

**NETWORKS PRICING:
ASSET VALUATION OFF-RAMP**

DRAFT DECISION

FEBRUARY 2005



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CHAPTER**1****FOREWORD****Purpose of this Paper**

1.1 This paper presents the Commission's draft decision relating to asset valuation matters consequential to its Final Determination for the 2004 Regulatory Reset ("the 2004 Reset Determination").

1.2 The 2004 Reset Determination included provision for what was termed an asset valuation 'off-ramp' (hereafter the "off-ramp provision"). This allowed for a once-off adjustment to the value of the network price cap were the Commission to find that there had been a material error in the asset values underlying the Z factor that had been incorporated into the 2004 Reset price cap formula (Attachment A).

1.3 The Z factor applied in the 2004 Reset Determination had the effect of increasing the price base for the second regulatory control period by 4.4%.

Timetable

1.4 The timetable for the remainder of this asset valuation off-ramp review is as follows:

Date	Event
21 March 2005	submissions on draft decision due
31 March 2004	publication of the Commission's final decision

Inquiries

1.5 Any inquiries regarding the asset valuation off-ramp review process should be directed to:

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Abbreviations used in this Paper

1.6 The key abbreviations and acronyms used in this paper are as follows:

2000 Determination	the review of network price regulation by the Commission that was completed in May 2000
2004 Reset	the review of network price regulation by the Commission that was completed in March 2004
DORC	depreciated optimised replacement cost
GARP	generally accepted regulatory practice
RAV	regulatory asset value, being the value used for price regulation purposes
S factor	the side-constraint factor determined by the Commission applying to the weighted average tariff for each individual end-use customer, in respect of a particular year or years
Z factor	the factor determined by the Commission which indicates the extent to which the weighted average of all network access tariffs applying in the first regulatory control period required adjustment at the commencement of the second regulatory control period

CHAPTER

2

EXECUTIVE SUMMARY

2.1 In the Commission's 2004 Reset Determination, provision was made for a once-off adjustment to the value of the network price cap if it was found that a material error had been made in the regulatory asset values used in the Reset price cap formula.

2.2 Following a review initiated by the Commission, this draft decision finds that:

- the DORC values (and underlying book values) used in the 2004 Reset involved certain measurement errors; and
- the 2004 Reset's sole reliance on the DORC valuation methodology involved a conceptual error in light of relevant requirements of the NT Network Access Code and the *Utilities Commission Act*.

2.3 In place of the DORC valuation used at the time of the 2004 Reset, the draft decision involves the use instead of a regulatory asset valuation methodology that:

- for sunk assets (in practice, assets in place at 1 July 2002), values such assets equal to a value that would sustainably generate sufficient cashflows to justify at least a single-A credit rating for Power and Water's regulated networks business on a stand-alone basis; and
- at 1 July in each of the subsequent years, the 1 July 2002 value 'rolled-forward' in accordance with generally accepted regulatory practice (i.e., appropriately adjusted for inflation, asset acquisitions, asset disposals and annual depreciation).

2.4 This draft decision also includes the Commission's preliminary assessment that the use of this alternative methodology would reduce the regulatory asset value underlying the Reset price cap formula by 27% and the weighted-average reference tariffs by 18%.

2.5 Finally, the draft decision proposes that, while the benefits to network users of the resultant lower reference tariffs are to accrue from 1 July 2005, the passing-on of those benefits to users be postponed for up to a year (involving the current reference tariffs remaining in place), to enable the Commission's preliminary assessment of the regulatory asset value to be finalised. To this end, parties are to be given until 30 September 2005 to, in addition to undertaking any associated consultations, make submissions to the Commission on the modelling underlying the preliminary assessment. The regulatory asset value will be finalised by no later than 30 November 2005, and the network service provider will then be expected to rebate the over-collections of network revenues expected during 2005 06 to users by 30 June 2006.

CHAPTER

3

DRAFT DECISION

The Commission's draft decision is:

- 1) that, on the basis of a desktop analysis by the Power and Water Corporation ("Power and Water"), the depreciated optimised replacement cost (DORC) values used in the 2004 Reset for Power and Water's total regulated network assets as at 30 June 2002 were overstated;
- 2) that the precise amount of this overstatement requires an independent expert assessment;
- 3) that, in contrast with the 2000 Determination, the Commission erred in the 2004 Reset by placing sole reliance on the DORC valuation methodology as the basis for determining the regulatory asset values (RAV) used;
- 4) that, in the NT context (including because of, but by no means restricted to, ongoing uncertainty about the DORC values themselves), the most appropriate conceptual approach for regulatory purposes would have been for the 2004 Reset to have used a RAV for the total regulated network assets that:
 - a) at 1 July 2002, was the greater of the assets':
 - i) book value; and
 - ii) business sustainability value, defined as the asset value that would sustainably generate sufficient cashflows to justify at least a single-A credit rating for Power and Water's regulated networks business on a stand-alone basis; and
 - b) at 1 July in each of the subsequent years, was the 1 July 2002 value 'rolled-forward' in accordance with generally accepted regulatory practice (i.e., appropriately adjusted for inflation, asset acquisitions, asset disposals and annual depreciation);
- 5) that, based upon a comparison of the assets' reported book value and the Commission's estimate of the assets' business sustainability value, the Commission's **preliminary assessment** is that the RAV for total regulated network assets excluding gifted assets as at 1 July 2002 was \$300.0 million (rounded to the nearest \$0.1 million);
- 6) that, for the purposes of the weighted-average price index of network tariffs in 2004-05 to be used when calculating the approved index of tariffs in 2005-06 and subsequent years, the approved 2003-04 index be adjusted by the corrected Z factor and then escalated by CPI-X (with the 2004-05 index calculated in the 2004 Reset being put aside);
- 7) that the corrected Z factor be calculated using:
 - a) for all components of the calculation other than any RAV-related components, the data used for the Z factor calculation in the 2004 Reset; and
 - b) for any RAV-related components of the Z factor calculation, a value based on the applicable rolled-forward value of the corrected 1 July 2002 RAV;

- 8) that, based upon the above preliminary estimate, the (preliminary) corrected Z factor is -13.4%;
- 9) that, while the benefits to network users of network tariffs based upon the corrected Z factor commence accruing from 1 July 2005, the passing-on of those benefits to network users be postponed for up to a year, to enable the Commission's preliminary assessment of the total RAV to be finalised;
- 10) that, in order to assist the Commission finalise the above preliminary assessment, parties be given until 30 September 2005 to, in addition to undertaking any associated consultations, make submissions to the Commission about amendments considered necessary to:
 - a) the Commission's business sustainability modelling and associated assumptions; and
 - b) the book valuation of Power and Water's regulated network assets as at 1 July 2002, including as a result of any consequential recoverable amounts test;
- 11) that, by no later than 30 November 2005, the Commission will issue a final assessment of:
 - a) taking into account the submissions made by interested parties, the corrected 1 July 2002 RAV; and
 - b) the resultant corrected Z factor;
- 12) that the Z factor correction be implemented with effect from 1 July 2005, involving:
 - a) with respect to the 2005-06 year, and subject to the Commission's approval of the basis of Power and Water's calculation of the amounts involved:
 - i) by 31 May 2005, Power and Water advising the Commission of Power and Water's forecast of the amount of network revenue to be collected during 2005-06 on account of the difference between the (preliminary) corrected Z factor and the 2004 Reset Z factor from (i) as a group, non-contestable customers and T4 customers benefiting from the Government's price cap, and (ii) individually, each contestable customer paying fully-negotiated network charges; and
 - ii) by 30 June 2006, Power and Water Networks refunding to Power and Water Retail, for on-passing as appropriate to the Government and for the payment of a rebate to each of the affected contestable customers based upon:
 - (1) if the final corrected Z factor implies a network price adjustment that is equal to or greater than that based on the (preliminary) corrected Z factor, the above forecast over-collections of network revenues during 2005-06; and
 - (2) if the final corrected Z factor implies a network price adjustment that is less than that based on the (preliminary) corrected Z factor, the above forecast over-collections of network revenues during 2005-06 scaled back by the difference between the final corrected Z factor and the (preliminary) corrected Z factor; and
 - b) with respect to the 2006-07 year and subsequent years, the approved weighted-average price index of network tariffs in 2003-04 being adjusted by the corrected Z factor and then escalated forward in accordance with the approved CPI-X values; and
- 13) that, to allow sufficient time for the subsequent consideration of Power and Water's network pricing principles and methods, the allowed S factors for application during the second regulatory control period be slipped by two years on those approved in the 2004 Reset Determination.

CHAPTER

4

2004 RESET VALUATIONS

2004 Reset valuations

4.1 The depreciated optimised replacement cost (DORC) valuations of regulated network assets as at 30 June 2002 used in the 2004 Reset to determine the value of the Z factor were derived as follows:¹

\$ millions	Power and Water's DORC values	Additional optimisation adjustment (a)	2004 Reset RAV values
total regulated network assets including gifted assets	454.429	2.24%*76.71%	446.621
less gifted assets	16.377	2.24%*76.71%	16.096
equals regulated assets net of gifted assets	438.052		430.525

(a) In the 2004 Reset Determination, the Commission applied the same global optimisation adjustment to pre-2000 assets (2.24%) as was evident in the 2000 Determination, with pre-2000 assets estimated to comprise 76.71% of assets at 30 June 2002.

Issues with 2004 valuations

4.2 Power and Water flagged a range of asset register and reconciliation problems with the above DORC valuations, but was unable to confirm the valuation consequences of these deficiencies in its asset register prior to the Final Determination.

