

30 January 2004

Sebastian Roberts  
General Manager  
Regulatory Affairs - Electricity  
Australian Competition and Consumer Commission  
360 Elizabeth Street  
Melbourne, VIC 3000

By email: [electricity.group@acc.gov.au](mailto:electricity.group@acc.gov.au)

Dear Sebastian,

### **Post-tax Revenue Model**

Thank you for the opportunity to review and comment on the Post-tax Revenue Model that was released for comment on 22 December 2003.

ElectraNet engaged KPMG to review the model.

KPMG's comments, which are summarised below, are almost identical to those ElectraNet provided on a pre-release version of the model on 23 June 2003. It is disappointing that the new model does not address the earlier comments.

### **Capital Expenditure**

The main issue identified with the ACCC model is that it does not give the correct return on assets over the life of capital additions.

This error results from two individual errors:

- Firstly, there is a failure to give a return on the initial asset value; and
- Secondly, there is an over statement of depreciation as the ACCC model does not recognise the CPI increment in the first year. This compensates and offsets, in part, the lack of return.

These issues are demonstrated by using a sample set of data and comparing the returns calculated using the ACCC model with those calculated using KPMG's model.

The comparisons are not perfect as the KPMG model uses consistent assumptions in the return on and of assets. That is, if the asset is inflated by a half years WACC, it will earn returns on and of capital after the end of the year of addition. The ACCC model confuses these assumptions as is demonstrated in the following:

Inputs	Asset life	4 years					
	Asset addition	1,000.00					
	WACC	9.62%					
<b>Outputs</b>							
<b>ACCC's PTRM - June 2003</b>		<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Return on assets		-	-	77.93	53.51	27.56	-
Return of assets		-	269.89	253.70	269.65	286.33	-
Total		-	269.89	331.62	323.16	313.89	-
<b>NPV (Discounted at Vanilla WACC)</b>		<b>\$984.79</b>					
		<b>This does not equal the original asset value of \$1,000 or WACC inflated value of \$1048.12</b>					
		<b>Inadequate return</b>					
<b>ACCC's PTRM - Dec 2003</b>		<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Return on assets		-	-	77.93	53.51	27.56	-
Return of assets		-	269.89	253.70	269.65	286.33	-
Total		-	269.89	331.62	323.16	313.89	-
<b>NPV (Discounted at Vanilla WACC)</b>		<b>\$984.79</b>					
		<b>This does not equal the original asset value of \$1,000 or WACC inflated value of \$1048.12</b>					
		<b>Inadequate return</b>					
<b>TNSP Modelling</b>		<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Return on assets		0.00	100.87	77.92	53.51	27.56	-
Return of assets		0.00	269.89	277.99	286.33	294.92	-
Less CPI Increment		(0.00)	(31.44)	(24.29)	(16.68)	(8.59)	-
Total		0.00	339.32	331.62	323.16	313.88	-
<b>NPV</b>		<b>\$1,048.11</b>					
Original input	1,000.00						
Add half WACC	48.12						
	1,048.12						
		Reconciles with original asset value					
		Minor difference due to rounding of WACC					
		WACC inflated capex is consistent with ACCC assumptions					

The ACCC model provides a return of assets over 4 years, but only provides a return on assets over three years. The KPMG model (referred to as the TNSP model) confirms that the NPV of the returns (on and of capital) equals the original asset value – consistent with the financial capital maintenance principle. The ACCC model does not allow the full return to be realised.

The discrepancy is explained in more detail in the following reconciliation:

<b>Error in ACCC' PTRM</b>	
NPV of returns	984.79
Initial asset value (capital expenditure)	1,048.12 (WACC inflated value)
Difference	63.34
Difference as a percentage	6.0%

<b>Analysis of difference</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Closing balance							
<b>ACCC</b>							
Opening		1,048.12	809.67	555.98	286.33		
Addition	1,048.12						
Depreciation and CPI	-	(269.89)	(253.70)	(269.65)	(286.33)		
CPI Increment	-	-	-	-	-		Note: the CPI is not separately calculated
WDV	1,048.12	778.23	555.98	286.33	-		
Difference		(31.44)					Difference - initial CPI increment
From the ACCC PTRM (Dec 2003)		809.67	555.98	286.33	-		
<b>TNSP modelling</b>							
Opening		1,048.12	809.67	555.98	286.33		
Depreciation	(0.00)	(269.89)	(277.99)	(286.33)	(294.92)		
CPI Increment	0.00	31.44	24.29	16.68	8.59		
WDV	(0.00)	809.67	555.98	286.33	(0.00)		
Difference							
KPMG Model	1,048.12	809.67	555.98	286.33	-		Check - OK
<b>Summary of errors</b>							
ACCC's over depreciation in year after addition		-	31.44				
ACCC's failure to give a return on original asset addition			100.88				
			69.43				
Discounted by one years WACC			63.34				
<b>Percentage of Capex</b>			<b>6.0%</b>				Proves with above error

We note that the ACCC model does not perform an NPV check on the returns.

The NPV check on the ACCC's modelling does work for the initial assets, so if the NPV check was carried out with a full set of data including a substantial initial capital base and a reasonable set of capital additions, then the amount in error might go unnoticed as it only represents less than 6% of the capital expenditure, however, this 6% of revenue is lost from the business forever.

We note that the ACCC model still adds half a year's WACC to the capital expenditure and capitalises this into the capex for the year compensating the business for the lost returns in the first year, but deferring this return to be recovered over the life of the asset. ElectraNet argues that it is more correct to allow the return on capital expenditure in the year that it is incurred as the ACCC did for ElectraNet in its revenue cap decision.

### **Initial Assets**

The ACCC model only works for asset lives in whole years. Part years will result in a "run time error" the reasons for which appear to be hidden in a macro. If a remaining life of 2.5 years is entered, the depreciation calculated for the third year (which should be 20% of the opening WDV) is omitted, and the residual value (20%) is carried forward each year for the remainder of the model.

### **Depreciation**

A calculation of real depreciation is made in the ACCC model. The value used for capital additions is the WACC adjusted value from real inputs (a half year's return on the asset is added to the asset value to compensate the business for the return forgone during the year of addition assuming that it was acquired half way through the year).

A full year's depreciation is applied in the first year of the addition. We note that this is inconsistent with the notion of adding a half year's WACC on the capex into the value of the asset to compensate for delivering a return on the asset only after the end of the year of addition. It has the effect of overstating the return of assets which is offset by the under recovery of the return on assets noted earlier.

A nominal depreciation asset register is not calculated. Real closing written down asset values are inflated to calculate nominal closing written down values, which are then used to determine the nominal (current cost account) depreciation, net of the CPI increment.

The nominal depreciation for the first year after the year of capex addition incorrectly inflates depreciation by ignoring the CPI increment for the year (see example in the earlier table).

### **Other Comments**

The ACCC's publicly released model should be expanded to allow more asset classes (say up to 20) so that the model can be more fully tested by interested parties.

I can be contacted on 08 8404 7983 in relation to the comments made in this letter.

Yours sincerely,



Rainer Korte  
**NEM DEVELOPMENT AND REGULATION MANAGER**