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## **ANALYSIS SUPPORTING FOR APPROVAL OF REFERENCE TARIFFS FOR STANDARD NETWORK ACCESS SERVICES, 2008-09**

As set out in the 2004 Reset Final Determination, the Commission must approve the schedule of individual network access tariffs submitted by the Power and Water Corporation for the 2008-09 year, unless:

- the weighted average of tariffs included in the schedule, expressed in index number form, does not comply with the constraint:

$$P_t \leq [ (P_{t-1} * (1 + Z)) * (CPI_{t-1} / CPI_{t-2}) * (1 - (X_1 + X_2))] ]$$

- in conjunction with the submission of the schedule of annual network access tariffs for approval, the network service provider fails to submit to the Commission a statement of reasons for any modifications proposed to the structure of network access tariffs that is consistent with the approved Pricing Principles Statement and capable of publication (with the Commission intervening only if it considers the proposed change in structure to be inconsistent with the approved Pricing Principles Statement); or
- the resultant impact on the weighted average tariff for each individual end-use customer does not comply with a CPI+S side constraint, where S is the factor applying to a particular year or years determined by the Commission.

### **(a) Weighted average of tariffs: compliance with the CPI-X constraint**

The price constraint calculations for 2008-09 are set out below:

<b>Parameters</b>	
CPI <sub>2006</sub> (average of 4 quarters Mar 06 to Dec 06)	154.350
CPI <sub>2007</sub> (average of 4 quarters Mar 07 to Dec 07)	157.950
P <sub>2007-08</sub>	94.060
X <sub>1</sub>	1.75%
X <sub>2</sub>	0.25%

Constraint equation for 2008-09:

$$P_t \leq [ P_{t-1} * (CPI_{t-1} / CPI_{t-2}) * (1 - (X_1 + X_2))] ]$$

$$P_{2008-09} \leq [ P_{2007-08} * (CPI_{2007} / CPI_{2006}) * (1 - (X_1 + X_2))] ]$$

$$P_{2008-09} \leq \left[ 94.060 * \left( \frac{157.950}{154.350} \right) * (1 - (1.75\% + 0.25\%)) \right]$$

$$P_{2008-09} \leq 94.329$$

The weighted average tariff index for 2008-09 tariff schedule proposed by Power and Water was calculated as follows:

<b>Price and quantity data</b>	
$\sum_{i=1...n} [p^{i2008-09} * q^{i2006-07}]$	73,948,848
$\sum_{i=1...n} [p^{i2007-08} * q^{i2006-07}]$	73,738,270

$$P_t = P_{t-1} * \left[ \frac{\sum_{i=1...n} [p^i * q^{i-t-2}]}{\sum_{i=1...n} [p^{i-t-1} * q^{i-t-2}]} \right]$$

$$P_{2008-09} = P_{2007-08} * \left[ \frac{\sum_{i=1...n} [p^{i2008-09} * q^{i2006-07}]}{\sum_{i=1...n} [p^{i2007-08} * q^{i2006-07}]} \right]$$

$$= 94.060 * \left[ \frac{73,948,848}{73,738,270} \right]$$

$$= 94.329$$

Power and Water's proposed tariff schedules for 2008-09 comply with the price constraint equation.

**(b) Statement of reasons consistent with the approved Pricing Principles Statement and capable of publication**

Power and Water has not made any changes to the network tariff structure from those approved for 2007-08, escalating all network tariff components by the 'CPI - X' constraint (i.e., 0.29%).

Full details of the proposed changes and a qualitative assessment against the criteria set out in the 2006 Network Pricing Principles Statement has been provided by Power and Water in the accompanying Statement of Reasons.

The Commission has assessed Power and Water's Statement of Reasons as complying with the relevant requirement of paragraph 3.20 of the 2004 Reset Final Determination paper.

**(c) Weighted average tariff for each individual end-use customer: compliance with a CPI+S side constraint**

The 2004 Reset Final Determination provided that the S factor for application in 2008-09 is CPI + 5%.

The S factor constraint requires that the change in tariff confronting each individual end-user complies with the following constraint:

$$P_{j_t} \leq \left[ P_{j_{t-1}} * \left( \frac{CPI_{t-1}}{CPI_{t-2}} \right) * (1 + S) \right]$$

where the “j” superscript denotes an individual customer.

$$P_{2008-09}^j \leq \left[ P_{2007-08}^j * \left( \frac{CPI_{2007}}{CPI_{2006}} \right) * (1 + S) \right]$$

$$P_{2008-09}^j \leq \left[ P_{2007-08}^j * \left( \frac{157.950}{154.350} \right) * (1 + 5.0\%) \right]$$

$$P_{2008-09}^j \leq \left[ P_{2007-08}^j * 1.074490 \right]$$

This can be re-expressed as:

$$P_{2008-09}^j / P_{2007-08}^j \leq 1.074490$$

As all tariff components were increased by the same percentage amount, the ratio of the change in tariff confronting each individual end-user is exactly 1.0029.

Power and Water’s proposed tariff schedules for 2008-09 complied with the side constraint for individual customers.