4.3 The Commission nevertheless expressed concern over the dramatic increase in the DORC valuation relative to the equivalent year's values used in the 2000 Determination implied by some preliminary figuring by Power and Water, in view of the regulated asset base.

4.4 During the 2004 Reset, the Commission also expressed some doubts as to whether available DORC valuations were appropriate for use as the regulatory asset values (RAV) used for price regulation, and particularly whether:

- the DORC value is indicative of an optimised deprival value in the NT context; and
- it is appropriate to value all assets existing prior to 2000 at a DORC value given that some of the assets were financed by government funding that was in the

¹ The regulatory asset value used to determine the Z factor in the 2004 Reset was the average of an 'adjusted' DORC value, net of gifted assets, for the regulated network assets as at 30 June 2002 and 30 June 2003.

nature of a capital contribution, and on which the government may never have expected to earn a commercial rate of return.

4.5 In its 2004 Reset Draft Determination, the Commission flagged its intention to discount the DORC values of the pre-2000 asset (only) by around 10% (including the technical optimisation discussed in the previous issue), to keep network access tariff increases within sustainable bounds. In the end, the Commission acknowledged the force of arguments about the risks associated with any arbitrary adjustments to Power and Water's regulated network asset base by the Commission.

4.6 In April 2004, the Commission published its Final Determination for the 2004 Reset. In that determination, the Commission opted to accept asset values based on a 30 June 2001 replacement cost valuation exercise conducted by Sinclair Knight Merz. Despite some uncertainties on the Commission's part, use of the DORC valuation methodology effectively was continued but with certain post-2001 developments (particularly relating the Power and Water's asset register) being put aside.

4.7 However, to address both sets of unresolved issues (the continuing appropriateness of the DORC methodology and possible inadequacies in Power and Water's asset register), the Final Determination made provision for an 'asset valuation off-ramp' to be applied if, prior to 31 March 2005, the Commission were to be satisfied that the valuation underlying the 2004 Reset had involved a 'material error'.

Review processes

4.8 To address these various issues, the Commission initiated an inquiry to determine whether the asset valuation underlying the 2004 regulatory reset involved a material error.

4.9 First, Power and Water was encouraged to progress the examination of its network asset register, and the associated book and DORC valuations of those assets.

4.10 Secondly, the Commission appointed the Allen Consulting Group to provide advice on asset valuation and to recommend an appropriate and cost-effective asset valuation methodology capable of implementation in the Northern Territory context.

Scope of off-ramp review

4.11 The off-ramp provision referred specifically to the Commission reviewing:
"...the valuation of the initial asset base at 30 June 2000 and/or the asset amounts rolled-forward during the first regulatory control period underlying the determined value of the Z factor..."

4.12 As such, the Commission's focus in this off-ramp review has always been on the initial value of 'sunk assets'. The Commission notes that the process of determining such an initial regulatory asset value is fundamentally different than that of determining regulatory asset values into the future. The approach to be taken to revaluing assets over time must provide Power and Water's board and management with expectations of making a reasonable return on new investment and obtaining the return of that capital over time. The Commission accepts the advice tendered by the Allen Consulting Group (and regulatory best practice as evident by the ACCC recent decision on the matter) regarding the importance of adopting a 'roll-forward' methodology for revaluing regulatory values between periods by adjustment for capital expenditure, depreciation, asset disposals and inflation.

4.13 The Commission's preference would therefore have been to focus on asset values as at 30 June 2000. However, Power and Water has had difficulty in establishing error-free gross replacement cost valuations for its regulated network

assets at that point in time. In these circumstances, the Commission has therefore opted to focus on regulatory asset values as at 30 June 2002. This predates Power and Water's corporatisation, which took place on 1 July 2002. The Commission's desire is to establish a RAV for 30 June 2002 that will allow it to exclusively adopt the roll-forward methodology.

4.14 To adopt a roll-forward methodology, the initial regulatory asset values in question must distinguish between:

- the total value of all regulated assets; and
- the value of the gifted (or contributed) assets component of regulated assets.

4.15 For this reason, the Commission's focus is on:

- the \$446.621 million used by the Commission in the 2004 Reset as the (written down) RAV of total regulated assets including gifted assets as at 30 June 2002; and
- the \$16.096 million used by the Commission in the 2004 Reset as the (written down) RAV of the gifted assets component of those regulated assets as at 30 June 2002.

4.16 Therefore, in this review, the Commission's focus has been exclusively on determining whether, following consideration of the appropriate RAV but holding all other elements of the 2004 Reset unchanged, a correction to the Z factor is warranted (and, if so, the quantum required).

CHAPTER

5

CORRECTED DORC VALUES

Corrected DORC values

5.1 In January 2005, Power and Water advised the Commission that the DORC values for Power and Water's total regulated network assets (including gifted assets) used by the Commission in the 2004 Reset involved measurement errors on Power and Water's part, as follows:

total regulated network assets (including gifted assets)^(a)	2004 Reset (\$M)	2005 correction (\$M)	error (\$M)
gross value (30 June 2002)	874.823	852.789	22.034
written down value (30 June 2002)	454.429	432.395	22.034
written down value (30 June 2003)	463.272	449.587	13.685
roll-forward adjustment (net)	8.843	17.193	-8.350
written down value (avg 2002-03)	458.851	440.991	17.859
depreciation (2002-03)	22.352	20.832	1.520

(a) These values are prior to the global optimisation adjustment to pre-2000 assets (2.24%) also applied by the Commission, based on the adjustment also used in the 2000 Determination, with pre-2000 assets estimated to comprise 76.71% of assets at 30 June 2002.

5.2 Subsequently, Power and Water also advised the Commission that the DORC values for the gifted assets component of Power and Water's total regulated network assets used by the Commission in the 2004 Reset involved measurement errors on Power and Water's part, as follows:

gifted assets^(a)	2004 Reset (\$M)	2005 correction (\$M)	error (\$M)
written down value (30 June 2002)	16.377	11.351	5.026
written down value (30 June 2003)	20.600	14.190	6.410
roll-forward adjustment (net)	4.222	2.839	1.383
written down value (avg 2002-03)	18.488	12.771	5.718
depreciation (2002-03)	0.433	1.543	-1.110

(a) These values are prior to the global optimisation adjustment to pre-2000 assets (2.24%) also applied by the Commission, based on the adjustment also used in the 2000 Determination, with pre-2000 assets estimated to comprise 76.71% of assets at 30 June 2002.

5.3 The consequence of this advice from Power and Water is that (after making the Commission's global optimisation adjustment as per the 2004 Reset), the DORC values of the regulated network assets excluding gifted assets – the regulatory asset values used by the Commission in the 2004 Reset – involved the following measurement errors:

excluding gifted assets ^(a)	30/6/02 value \$M	DORC error		Z factor
		\$M	%	
Corrected DORC	413.809			+0.1%
2004 Reset DORC	430.524	+16.715	+4.0%	+4.4%

(a) Net of the same global optimisation adjustment to pre-2000 assets (2.24%) as evident in the 2000 Determination, with pre-2000 assets estimated to comprise 76.71% of assets at 30 June 2002.

Commission's analysis regarding DORC values

5.4 It appears that the DORC value of Power and Water's total regulated network assets as at 30 June 2002 used by the Commission was overstated by 4.0% in the 2004 Reset. If the corrected DORC value had been used for these assets, then the Z factor would have been +0.1% rather than +4.4%.

5.5 The Commission considers, however, that these corrected DORC values need to be treated with some caution, for a number of reasons.

5.6 First, the corrected DORC values as advised by Power and Water are the result of a desktop exercise undertaken by Power and Water staff. The Commission does not doubt the professionalism that went into this exercise, but the results have not been subject to independent verification. As a result, considerable scope remains that this latest DORC value itself may be subject to further change over time.

5.7 Secondly, this desktop analysis was based upon a replacement cost valuation exercise conducted by Sinclair Knight Merz as at 30 June 2001. This exercise adopted only one of a number of different approaches that could be applied in a DORC analysis.²

5.8 Determination of optimised replacement cost values for assets may be undertaken under a range of different constraints and assumptions.

- *The level of service potential to be reproduced.* An optimised replacement cost may be determined to reproduce the 'service potential' of the existing assets (i.e. the maximum level of service able to be offered) or to achieve a 'required level' of service, for example to meet current or forecast level of demand for the service, even though this may be less than the service potential of the assets.
- *Assets included in the valuation.* Certain assets may be explicitly excluded from the valuation. For example, the *Railways (Access) Code* of Western Australia explicitly requires that the value of land on which railway assets are located be

² A replacement-cost valuation of infrastructure assets (RC) is, as the name suggests, the cost of replacing the existing assets on a 'new for old' basis. At its simplest, this valuation methodology involves estimating the cost of constructing the infrastructure assets at the present time. A replacement cost valuation may be undertaken taking into account available modern technologies, and directed at determining the cost that would be incurred in constructing new assets using modern technology and to provide the same 'service potential' as the existing assets. A valuation made in this manner is commonly termed an 'optimised replacement cost' (ORC).

