other relevant costs the QCA considers relevant.

Further sections provide the methodology the QCA must adopt in fixing each of the components of the total benchmark retail cost. In fixing each of the components according to the methodology set out in the Act other than network costs the QCA is required to consult with interested persons in a way prescribed by regulation.

It is proposed that the regulation outline the following consultation arrangements.

“In determining the total benchmark retail cost the pricing entity should make the following consultation arrangements:

- in fixing each of the components of the total benchmark cost the elements the pricing entity should publicly release a discussion paper detailing the proposed approach to fix the component of the total benchmark cost;
- the pricing entity should seek written submissions from interested parties on the discussion paper through posting the discussion paper on a website. The pricing entity may use public seminars, conduct workshops and establish working groups to conduct the consultation;
- the pricing entity should produce a draft outcome on the total benchmark retail cost for the relevant tariff year taking into account submissions received and seek submissions on the draft outcome. The pricing entity may use public seminars, conduct workshops and establish working groups to conduct the consultation;
- the pricing entity must publish all responses to consultation notices on a website.
- The pricing entity should allow an adequate period of time between the call for submissions and the due date for receipt of submissions, not less than three weeks.
- In determining the total benchmark retail cost the pricing entity must consider all submissions that:
  - are made in response to consultation notices;
  - are received by the due date.”
- If the pricing entity decides to change the methodology for determining the cost of energy, the pricing entity should notify at least one year prior making the change.

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## **Cost of Energy**

Section 92 describes how the QCA should work out the cost of energy, which is one element of the total benchmark retail cost. The cost of energy is to be based on the QCA’s view of the long run marginal cost of energy in the part of the State connected to the national grid taking into account the 13 percent gas scheme and the Commonwealth Renewable Energy scheme. The 13 percent gas scheme and the renewable energy scheme are regulatory mechanisms to develop gas and renewable generation and therefore impact on the long run marginal cost of energy.

Section 92 (6) provides that the QCA in estimating the long run marginal cost must comply with any methodology prescribed under a regulation.

Long run marginal cost is an economic term to define the cost of the next unit of energy produced to meet the requirements for the NEM load as defined in the regulation.

In general terms, marginal cost at each level of production includes any additional costs required to produce the next unit. In principle marginal cost pricing means that the market over the long run will cause a commodity to be sold at its long run marginal cost of production.

Whether electricity is sold at marginal cost will depend on factors such as competition in the market as well as the time frame considered. Therefore it will be necessary for the Regulation to set out the methodology which will enable the QCA to fix an appropriate LRMC.

Suggested drafting is as follows:

“Methodology for Estimating the Long Run Marginal Cost of Energy

The methodology should be a recognised and acceptable theoretical framework.

- for example: determination of the new entrant price of various electricity generation technologies with the actual electricity generation plant mix optimised to efficiently supply the NEM load

The theoretical framework should explicitly account for:

- provision of ancillary services to meet the NEM load and any other legitimate costs that influence the cost of generation;
- The treatment of the 13 percent gas scheme and the scheme under the *Renewable Energy (Electricity) Act 2000 (Cwlth)*
- For example the LRMC model can be constrained to meet the requirements of these schemes. Alternatively, the model can be unconstrained, with the resulting energy price uplifted to take account of schemes. If the second approach is adopted double-counting should not occur. If the resulting industry LRMC contains 10% gas generation, the price need only be uplifted to account for the 3% shortfall to meet the 13% gas scheme.

The LRMC theoretical framework should be based on the following:

- consumers should be charged the costs to produce the unit of electricity for their consumption and retailers should be able to recover sufficient costs to enable them to efficiently retail to consumers;
- the framework should be capable of being applied as a model which is practical and easy to estimate;
- LRMC for a tariff year should be shaped based upon the NEM load from the previous calendar year

The modelling of the theoretical should result in the calculation of a cost per unit of energy expressed in \$/MWh which should then be multiplied by the determined NEM load from the most recent 12 months of data to determine the aggregate cost of energy which is the component of the total benchmark retail cost.

The theoretical model should continue to be used indefinitely, unless there are clear reasons to change. If change is necessary, the QCA should make a notification of the need to change at least one year prior to the change taking effect. It may be necessary to calculate a year minus one base to create the correct basis for the first use of any potential new methodology, as will be done for the first year of the new tariff policy.

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## Network Costs

Ostensibly the method of including network costs in the calculation of the total benchmark should simply be to include the published *Maximum Allowable Revenue* and *Aggregate*

*Annual Revenue Requirements* published by the relevant network regulator (currently this is the QCA but this role will be transferred to the Australian Energy Regulator in the near future). There are two distribution entities in Queensland – Energex and Ergon. Therefore the QCA will include the network costs associated with the networks operated by each of these entities because the total benchmark cost relates to costs of supplying all customers in the State.