A depreciated optimised replacement cost (DORC) is derived by the scaling down of an estimated optimised replacement cost of an asset to reflect the lower value of the existing (old) asset relative to a new asset. This can also be described as determining a value of the existing asset to a service provider given the option of constructing a new asset.

excluded from the valuation, although improvements to land (such as railway cuttings and embankments) are to be included.³

- *The extent of optimisation.* The extent of optimisation of an asset may vary. At the simplest level, optimisation may involve just removing any surplus assets or excess capacity from the asset or from elements of the asset.⁴ At a more complex level, optimisation may involve reconfiguration of the asset⁵ or even fundamental change in the nature of the assets used to deliver the service.
- *'Brownfields' or 'greenfields' assumption.* The replacement cost of the asset may be determined on the basis that there is no basic infrastructure in place (easements, roads, etc.) – the greenfields assumption – or that the basic infrastructure is in place – the brownfields assumption.⁶
- *One-off or incremental asset development.* The optimised asset may be determined to be an asset configuration that would be constructed if the new asset was constructed in its entirety at a single point in time, or may be determined as an asset configuration reflecting that which would have occurred if the asset was developed in incremental stages over time.⁷

5.9 For reason of the different approaches and assumptions that may be made in determining an optimised replacement cost, different parties determining an optimised replacement cost for the same asset may derive substantially different values.

5.10 Against this background, the Commission is faced with two options:

- option (a): accept Power and Water's valuation as suggesting an appropriate DORC valuation of the regulated network assets; or
- option (b): await an independent valuation before settling on an appropriate DORC valuation of these assets.

5.11 As the costs involved in an independent valuation can be high, the Commission concedes that option (b) would only have merits if the benefits of such a valuation were commensurately high. A necessary condition for this would be that the DORC methodology is the basis of settling on a RAV for the network assets involved. As discussed in the remainder of this draft decision report, this is not the Commission's view.

5.12 For the purposes at hand (and particularly because Power and Water's advice is that the asset values used in the 2004 Reset were *overvalued*), the Commission is prepared to accept that the DORC values for Power and Water's total regulated network assets used by the Commission in the 2004 Reset involved the measurement errors as advised by Power and Water.

³ *Railways (Access) Code 2000* (Western Australia), schedule 4, clause 2.

⁴ This level of optimisation is specified in New Zealand guidance for determination of optimised replacement cost for electricity line businesses: Ministry of Economic Development, October 2000, *Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Line Businesses* 4th Edition, p14.

⁵ For example, in determination of an optimised replacement cost value for the Goldfields Gas Pipeline in Western Australia, the Economic Regulation Authority in that state determined the cost for a pipeline of smaller diameter and higher compression than the existing pipeline (Economic Regulation Authority, 29 July 2004, *Amended Draft Decision on the Proposed Access Arrangement for the Goldfields Gas Pipeline*, para 107).

⁶ ACCC, 27 May 1999, *Statement of Principles for the Regulation of Transmission Revenues* (draft), pp 43, 44.

⁷ This aspect of optimisation was recognised by Sinclair Knight Mertz (April 2002, *Optimisation Assessment for the SPI PowerNet Network*, p 12) which recommended that the "incremental development" approach to optimisation be adopted in the circumstance of an electricity network.

CHAPTER

6

BASIS OF RAV METHODOLOGY

Schedule 7 to the Code

6.1 Prices paid by network users for the conveyance of electricity through prescribed electricity networks in the Northern Territory are regulated under the Electricity Networks (Third Party Access) Code (“the Code”)⁸ which is a schedule to the *Electricity Networks (Third Party Access) Act 2000* (“the Act”).

6.2 For the first time, the Code permitted regulatory asset values to depart from book values during the second regulatory control period.⁹ Schedule 7 of the Code (clause 6) states the requirements for valuing network assets for second and subsequent regulatory control periods in the following terms.

“6. Valuing network assets for second and subsequent regulatory control periods

(1) *Subsequent revaluation of assets brought into service after 1 July 1999 and subsequent valuation of existing assets generally in service on 1 July 1999 (for use during the second or subsequent regulatory control periods, where the revaluations are to be used for regulatory purposes) are to be undertaken on a basis to be approved by the regulator.*

(2) *In approving the basis of asset valuation to be used, the regulator must have regard to –*

- (a) *the agreement of the Council of Australian Governments of 19 August 1994 that deprival value should be the preferred approach to valuing network assets;*
- (b) *any subsequent decisions of the Council of Australian Governments regarding the valuation of public sector assets; and*
- (c) *generally accepted regulatory practice at the time.*

6.3 Far from being prescriptive of the asset methodology to be applied, Schedule 7 only states certain factors that the Commission as regulator must have regard to in determining the basis of asset valuation.

6.4 At this stage, it is important to note that Schedule 7 involves a preference both:

- for ‘deprival value’; and
- for ‘generally accepted regulatory practice’.

⁸ The Code can be viewed on the legislation page of the Commission’s website (www.utilicom.nt.gov.au).

⁹ In the first regulatory control period, the Code required that sunk assets be valued at available book values – provided that those values did not exceed the assets’ optimised deprival value. At the time of the 2000 Determination, the Commission accepted that the recorded book value was equal to the associated DORC value of the assets.

Interpreting deprival value

6.5 Schedule 7 does not mandate DORC, only going as far as requiring the regulator to ‘take into consideration’ the deprival valuation methodology.

6.6 A general definition of deprival value is the value of an asset to the owner considered in terms of the loss that would be incurred by the owner if deprived of the asset.

6.7 Various working definitions of deprival value exist. For example, the working definition adopted by the Steering Committee on National Performance Monitoring was:

“...in most cases [deprival value] will be measured by the replacement cost of the services or benefits currently embodied in the assets”.

Such a definition is consistent with a deprival value of assets being the lesser of the net present value of the income able to be generated by the asset, and the depreciated replacement cost of the asset, or the DORC value of the asset. A deprival value defined as the lesser of the net present value of the income able to be generated by the asset and the DORC value of the asset, is also referred to as an optimised deprival value (ODV).

6.8 The New Zealand Government has produced detailed guidelines for determination of ODV values for electricity network assets, under which ODV values for individual segments of an electricity network are determined as the lesser of:

- the DORC value of the network segment, being the replacement cost of the existing fixed system assets with modern equivalent assets, depreciated by a straight-line depreciation methodology according to the age of the existing asset relative to the expected total life of the existing asset; and
- the net present values of future revenues derived from the transmission or distribution service provided by the network segment.

In these guidelines, the New Zealand Government has indicated that it would expect the economic value of a network segment to be less than its DORC in circumstances where regulated tariffs for the network segment are less than the tariff that would correspond to (or be derived from) the DORC value of the relevant network assets.

6.9 The Steering Committee on National Performance Monitoring of Government Trading Enterprises issued guidelines for determination of deprival values of assets of government trading enterprises that added an extra element to the determination of deprival values, being the consideration of whether or not the assets would be replaced if they were no longer available. Under these guidelines, where an asset would be replaced, the deprival value is taken to be the current replacement cost of the asset or of an alternative asset with the same service potential. Depreciation of a replacement value to reflect the age of the existing asset is not explicitly contemplated, although an accountant may interpret the terms ‘similar asset’ and ‘the same service potential’ as taking into account the age of the existing asset and hence valuation at depreciated replacement cost or DORC.

6.10 An important issue with the interpretation of the reference to deprival value is to understand under which circumstances the asset owner would be deemed to replace an asset if the firm was deprived of that asset (and hence the circumstances when the deprival value methodology would result in an asset being valued at the DORC value).

6.11 The guidelines developed by the Steering Committee on National Performance Monitoring expressed an expectation that a firm generally would replace assets that were being used – irrespective of whether the replacement of the asset would be economic (that is, the provision of the service generates a return at least equal to the cost of capital). In contrast, in the New Zealand and ACCC application of

deprival value, assets are only valued at replacement cost if the net present value of revenues from the asset exceed the cost of the asset. Assets are only deemed notionally to be replaced if the utility would be under implicit or explicit service obligations to continue to provide the service.

6.12 The ACCC has made the following statements about deprival value:

“Although the NEC also does not specify a methodology for the initial valuation of sunk assets, it does advocate the use of deprival value for regulatory purposes. Moreover, the NEC says that in reaching a decision on an asset valuation methodology the Commission shall provide a fair and reasonable risk adjusted cashflow rate of return on efficient investment. Other aspects of the objectives and principles set out in Chapter 6 of the NEC (clause 6.2.2) also bear upon the determination of the asset base. These include the need to promote incentives for efficient investment, maintenance and the use of the network, and the affects on different interest groups of the regulatory decision.

The main economic principle for assessing the economic value of any assets is that their value to investors is equal to the net present value of the expected future cashflows generated by those assets. The practical difficulty in making this assessment for regulated monopoly businesses is that the future revenue derived from the assets is itself determined by the regulator – hence the issue of circularity associated with the use of ODV as a methodology to value sunk assets.

This potential circularity is eliminated by the use of DORC. The DORC of a network is the sum of the depreciated replacement cost of the assets that would be used if the system were notionally reconfigured so as to minimise the forward-looking costs of service delivery. ...

ODV amounts to an extension of the DORC concept, by recognising that, as a result of being deprived of an asset, the economic value foregone may be less than its DORC value. In principle, the difference relates to the accuracy of the assumed depreciation profile in reflecting the decline in the service potential or the demand for the service potential provided by the existing system. With this qualification, the two concepts are consistent.

Clearly, in using DORC, if the future income streams were solely derived from a return on the assessed DORC value the economic value will be the same as the DORC. However, if revenue streams are limited by any mechanism to a lower value then economic value, ODV will be lower than DORC. This could arise, for example, from the threat of by-pass, loss of markets or the imposition of external regulatory requirements by jurisdictions. In these cases, the Commission’s regulatory framework provides for the asset owner to request a write down of the value of the asset to below DORC under certain circumstances (as discussed in Chapter 5). The Commission’s may also write down part of the system below DORC in recognition of evidence suggesting that the regulatory asset base valuation currently exceeds the ODV of the system.”¹⁰

6.13 It is clear from these statements that the ACCC has adopted the New Zealand approach for determining when the ‘economic value’ leg of deprival should apply, that is, to write down the value of assets to below the DORC value if an external constraint to pricing applies. Alternatively, this implies deeming the asset owner notionally to replace the asset only when it would be economic for the asset to be replaced, irrespective of any implicit or explicit service obligations.

6.14 The Commission takes from these arguments that there are circumstances where regulatory asset values (based on deprival value) will need to be less than the DORC valuation. Allen Consulting Group’s advice to the Commission is that the setting of a starting regulatory asset value for Power and Water’s network assets to reflect its current (constrained) revenue streams would be consistent with the concept of deprival value.

6.15 However, there are limits to the usefulness of deprival value. For regulated infrastructure assets, the future prices of services provided by these assets will be regulated and determined from the regulatory asset value. There is an obvious circularity in the asset valuation at a deprival value and the dependence of the deprival value on prices that would be determined from that value.

¹⁰ ACCC, 1999, *Draft Statement of Regulatory Principles*, May, pp.39 40.

Generally-accepted regulatory practice

6.16 Schedule 7 to the Code (at clause 6(2)(c)) obliges the regulator, when approving the basis of the asset valuation to be used in the second regulatory control period, to have regard to ‘generally accepted regulatory practice’ (GARP). At issue is the extent to which the use of DORC is consistent with GARP.

6.17 The Allen Consulting Group’s advice was that DORC wasn’t necessarily GARP, with examples cited of regulatory values being set at values lower than the estimates of DORC to reflect other concerns:

- The regulatory values for the predominantly-rural Victorian electricity distributors were valued at a discount to DORC to limit the magnitude of potential price increases experienced by end users of gas.¹¹
- A similar approach was adopted for the AlintaGas gas distribution networks in Western Australia.¹² AlintaGas’s regulatory asset base was determined to be a value of less than DORC through consideration of an economic value. The economic value for the networks was, in effect, determined by assuming values for all cost elements in the retail supply of gas other than the value of the distribution networks, and then solving for the value of the networks that gave a total cost for gas supply that corresponded to the revenue that would be generated by the prevailing retail gas prices.
- In the valuation of gas distribution assets of AGL Gas Networks in New South Wales and of the gas distributors in Victoria,¹³ assets were valued by this methodology at a value less than the estimated DORC value, with the explicit intent of establishing an initial regulatory asset value that would not give rise to increases in retail gas prices for end users of gas.

6.18 These valuation methodologies are generally presented as a version of a deprival value, being an asset value that is implied by existing prices for, and revenues from, the relevant services.

6.19 The Allen Consulting Group’s advice to the Commission was that the setting of a starting regulatory asset value for Power and Water’s network assets to reflect its current (constrained) revenue streams would be consistent with the concept of deprival value as actually applied by Australian regulators.

Other relevant regulatory provisions**Part 3 of the Code**

6.20 Part 3 of the Code specifies the price regulation framework to be observed by the Commission and by the network service provider when setting the prices to be paid by network users for the conveyance of electricity through the electricity network. While the Code sets out in some detail the determinations that were required to be

¹¹ Office of the Regulator General, Victoria, October 1998, *Access Arrangements - Multinet Energy Pty Ltd & Multinet (Assets) Pty Ltd, Westar (Gas) Pty Ltd & Westar (Assets) Pty Ltd, Stratus (Gas) Pty Ltd & Stratus Networks (Assets) Pty Ltd Final Decision*, pp 51–70

¹² Independent Gas Pipelines Access Regulator Western Australia, 30 June 2000, *Final Decision: Access Arrangement Mid-West and South-West Gas Distribution Systems*, Part B pp 73–84.

¹³ Independent Pricing and Regulatory Tribunal of New South Wales, July 2000, *Final Decision Access Arrangement for AGL Gas Networks Limited Natural Gas System in New South Wales*, pp 71–88. Office of the Regulator General, Victoria, October 1998 *Access Arrangements - Multinet Energy Pty Ltd & Multinet (Assets) Pty Ltd, Westar (Gas) Pty Ltd & Westar (Assets) Pty Ltd, Stratus (Gas) Pty Ltd & Stratus Networks (Assets) Pty Ltd Final Decision*, pp 51–70.

made by the Commission in the first regulatory control period¹⁴ (the period from the commencement of the Code on 1 April 2000 to 30 June 2004), with respect to the second regulatory control period (the period from 1 July 2004 to 30 June 2009), clause 66(3) of the Code provides that:

“The revenue or price caps that are to apply during the second and subsequent regulatory control periods are to be determined by the regulator in a manner that:

- (a) in the regulator’s opinion, most effectively achieves the desired outcomes set out in clause 63; and*
- (b) is consistent with generally accepted regulatory practice at the time.”*

6.21 Clause 63 of the Code requires the Commission to administer access price regulation under the Code in a way that achieves the following outcomes:

- “(a) efficient costs of supply;*
- (aa) expected revenue for a regulated service or services that is at least sufficient to meet the efficient long-run costs of providing that regulated service or services, and includes a return on investment commensurate with the commercial and regulatory risks involved;*
- (b) prevention of monopoly rent extraction by the network provider;*
- (c) promotion of competition in upstream and downstream markets and promotion of competition in the provision of network services where economically feasible;*
- (ca) an efficient and cost-effective regulatory environment;*
- (d) regulatory accountability through transparency and public disclosure of regulatory processes and the basis of regulatory decisions;*
- (e) reasonable certainty and consistency over time of the outcomes of regulatory processes;*
- (f) an acceptable balancing of the interests of the network provider, network users and the public interest; and*
- (g) such other outcomes as the regulator determines are consistent with the underlying principles set out in clause 2 [of the Code].”*

6.22 Clause 2(2) of the Code states that:

“In deciding on the terms and conditions for access, the regulator when undertaking any of the functions assigned to the regulator by this Code ... should take into account:

- (a) the network provider’s legitimate business interests and investment in the electricity network;*
- (b) the costs to the network provider of providing access, including any costs of extending the electricity network but not costs associated with losses arising from increased competition in upstream or downstream markets;*
- (c) the economic value to the network provider of any additional investment that an access applicant or the network provider has agreed to undertake;*
- (d) the interests of all persons holding access agreements for use of the electricity network;*
- (e) firm and binding contractual obligations of the network provider or other persons (or both) already using the electricity network;*
- (f) the operational and technical requirements necessary for the safe and reliable operation of the electricity network;*
- (g) the economically efficient operation of the electricity network; and*
- (h) the benefit to the public from having competitive markets.”*

6.23 Clearly, the regulator is required to balance a range of considerations.

Utilities Commission Act

6.24 In addition, section 6(2) of the *Utilities Commission Act* states that:

“In performing the Utilities Commission’s functions, the Utilities Commission must have regard to the need –

¹⁴ A regulatory control period is defined in clause 3 of the Code as the period between major price reviews (or ‘resets’) during which time the price regulation methodology used in setting prices is held constant.

- (a) to promote competitive and fair market conduct;
- (b) to prevent misuse of monopoly or market power;
- (c) to facilitate entry into relevant markets;
- (d) to promote economic efficiency;
- (e) to ensure consumers benefit from competition and efficiency;
- (f) to protect the interests of consumers with respect to reliability and quality of services and supply in regulated industries;
- (g) to facilitate maintenance of the financial viability of regulated industries; and
- (h) to ensure an appropriate rate of return on regulated infrastructure assets.”

6.25 Once again, the regulator is required to balance a range of considerations.

6.26 DORC is not the only methodology that might meet some of these requirements. In fact, as discussed below, it is likely that the use of DORC could violate some of these legislative requirements in the NT context.

Commission’s analysis regarding DORC methodology

6.27 The Commission has concluded that, given the NT context, the 2004 Reset’s sole reliance on the DORC valuation methodology as the basis of the RAV used involved a conceptual error on the Commission’s part in light of:

- the legislative requirements in: Schedule 7 to the Code, Part 3 of the Code (especially clauses 63 and 3(2)), and section 6 of the *Utilities Commission Act*; and
- generally accepted regulatory practice where there are concerns that adoption of a DORC valuation method may lead to a rise in prices above levels prevailing or considered sustainable.

6.28 Material in this regard is the NT Government’s decision, in conjunction with the 2004 Reset, to make CSO payments to Power and Water in 2004-05 (\$38.8 million) that were less than the value of CSOs determined by the Commission as the difference between the Corporation’s expected sales revenue and the revenue requirements of the electricity business of the Corporation based, in part, on the DORC values of network assets used in the 2004 Reset (\$70.8 million).¹⁵ This implies that the Government considers the minimum commercially sustainable revenue requirement of Power and Water to be less than the revenue requirement determined by the Commission on the basis of DORC values.

6.29 In addition, the Commission places significant weight on the advice it received from the Allen Consulting Group that DORC – even properly measured – may not be justified as a basis for pricing purposes in certain circumstances. While the argument that prices based on the DORC value of assets simulates the outcome of a contestable market is often given weight by regulators, the argument does not derive from a well considered analysis of economic efficiency, and so need not prevail over other possible considerations.

¹⁵ In the Northern Territory electricity market, the regulated retail prices for electricity are less than the costs of supply to the relevant customers. Regulated retail electricity prices are established for household customers (Tranche 6 customers) and small business customers consuming less than 750,000 kWh per annum (Tranche 5 customers). These prices are established as uniform prices throughout the Northern Territory. These retail prices were established in 1998 and have not subsequently been increased except for application of the goods and service tax in 2000. In addition, a maximum price is established for business customers consuming between 750,000 and 2,000,000 kWh per annum (Tranche 4 customers) that from 1 April 2004 is subject to increases at a real rate of three percent per annum with customers free to negotiate prices below the maximum level. In these circumstances, regulatory asset values ascribed to utility assets of the Power and Water Corporation are also used to inform the Government of the value of community service obligations (CSOs) in the provision of utility services, and so the subsidies warranted to ensure that these CSOs continue to be provided by the Power and Water Corporation.