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## **Retail Costs**

Section 94 provides that the QCA should calculate the retail cost element of the total benchmark cost on the basis of an efficient retailer with the following characteristics: the retailer is a standalone retailer; is of reasonable size (ie has significant market share of the Queensland electricity market); and has a cross-section of customers.

This will mean calculating costs of providing customer retail services on the basis of a hypothetical electricity retailer, not undertaking other business activities. The retailer will have a reasonable customer base, for example to be determined as 500,000 customers, and the customer types will be in the same proportion as the entire Queensland customer base. Customer types are defined by the consumption level of customers. For example:

- 0.5% > 200MWh per year;
- 0.5% 100-200MWh per year;
- 11% Commercial < 100MWh per year; and
- 88.5% domestic.

Costs to service the customer base will include costs such as – billing, customer call centres, credit management, trading, overhead, information technology systems, appropriate margin to compensate the retailer for its risk weighted investment and any other cost categories that the QCA considers reasonable.

This efficient cost for a benchmark retailer calculated by the QCA should be multiplied out to cover the whole Queensland customer base. For example, if \$50 million in retail costs is calculated for 500,000 customers then this would translate to \$180 million for the current 1.8 million Queensland customers connected to the national grid. The calculation for this example is as follows:

Number of Queensland customers connected to the national grid for the relevant tariff year (1,800,000)

*divided by*

Significant share of State's electricity retail market (500,000)

*multiplied by*

Calculated costs of an efficient retail entity meeting the relevant criteria (\$50 million)

*equals*

Efficient retail cost to be included in R the total benchmark retail cost (\$180 million).

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## **Fixed Principles**

A fixed principle can be set where the benchmark study is not expected to change greatly, or where the price movement can be expected to move in a predicted fashion. For example, if the retail benchmark has been calculated to be \$100 per customer per year and expected to increase at 100% of CPI for the following two years, the benchmark for years 1, 2 and 3 would be:

1. \$100

2.  $\$100 * (1 + \text{CPI} * 100\%) = \$102.50$
3.  $\$102.50 * (1 + \text{CPI} * 100\%) = \$105.06$

The CPI figure used will be the ABS March on March change in the 'Brisbane – all groups' index. The CPI multiplier used in the above example appears simplistic, but it will be a compound rate based on the blended real change in all of the input costs of the retail cost component being fixed.

The pricing entity must consult on whether or not it will include 're-openers' to each fixed principle. If including re-openers, they must be listed with trigger values and what process will be followed.



Hon Geoff Wilson MP  
Member for Ferny Grove



Queensland  
Government

Minister for Mines and Energy

## Attention Bidders in the Queensland Retail Asset Sale Process

### Energy and Other Legislation Amendment (EOLA) Bill – Benchmark Retail Cost Index

I introduced the EOLA Bill into the Queensland Parliament on 31 October. Clause 25 of the EOLA Bill provides for a method of indexing retail electricity tariffs in Queensland on an annual basis from 1 July 2007.

I intend to delegate the authority to calculate the benchmark retail cost index to the Queensland Competition Authority (QCA).

The Queensland Government has a published gazette notice which notifies current electricity tariffs. Each tariff in the tariff schedule will be indexed annually by the benchmark retail cost index calculated by the QCA. In addition, tariffs can be added to or deleted from the tariff schedule as provided for by the new section 91D(2) of the Electricity Act 1994. Consequently, it is intended that the efficiency and effectiveness of the existing tariffs can be reviewed.

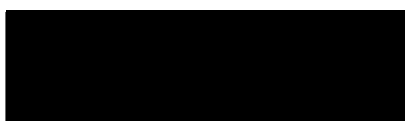
It is important for bidders to understand that the index will reflect changes in the components. On that basis the actual level of the components are less critical than the change in the components.

The overall policy intent of the annual indexation of tariffs by the benchmark retail cost index is to ensure that the actual increases in (the total) electricity costs are reflected in the level of tariff increases. This approach will, amongst other things, ensure that the competitive headroom in Queensland remains relatively stable. Additionally, the intent is to ensure that the reversion policy does not result in retailers providing services at a loss to customers.

Further details will be included by way of Regulation to provide direction to the QCA in undertaking the calculation. It is intended that the draft Regulation including directions to the QCA will be available for public consultation in late November. To assist bidders understanding of what is intended to be in the Regulation, please find attached a detailed description of the formula that is intended to be used to calculate the retail tariff in the preparation of the regulation.