6.30 The Allen Consulting Group's argument is that economic principles do not provide unambiguous guidance for the setting of a regulatory value for monopoly network assets at a particular point in time, but rather are typically interpreted as providing a feasible range.

- A binding lower limit for the asset valuation is that which is consistent with generating returns to the owner sufficient for the owner to have the incentive to continue to use the asset for the regulated activity, which implies that the owner must receive a return at least as good as it would if the asset were used in its next best use. The asset value meeting this criterion is commonly referred to as 'scrap value'. Except for assets like freehold land, the value of network assets in alternative uses is typically very low.
- An upper limit that is typically posed is the value that is consistent with the price that would be charged by a hypothetical (efficient) new entrant. The rationale for this valuation derives from the observation that, in a perfectly contestable market, prices would reflect the cost structure of the efficient new entrant. Thus, it is argued that prices would contain monopoly rents if they were higher than would be earned in a contestable market, and so this should place a cap on the regulatory valuation. A DORC valuation – if implemented correctly – provides an estimate of the regulatory value for an existing asset that is consistent with the cost structure and prices of the hypothetical (efficient) new entrant that operates with a new asset.

6.31 In particular, the Allen Consulting Group's advice to the Commission was that economic principles:

- suggest that regulated assets should not be valued at less than scrap value or more than a (correctly determined) DORC value; and
- do not provide guidance as to whether a regulatory asset value should be set as scrap value or at DORC value, or at any particular value in between.

6.32 The Commission interprets these various legislative requirements and lines of argument to mean that, contrary to the basis of the 2004 Reset decision:

- 1) it was under no obligation to consider only the DORC methodology as the basis for regulatory asset values used; and
- 2) it could have approved alternative regulatory asset valuation methodologies provided they resulted in regulatory asset values that were:
 - a) no less than necessary to:
 - i) facilitate the financial viability of regulated industries,
 - ii) ensure the reliability and quality of services and supply in regulated industries,
 - iii) recognise the economic value to the network provider of any additional investment that an access applicant or the network provider has agreed to undertake, and
 - iv) protect the network provider's legitimate business interests and investment in the electricity network; and
 - b) no more than necessary to:
 - i) prevent misuse of monopoly or market power, and
 - ii) promote economic efficiency.

An alternative RAV Methodology to DORC

6.33 The determination of an appropriate regulatory asset value for a particular set of assets is by necessity a pragmatic determination, with the most appropriate valuation determined by consideration of the particular circumstances of the regulated business and the outcomes of the valuation.

Ceiling

6.34 The Commission accepts that the maximum regulatory asset value of Power and Water's electricity network assets may be those assets' DORC value.

Floor

6.35 For the electricity network assets of Power and Water, the regulatory asset valuation should recognise the minimum revenue required by Power and Water's regulated network business to remain a commercially viable, stand-alone entity – that is, to finance its ongoing operations including the costs of servicing debt. This practical financing constraint consideration establishes a 'floor' for the regulatory value of assets.

6.36 Commission's view is that the floor RAV should be the value that *at least* ensures continuing financial viability.

6.37 The financial viability of an asset-intensive business like Power and Water's regulated network business can be interpreted as implying that there is a high level of certainty that the entity will be able to pay its bills as they fall due, and have sufficiently strong cashflow to raise the finance required to fund its continuing operations (including growth).

6.38 Estimating the probability that an entity may default on its obligations given a particular level of cashflow is similar to the process that is undertaken by credit rating agencies when assigning a rating to an entity, and hence the methods employed by ratings agencies are commonly drawn upon. The minimum strength of the cashflow that is considered desirable is typically defined as that consistent with an investment grade credit rating (that is, using the Standard & Poor's metric, a rating of BBB or better). By way of example, the Independent Pricing and Regulatory Tribunal of NSW recently commented as follows, in relation to distribution network service providers (DNSPs):¹⁶

"The Tribunal expects that its decisions on the amount by which average prices can change will allow DNSPs to maintain their financial viability. NSW Treasury targets an investment grade rating of BBB or higher for state-owned businesses. The Tribunal's analysis and financial modelling indicates that all four DNSPs will be able to maintain or improve their financial position, and earn a reasonable rate of return. It also indicates that the DNSPs can maintain their current investment grade rating for all of the key financial indicators".

6.39 The basic methodology for assessing the strength of cashflow is to calculate a series of financial ratios, and compare them to the financial ratios of 'peer' entities, including the bands that are published by ratings agencies. As a number of ratios are examined, an overall judgment based on an assessment of all of the ratios is required. For an assessment of the minimum starting regulatory asset value for Power and Water, this implies commencing with a particular regulatory asset value, calculating the regulated revenue to the entity over the reasonable forecast period, and calculating the relevant financial ratios. This process can then be repeated across a range of regulatory asset values to observe how the indicators of the strength of the cashflows vary with the starting value.

¹⁶ Independent Pricing and Regulatory Tribunal, *NSW Electricity Distribution Pricing 2004-05 to 2008-09: Final Report*, June 2004, p.87.

6.40 As the focus of an assessment of financial viability is the ability for an entity to meet its cash obligations, the most relevant financial indicators are those that are based on cash measures rather than on accrual identities. This implies placing more weight on the relationship between cash inflows and cash obligations at each point in time, and less on weight on accounting accruals and provisions such as depreciation.

6.41 The main cash-based financial indicators that both regulators and ratings agencies most commonly employ for assessing the strength of cashflows are:

- **Funds flow net interest cover** – which measures the level of protection the entity has to meet its interest obligations after meeting its cash operating expenses (including taxation payments). The formula is as follows:

$$\frac{FFO + Net\ Interest}{Net\ Interest}$$

where FFO is ‘funds from operations’ (or ‘funds flow from operations’). Funds from operations is approximately equal to the accounting definition of net cashflow from operating activities, less the sources of non recurrent revenue – that is, revenue from customer capital contributions, and the proceeds of disposals removed.

- **Net debt payback period** – which measures the length of time that the entity could retire its debt if it devoted all cashflow (after meeting cash operating expenses) to this purpose. While the entity would never be expected to pursue this course of action, the indicator shows the scope to change the debt level if the need arose. It also provides a reasonable cash based measure of the overall indebtedness of the entity. The formula is as follows:

$$\frac{Net\ Debt}{FFO}$$

The reciprocal of the ‘debt payback period’ is also commonly employed as a financial indicator (that is, funds from operations expressed as a proportion of the level of debt). Where the level of debt of an entity is expected to change, this indicator will show directly whether the ability to service that change in debt will change commensurately. By way of example, if the entity’s level of debt is expected to rise, there will be less concern if the ability to service this debt rises commensurately.

- **Internal financing ratio** – which measures the proportion of net capital expenditure the entity is expected to be able to finance from retained cashflow after meeting cash operating expenses (including taxation and interest payments) and paying the expected dividend.¹⁷ The remainder of capital expenditure is expected to be financed through debt. The formula is as follows:

$$\frac{FFO - Dividends}{Net\ Capital\ Expenditure}$$

Where within the range?

6.42 The Allen Consulting Group’s advice focused on the regulatory values to be placed on all of Power and Water’s assets (for CSO valuation purposes) rather than the network assets alone. This involved a recommendation that regulatory asset values be set at a level that as closely as possible reflects the current (effective) prices that are paid by customers, which may imply a valuation at the minimum valuation.

¹⁷ Net capital expenditure refers to the capital expenditure undertaken by the entity less capital contributions from customers and proceeds of disposals.

Commission's analysis regarding alternative RAV methodology

6.43 Following its consideration of the advice submitted by the Allen Consulting Group, and its review of regulatory practice in Australia, the Commission's (draft) conclusion is that the most appropriate conceptual approach for regulatory purposes in the NT context would have been for the 2004 Reset to have used a regulatory asset value of the total regulated network assets at 1 July 2002 that was the greater of the assets':

- book value; and
- business sustainability value, defined as the asset value that would sustainably generate sufficient cashflows to justify at least a single-A credit rating for Power and Water's regulated networks business on a stand-alone basis.

6.44 The Commission notes that, if minimising sustainable prices to customers was the sole consideration, book value would not be included as a relevant criterion. However, the key merits of the proposed approach are that it ensures that the resultant RAV:

- by being no less than the book value, would avoid the possible consequences for the corporation as a whole of any statutory writedown in asset values;
- by applying only to assets in place prior to 1 July 2002, would not impact on the returns on investments made by Power and Water's board and management since Power and Water's corporatisation, thereby recognising the economic value to the network provider of any additional investment that an access applicant or the network provider has agreed to undertake; and
- by being no less than the business sustainability value, would:
 - protect the network provider's legitimate business interests and investment in the electricity network,
 - facilitate the financial viability of regulated industries, and
 - ensure the reliability and quality of services and supply in regulated industries.

CHAPTER

7

MEASURING REGULATORY ASSET VALUES**Introduction**

7.1 The approach to regulatory asset valuation determined by the Commission to be appropriate for the second regulatory control period requires robust valuations of both:

- the book value of the regulated network asset; and
- the ‘business sustainability value’ of those assets, defined as the asset value that would sustainably generate sufficient cashflows to justify at least a single-A credit rating for Power and Water’s regulated networks business on a stand-alone basis.

Book values

7.2 Book values generally equal historical costs. An historical cost value of regulated assets refers generally to a value derived as a sum of the actual cost assets and subtraction of any subsequent return of capital or depreciation of the assets. An historical cost value is often referred to as a ‘depreciated actual cost’.

7.3 However, the book values of assets set out in Power and Water’s statutory accounts bear an uncertain relationship to written down historical values. The statutory accounts since 1999 has indicated a valuation of assets for financial accounting purposes as the lesser of the current replacement cost of the assets and net present values of forecast recoverable cashflows. For example, notes to the financial statements for the 1998-99 annual report of the then Power and Water Authority describe the methodology of asset valuation then applied as follows:¹⁸

“The cost of property, plant and equipment constructed by the consolidated entity includes the cost of materials and direct labour, an appropriate proportion of fixed and variable overheads and capitalised interest.

Revaluations

External consultants were engaged to provide a valuation of the infrastructure assets of the Authority as at 30 June 1999. The valuations were conducted by Deloitte Touche Tomatsu and Sinclair Knight Merz, and were based on the current replacement cost of a modern asset that is capable of delivering the same level of service as the existing asset, written down to take account of its expired life. Valuations of land were based on Valuer-General’s unimproved capital values recorded in the Lands Information System. These valuations formed part of the regular revaluation exercise proposed by the Authority.

Upon completion of the above revaluation exercise, the Authority reviewed the recoverable amount of property, plant and equipment in accordance with the accounting policy described at Note 1(c). This involved ascertaining values on a lines of business basis

¹⁸ Power and Water Authority of the Northern Territory, *Annual Report for the Year Ended 30 June 1999*, pp. 63, 64.

using future net cashflows expected to be derived from those assets, discounted to their present value. Where this resulted in a lower asset valuation than the independent written down current replacement cost valuation, the assets were revalued to their recoverable amount. All adjustments arising from the revaluation have been taken to the asset revaluation reserve.

The Authority does not obtain a return of net income on property, plant and equipment and services relating to the Aboriginal Essential Services Business unit as it is funded by the NT Government based on actual or expected costs (refer Note 1[m]). Accordingly, as the future net cashflows of this business unit are nil, the recoverable amount of property, plant and equipment within this business unit is nil. Property, plant and equipment with a written down book value of \$110 million relating to this business unit has therefore been revalued to nil as part of the above revaluation exercise.

The Authority proposes to revalue property, plant and equipment on a rolling basis every three years.”

7.4 This methodology of asset valuation in statutory accounts was indicated to change from 1 July 2002. For the 2002-03 financial year, the methodology of asset valuation was described as follows:¹⁹

“Subsequent to initial recognition as assets, freehold land and buildings and electricity, water and sewerage system assets are measured at fair value. These classes of non-current assets are revalued with sufficient regularity to ensure the carrying amount of each asset in the class does not differ materially from fair value at reporting date. Assessments will be made by directors at least every three years. Where current market prices are available, that price represents the fair value of the asset. Where current market prices are not available for the individual assets forming a cash-generating operation, fair value is estimated as the present value of net cash inflows discounted at the weighted average cost of capital.”

7.5 It is further indicated, however, that:

“The changed policy has not had a material effect in respect of the valuation of freehold land and buildings and electricity, water and sewerage system assets in the current or prior year, nor is it expected to have a material effect in subsequent financial years.”

7.6 In submitting corrected DORC values to the Commission in January 2005, the Commission notes that Power and Water indicated it had not updated the book value of its regulated network assets to reflect the outcome of its DORC desktop analysis. To the extent that the DORC errors reflect the misallocation of assets between lines of business (especially between networks and generation businesses), this would imply that such errors are common to both the regulatory and statutory asset registers.

7.7 Moreover, the Commission acknowledges any ‘recoverable amounts test’ to be applied under the (changed) asset valuation methodology in the statutory accounts from 1 July 2002, being based upon likely future ‘net cash inflows’, would depend in part on the regulatory values of – and consequent revenues generated by – the regulated network assets. Until the change in prospective cashflows based upon the Commission’s business sustainability valuation of these assets is known, it is not possible to be certain whether the current book values of those assets would be written down as a consequence.

7.8 Until these two issues are addressed, the Commission has opted to use the following book values for Power and Water’s total regulated network assets (including gifted assets):

¹⁹Power and Water Corporation, *Annual Report for the Year Ended 30 June 2003*, p. 63.

total regulated network assets (including gifted assets)	book values (\$M)
gross value (30 June 2002)	450.631
written down value (30 June 2002)	286.654
written down value (30 June 2003)	294.011
roll-forward adjustment (net)	7.358
written down value (avg 2002-03)	290.332
depreciation (2002-03)	11.344

7.9 In addition, the Commission has opted to use the following book values for Power and Water's gifted assets in its regulated networks:

gifted assets	book values (\$M)
written down value (30 June 2002)	7.131
written down value (30 June 2003)	9.970
roll-forward adjustment (net)	2.839
written down value (avg 2002-03)	8.550
depreciation (2002-03)	0.969

7.10 As a consequence, the written down book value of Power and Water's regulated network assets (excluding gifted assets) as at 30 June 2002 used by the Commission in this draft decision is \$279.523 million.

Business sustainability values

Modelling

7.11 The Commission has undertaken some extensive financial modelling to derive the 'business sustainability valuation' of Power and Water's regulated network assets. In summary, this modelling has involved the following:

- the use of benchmark ratios published by Standard & Poor's, the international credit rating agency;
- the use of certain projections and key assumptions considered favourable to Power and Water, such as:
 - using a modest 1.0% annual growth in network sales, as per Power and Water's own forecasts;
 - using Power and Water's projections of actual operating expenditures;
 - after basing the initial estimate of operating expenditure used for price regulation purposes (and hence revenues) on 90% of opening 'actual' operating expenditure (as per the 2004 Reset), growing such 'efficient' operating expenditure at the same rate (2%pa) as Power and Water projects actual operating expenditure to grow);
 - using Power and Water's forecasts of forecast capital expenditure on network assets to roll-forward asset values;

- setting the gearing (debt:assets ratio) of Power and Water’s networks business at 50%, which has the effect of allocating 56% of corporate debt to the networks business compared to a 33% share of the written down book value of corporate assets;
- an interest payment rate of 50 basis points above the cost of debt used in the Commission WACC calculation, which is itself 120 basis points above the Commonwealth long-term bond rate; and
- five-yearly resets of the network tariff basket based upon a full building blocks analysis of the costs of service provision; and
- setting other key forecasting assumption as follows:
 - an interest earnings rate of 5%pa;
 - an effective tax rate on networks earnings of 30% (equal to the statutory rate);
 - a 50% dividend payout ratio; and
 - an internal financing ratio of 75%, so that 25% or all future capital expenditures are assumed to be financed by additional external debt.

Results

7.12 Based upon the Commission’s model, the following Table compares forecast of the key financial ratios averaged over the next 10 years (2005-06 to 2014-15) under four different scenarios, namely setting the RAV of Power and Water’s regulated network assets (on a gifted assets-inclusive basis) equal to:

- the ‘corrected’ DORC value;
- \$100 million less than the ‘corrected’ DORC;
- \$125 million less than the ‘corrected’ DORC; and
- \$150 million less than the ‘corrected’ DORC.

Financial ratios (average for 10 years 2005-06 to 2014-15)	Regulated Asset Value ^(a)			
	Corrected DORC	Corrected DORC less \$100 million	Corrected DORC less \$125 million	Corrected DORC less \$150 million
FFO net interest cover (times)	4.4 times	3.4 times	3.1 times	2.9 times
<i>indicative stand-alone rating</i>	AAA	A	A	BBB
Net debt payback period (years)	3.9 yrs	5.8 yrs	6.6 yrs	7.3 yrs
<i>indicative stand-alone rating</i>	AAA	AA	AA	A
Internal financing ratio (%)	96%	77%	71%	67%
<i>indicative stand-alone rating</i>	AAA	AA	AA	AA

(a) The values used in the modelling were inclusive of gifted assets, except for the purpose of resetting regulated prices where the regulatory decision is based on a value excluding gifted assets.

7.13 The results in the ‘corrected DORC’ column in the above Table indicate that such a regulatory asset value would generate net cashflows well in excess of the minimum necessary to ensure at least a single-A stand-alone credit rating, and so ongoing financial viability. Use of the corrected DORC value gives rise to cashflows that would sustain a triple-A credit rating for Power and Water’s regulated network business. The ultimate beneficiary of such excessive net cashflows would be the NT Government as Power and Water’s owner. Such an excessive dividend stream is the equivalent of an additional tax on electricity usage in the Northern Territory.

7.14 While a RAV writedown against DORC of \$150 million gives rise to forecasts of single-A like financial ratios for half of the next 10 years, in the Commission's judgment the margin of comfort in the lower writedown of \$125 million is more consistent with the conservative approach followed in the Commission's modelling. A \$100 million writedown would consistently result in double-A like financial ratios.