We have considered comments from the Retailers in recent consultation.

Yours Sincerely



Geoff Wilson  
**Minister for Mines and Energy**

Level 17  
61 Mary Street Brisbane 4000  
PO Box 15216 City East  
Queensland 4002 Australia  
**Telephone +61 7 3225 1861**  
**Facsimile +61 7 3225 1828**  
**Email MinesandEnergy@ministerial.qld.gov.au**  
ABN 65 959 415 158

## **Attachment 1**

The key components of the benchmark retail cost index are:

- Cost of energy;
- Network costs;
- Retail costs; and
- Fixed principles.

### **Cost of Energy**

The cost of energy should represent the industry long-run marginal cost (LRMC) of procuring energy for the Queensland market load.

This should take into account:

- The Queensland market load shape, in particular the load shape of small customers;
- Mandatory requirements to procure a certain type of energy;
- Payments for Ancillary Services; and
- Any other legitimate charge that adds to the cost of procuring energy.

In determining the LRMC, the QCA will be required to use a methodology that is clear and transparent. One such methodology is to determine the new entrant price of various technologies (plant LRMC) and then optimise the mix of plant to suit the Queensland load.

The treatment of mandatory energy purchase requirements must be explicitly dealt with. This can be done by either constraining the industry LRMC model to contain at least 2% renewables and 13% gas generation. Alternatively, the model can be unconstrained, with the resulting energy price uplifted to take account of the energy schemes. Caution should be exercised with this approach to ensure double-counting does not occur. If the resulting industry LRMC contains 10% gas generation, the price need only be uplifted to account for the 3% shortfall.

If a cost per unit of energy is calculated (\$/MWh), this is multiplied by the actual load from the previous year to determine the aggregate cost.

It is expected that upon deciding a methodology (after consultation with industries), the regulator will continue to use it indefinitely, unless there are clear reasons to change. If change is necessary, the regulator should notify the industry at least one year prior to the change taking effect. It may be necessary to calculate a year minus one base to create the correct basis for the first use of any potential new methodology, as will be done for the first year of the new tariff policy.

### **Network Costs**

The usual method of including network costs should simply be to include the published Maximum Allowable Revenue and Aggregate Annual Revenue Requirements handed down by the relevant network regulator.

It has been recognised that the initial calculation of the index may be affected by the lack of growth in the Ergon area AARR, due to the fact that the electricity cost index is being implemented in the middle of a regulatory period and most of the growth has occurred in the first year. This issue is being investigated and a means of addressing this is as follows:

- Ergon AARR could be included in the calculation 'as if' it were NPV smoothed. This has the effect of averaging the growth over the remaining period and doesn't overly affect the State-wide index. This mechanism is being investigated to ascertain whether or not it would achieve the desired result via regulation.

## **Retail Costs**

The Retail cost component is based on a benchmark efficient cost for a standalone retailer, of reasonable size, and with a cross-section of customers.

Typically, this will mean that the benchmark will be set on the basis of a hypothetical electricity retailer, not undertaking other business activities. The retailer will have a customer base of, say, 500,000 and the customer types will be in the same proportion as the entire Queensland customer base. For example: 2% tranche 1; 8% tranche 2; 15% tranche 3; etc.

The regulator will determine the efficient level of costs to service this customer base and will include costs such as – billing, customer call centres, credit management, trading, overhead, systems, etc. The regulator should also include an appropriate margin to compensate the retailer for its risk-weighted investment.

This efficient cost for a benchmark retailer should be multiplied out to cover the whole Queensland customer base. For example, if \$50 million is appropriate for 500,000 customers then  $\rightarrow 500,000 / 1,800,000 \times \$50 \text{ million} = \$180 \text{ million}$ .

## **Fixed Principles**

A fixed principle can be set where the benchmark study is not expected to change greatly, or where the price movement can be expected to move in a predicted fashion. For example, if the retail benchmark has been calculated to be \$100 per customer per year and expected to increase at 100% of CPI for the following two years, the benchmark for years 1, 2 and 3 would be:

1. \$100
2.  $\$100 * (1 + \text{CPI} * 100\%) = \$102.50$
3.  $\$102.50 * (1 + \text{CPI} * 100\%) = \$105.06$

The CPI figure used will be the ABS March on March change in the 'Brisbane – all groups' index.

## **Delivered Energy**

The denominator in the calculation can bias the change in price year on year if new, transmission connected customers are commissioned. This is because the increase in load is not accompanied with increased distribution capital, a large component of the cost base. This can be addressed by adjusting for new or lost loads, or by only using energy delivered through the distribution networks.