7.15 The year-on-year financial ratios for a RAV writedown against DORC of \$125 million is set out in the following Table:

Year ending 30 June	2005 <i>forecast</i>	2006 <i>forecast</i>	2007 <i>forecast</i>	2008 <i>forecast</i>	2009 <i>forecast</i>	2010 <i>forecast</i>	2011 <i>forecast</i>	2012 <i>forecast</i>	2013 <i>forecast</i>	2014 <i>forecast</i>
FFO net interest cover (times)	3.4	3.3	3.2	3.2	3.3	3.2	2.8	2.9	2.8	3.0
<i>indicative rating</i>	A	A	A	A	A	A	BBB	BBB	BBB	A
Net debt payback period (years)	5.6	5.9	6.1	6.2	6.0	6.4	7.8	7.6	7.6	6.9
<i>indicative rating</i>	AA	AA	AA	AA	AA	AA	A	A	A	AA
Internal financing ratio (%)	53%	59%	76%	95%	56%	32%	89%	74%	83%	94%
<i>indicative rating</i>	A	A	AA	AAA	A	BB	AA	AA	AA	AAA

7.16 On this basis, the Commission would base regulatory asset values for regulated network assets including gifted assets on a value in the order of \$125 million less than DORC as, in its judgment, such a value would be consistent with a business sustainability valuation. The resultant valuations are as follows:

written down value (30 June 2002)	regulatory asset value (\$M)
All regulated network assets (including gifted assets)	307.395
Gifted assets	7.731
Regulated network assets excluding gifted assets	299.664

Commission's findings

7.17 Based upon the above asset values, the following Table compares the 'book value' and nominated 'business sustainability value' of Power and Water's total regulated network assets *excluding* gifted assets, and the consequences were each adopted as a basis for the RAV used to calculate the Z factor:

<i>excluding gifted assets</i>	30/6/02 value \$M	RAV writedown against corrected DORC		Z factor
		\$M	%	
Book value	279.523	-134.286	-32.5%	-15.8%
Business sustainability value	299.664	-114.146	-27.6%	-13.4%

7.18 Based upon the Commission's preferred approach of using a RAV of the total regulated network assets at 1 July 2002 that is the *greater* of the assets' book value and business sustainability value, a RAV of \$300 million as at 1 July 2002 is indicated, which is some \$114 million less than the value the Commission accepts as the corrected DORC excluding gifted assets. This lower RAV would imply a Z factor of -13.4% rather than the +4.4% determined by the 2004 Reset.

7.19 The Commission's draft conclusion is that a reduction in network prices implied by a Z factor of -13.4% would be fully consistent with the continued financial viability and service capability of Power and Water's regulated network business. The Commission also notes that such a reduction would still leave the average Territory network price expressed on a c/kWh basis some 10% above the comparable average price currently applied by Country Energy in NSW for use of its dispersed largely rural sub-transmission and distribution network.

7.20 Based upon Power and Water's 8% discount rate (used in 2001-02), the Commission's modelling also indicates that the depreciated recoverable value (the NPV of future net cash inflows) based upon a RAV of \$300 million would be in the order of \$301.5 million, which comfortably exceeds the book value of the assets as at 1 July 2002.

CHAPTER

8

IMPLEMENTING THE DECISION

8.1 The Commission acknowledges that the modelling necessary to derive a business sustainability valuation of Power and Water's regulated network assets is a complex matter.

8.2 In this regard, the Commission recognises concerns that Power and Water has already expressed about the insufficient time available to consider all aspects and ramifications of the modelling before the Commission's 31 March deadline for finalising this off-ramp decision.

8.3 The Commission itself also has concerns that the book values (and associated recoverable amounts) available to it for the purpose of setting a RAV in the previous chapter may be inadequate in certain respects.

8.4 For these sets of reasons, the Commission therefore considers the regulatory asset valuation quantified in the previous chapter to be its '**preliminary assessment**'.

8.5 As a result, it proposes that, once the off-ramp decision has been finalised (in all regards except the quantified RAV), the passing-on to network users of the benefits of lower network tariffs based upon the corrected Z factor be delayed for up to a year, to enable the Commission's preliminary assessment of the total RAV (and corrected Z factor) to be finalised.

8.6 In order to assist the Commission finalise the above preliminary assessment, the Commission proposes to give parties until 30 September 2005 to, in addition to undertaking any associated consultations, make submissions to the Commission about amendments considered necessary to either or both:

- the Commission's business sustainability modelling and associated assumptions; and
- the book valuation of Power and Water's regulated network assets as at 1 July 2002, including as a result of any consequential recoverable amounts test.

8.7 Lest there be any doubt, the final decision for this off-ramp review will settle, one way or the other, the role to be played by the DORC valuation *methodology* for the purposes of network price regulation during the second regulatory control period. All that will be left outstanding after 31 March 2005 will be the *implementation* of the RAV methodology approved by the Commission.

8.8 The Commission then proposes that, by no later than 30 November 2005, it would issue a final assessment of:

- taking into account the submissions made by interested parties, the corrected 1 July 2002 RAV; and
- the resultant corrected Z factor.

8.9 To give effect to the Z factor correction from 1 July 2005, the Commission proposes that the correction take place in two steps.

8.10 First, with respect to the 2005-06 year (and subject to the Commission's approval of the basis of Power and Water's calculation of the amounts involved), Power and Water Networks is to refund to Power and Water Retail by 30 June 2006 at the latest, for on-passing as appropriate to the Government and for the payment of a rebate to each of the affected contestable customers based upon:

- if the final corrected Z factor implies a network price adjustment that is equal to or greater than that based on the (preliminary) corrected Z factor, its forecast of the associated over-collections of network revenues during 2005-06; and
- if the final corrected Z factor implies a network price adjustment that is less than that based on the (preliminary) corrected Z factor, its forecast of over-collections of network revenues during 2005-06 based on the (preliminary) corrected Z factor scaled back by the difference between the final corrected Z factor and the (preliminary) corrected Z factor.

8.11 Secondly, with respect to the 2006-07 year and subsequent years, the approved weighted-average price index of network tariffs in 2003-04 will be adjusted by the corrected Z factor and then escalated forward in accordance with the approved CPI-X values.

8.12 To put a ceiling on the rebates payable with respect to the 2005-06 year (so as to minimise the associated perceived regulatory risk), by 31 May 2005 the Commission requires Power and Water to provide it with a forecast of the amount of network revenue to be collected during 2005-06 on account of the difference between the (preliminary) corrected Z factor and the 2004 Reset Z factor from:

- as a group, non-contestable customers and T4 customers benefiting from the Government's price cap; and
- individually, each contestable customer paying fully-negotiated network charges.

8.13 Finally, to allow sufficient time for the subsequent consideration of Power and Water's network pricing principles and methods, the Commission proposes that the allowed S factors for application during the second regulatory control period be slipped by two years on those approved in the 2004 Reset Determination.

APPENDIX**A****OFF-RAMP PROVISION**

The 2004 Reset Determination stated that:

“Where the forthcoming year is 2005-06, the equivalent of a Z factor adjustment to the current year’s [i.e., 2004-05] weighted average tariff may be incorporated when applying equation (3) [as specified in the Determination] if, prior to 31 March 2005, the Commission is satisfied that the valuation of the initial asset base at 30 June 2000 and/or the asset amounts rolled-forward during the first regulatory control period underlying the determined value of the Z factor involved a “material error”, where a material error is one that involves an error in the Z factor that is at least equivalent to one year’s allowed price increase (i.e., $\Delta\text{CPI-}X_1\text{-}X_2$).

If a material error is established, that error will be automatically corrected depending on the size of the required correction, but without any retrospectivity.

If the correction of a material error involves an adjustment equal or less in value than the determined Z factor value of 4.4%, an additional Z-like adjustment will be applied to the weighted average of approved tariffs in 2004-05 when determining the regulatory constraint to apply to weighted average tariffs in 2005-06.

If the correction of a material error involves an adjustment greater in value than the determined Z factor value of 4.4%, the additional Z-like adjustment to be applied to the weighted average of approved tariffs in 2004-05 when determining the regulatory constraint to apply to weighted average tariffs in 2005-06 will be limited to 4.4% and the remainder of the correction will be phased in equally over the remaining four years of the second regulatory control period via necessary Z-like adjustments.”

APPENDIX

B

MODELLING RESULTS

Modelling results based on RAV = corrected DORC

	B	G	H	I	J	K	L	M	N	O	P
4	REGULATED ELECTRICITY NETWORKS										
57	Profit & Loss Statement	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15
59	Rev - sales (actual) - non-contestable	54.5	55.3	56.1	57.0	59.7	60.9	62.1	63.3	64.6	68.2
60	Rev - sales (actual) - T4 contestable	8.5	8.6	8.7	8.9	9.3	9.5	9.7	9.9	10.1	10.6
61	Rev - sales (actual) - contestable (T1-T3)	14.1	14.3	14.5	14.7	15.4	15.7	16.1	16.4	16.7	17.6
62	Rev - from capital contributions (gifted assets)	5.5	5.7	5.8	6.0	6.1	6.3	6.4	6.6	6.7	6.9
63	Rev - personnel recoveries	7.8	8.0	8.2	8.4	8.6	8.9	9.1	9.3	9.5	9.8
64	Rev - non-sales (excl capcons, CSOs & interest)	4.6	4.8	4.9	5.0	5.1	5.2	5.4	5.5	5.6	5.8
65	Rev - CSOs										
66	Operating revenue	95.0	96.7	98.3	100.0	104.3	106.5	108.7	111.0	113.3	119.0
68	O&M (actual, not efficient)	33.8	34.4	34.5	35.0	35.6	36.1	36.7	37.2	37.8	38.4
69	Internal (?) O&M	7.8	8.0	8.2	8.4	8.6	8.9	9.1	9.3	9.5	9.8
70	Depreciation expense	12.6	13.2	13.6	14.0	14.7	16.0	16.4	17.0	17.5	18.1
71	Recoverable amount writedown										
72	Operating expenses	54.2	55.6	56.4	57.5	58.9	61.0	62.2	63.5	64.9	66.2
73	EBIT	40.8	41.1	41.9	42.5	45.3	45.5	46.5	47.4	48.4	52.7
74	rate of return on capital employed (WDBV+cash)	12.9%	12.6%	12.5%	12.3%	12.8%	12.3%	12.0%	12.0%	11.9%	12.6%
75	Interest income	0.8	1.0	1.0	1.2	1.6	1.6	0.8	1.2	1.5	1.9
76	Interest expense	11.8	12.1	12.6	12.9	13.2	13.7	14.6	14.9	15.3	15.7
77	NPBT	29.9	29.9	30.4	30.8	33.8	33.4	32.8	33.8	34.6	38.9
78	Tax payments	9.0	9.0	9.1	9.2	10.1	10.0	9.8	10.1	10.4	11.7
79	NPAT	20.9	20.9	21.3	21.6	23.6	23.4	22.9	23.6	24.2	27.3
80											
81	Funds Flow Statement	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15
83	Cashflow from operating activities										
84	Receipts (excluding capital contributions i.e., non-cash)	89.5	91.0	92.5	94.0	98.2	100.2	102.3	104.4	106.6	112.0
85	Payments (excluding depreciation expense i.e., non-cash)	50.6	51.4	51.8	52.7	54.3	55.0	55.6	56.6	57.7	59.8
86	Net cashflow from operations	38.9	39.6	40.6	41.3	43.8	45.2	46.7	47.8	48.8	52.2
87											
88	Cashflow from investing activity										
89	Receipts from disposals	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
90	Payments for additions (capex)	18.3	23.6	19.1	15.5	28.4	50.3	17.9	22.8	21.0	21.2
91	less prepaid (to WIP)										
92	Interest receipts	0.8	1.0	1.0	1.2	1.6	1.6	0.8	1.2	1.5	1.9
93	Net cashflow from investments	-17.3	-22.4	-17.9	-14.1	-26.6	-48.4	-16.8	-21.4	-19.2	-19.0
94											
95	Cashflow from financial activities										
96	New borrowing	4.6	5.9	4.8	3.9	7.1	12.6	4.5	5.7	5.2	5.3
97	Dividend payments	10.9	10.5	10.5	10.6	10.8	11.8	11.7	11.5	11.8	12.1
98	less prepaid or deferred										
99	Principal repayment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	Interest payments	11.8	12.1	12.6	12.9	13.2	13.7	14.6	14.9	15.3	15.7
101	Net cashflow from financial activities	-18.1	-16.7	-18.3	-19.6	-16.9	-12.9	-21.8	-20.7	-21.9	-22.5
102											
103	Increase (decrease) in cash	3.5	0.5	4.5	7.5	0.4	-16.2	8.1	5.7	7.7	10.6
104											
105	Balance Sheet	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15
107	Fixed Assets (Plant, Property & Equipment)										
110	Gross book value (incl gifted assets)	517.3	540.7	559.6	575.0	603.1	653.2	670.9	693.5	714.2	735.2
111	Book depreciation expense on 30 June 02 assets	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
112	Book depreciation expense on new assets	1.7	2.3	2.8	3.1	3.8	5.1	5.6	6.1	6.6	7.2
113	Book depreciation expense (total)	12.6	13.2	13.6	14.0	14.7	16.0	16.4	17.0	17.5	18.1
114	Accumulated book depreciation	211.8	225.0	238.6	252.7	267.4	283.4	299.8	316.9	334.4	352.5
149	Written down book value (incl gifted assets)	305.5	315.8	321.0	322.3	335.7	369.8	371.0	376.6	379.8	382.7
150	Interest-bearing financial assets (cash)	19.9	20.4	24.9	32.4	32.8	16.6	24.7	30.4	38.1	48.7
151	Total assets	325.4	336.1	345.9	354.7	368.6	386.4	395.7	407.0	417.9	431.5
152	Borrowings (gross)	168.7	174.6	179.3	183.2	190.3	202.9	207.3	213.0	218.3	223.6
154	Total liabilities	168.7	174.6	179.3	183.2	190.3	202.9	207.3	213.0	218.3	223.6
155											
157	Gearing (Borrowings as % of total assets)	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%
159	Business Sustainability Indicators										
161	FFO net interest cover (times)	4.4	4.4	4.3	4.3	4.7	4.6	4.1	4.2	4.3	4.6
162		<i>indicative rating</i>	AAA	AAA	AAA	AAA	AAA	AAA	AA	AAA	AAA
163	Net debt payback period (years)	4.0	4.0	4.0	4.0	3.6	3.6	4.4	4.1	4.0	3.6
164		<i>indicative rating</i>	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
165	Internal financing ratio (%)	93%	76%	98%	122%	76%	42%	119%	99%	111%	124%
166		<i>indicative rating</i>	AAA	AA	AAA	AAA	AA	BBB	AAA	AAA	AAA

Modelling results based on RAV = corrected DORC less \$125 million

	B	G	H	I	J	K	L	M	N	O	P
4	REGULATED ELECTRICITY NETWORKS										
57	Profit & Loss Statement	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15
59	Rev - sales (actual) - non-contestable	47.1	47.8	48.6	49.3	50.5	51.5	52.6	53.6	54.7	57.8
60	Rev - sales (actual) - T4 contestable	7.3	7.5	7.6	7.7	7.9	8.0	8.2	8.4	8.5	9.0
61	Rev - sales (actual) - contestable (T1-T3)	12.2	12.4	12.6	12.8	13.1	13.3	13.6	13.9	14.2	14.9
62	Rev - from capital contributions (gifted assets)	5.5	5.7	5.8	6.0	6.1	6.3	6.4	6.6	6.7	6.9
63	Rev - personnel recoveries	7.8	8.0	8.2	8.4	8.6	8.9	9.1	9.3	9.5	9.8
64	Rev - non-sales (excl capcons, CSOs & interest)	4.6	4.8	4.9	5.0	5.1	5.2	5.4	5.5	5.6	5.8
65	Rev - CSOs										
66	Operating revenue	84.7	86.1	87.6	89.1	91.3	93.2	95.2	97.2	99.3	104.2
68	O&M (actual, not efficient)	33.8	34.4	34.5	35.0	35.6	36.1	36.7	37.2	37.8	38.4
69	Internal (?) O&M	7.8	8.0	8.2	8.4	8.6	8.9	9.1	9.3	9.5	9.8
70	Depreciation expense	12.6	13.2	13.6	14.0	14.7	16.0	16.4	17.0	17.5	18.1
71	Recoverable amount writedown										
72	Operating expenses	54.2	55.6	56.4	57.5	58.9	61.0	62.2	63.5	64.9	66.2
73	EBIT	30.5	30.5	31.2	31.6	32.4	32.3	33.0	33.7	34.4	38.0
74	rate of return on capital employed (WDBV+cash)	9.6%	9.6%	9.6%	9.6%	9.7%	9.4%	9.3%	9.4%	9.4%	10.2%
75	Interest income	0.8	0.6	0.5	0.5	0.6	0.4	-0.7	-0.6	-0.6	-0.5
76	Interest expense	11.8	12.1	12.6	12.9	13.2	13.7	14.6	14.9	15.3	15.7
77	NPBT	19.5	19.0	19.1	19.2	19.8	19.0	17.8	18.2	18.5	21.8
78	Tax payments	5.8	5.7	5.7	5.8	6.0	5.7	5.3	5.5	5.6	6.5
79	NPAT	13.6	13.3	13.4	13.4	13.9	13.3	12.4	12.8	13.0	15.3
80											
81	Funds Flow Statement	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15
83	Cashflow from operating activities										
84	Receipts (excluding capital contributions i.e., non-cash)	79.1	80.4	81.8	83.1	85.2	87.0	88.8	90.7	92.6	97.3
85	Payments (excluding depreciation expense i.e., non-cash)	47.5	48.1	48.5	49.2	50.1	50.7	51.1	52.0	52.9	54.7
86	Net cashflow from operations	31.7	32.3	33.3	33.9	35.1	36.3	37.7	38.7	39.7	42.6
87											
88	Cashflow from investing activity										
89	Receipts from disposals	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
90	Payments for additions (capex)	18.3	23.6	19.1	15.5	28.4	50.3	17.9	22.8	21.0	21.2
91	less prepaid (to WIP)										
92	Interest receipts	0.8	0.6	0.5	0.5	0.6	0.4	-0.7	-0.6	-0.6	-0.5
93	Net cashflow from investments	-17.3	-22.8	-18.4	-14.9	-27.5	-49.7	-18.3	-23.2	-21.3	-21.4
94											
95	Cashflow from financial activities										
96	New borrowing	4.6	5.9	4.8	3.9	7.1	12.6	4.5	5.7	5.2	5.3
97	Dividend payments	10.9	6.8	6.7	6.7	6.7	6.9	6.6	6.2	6.4	6.5
98	less prepaid or deferred										
99	Principal repayment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	Interest payments	11.8	12.1	12.6	12.9	13.2	13.7	14.6	14.9	15.3	15.7
101	Net cashflow from financial activities	-18.1	-13.0	-14.4	-15.7	-12.8	-8.1	-16.8	-15.4	-16.5	-16.9
102											
103	Increase (decrease) in cash	-3.8	-3.5	0.4	3.3	-5.3	-21.4	2.6	0.1	1.9	4.3
104											
105	Balance Sheet	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15
107	Fixed Assets (Plant, Property & Equipment)										
110	Gross book value (incl gifted assets)	517.3	540.7	559.6	575.0	603.1	653.2	670.9	693.5	714.2	735.2
111	Book depreciation expense on 30 June 02 assets	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
112	Book depreciation expense on new assets	1.7	2.3	2.8	3.1	3.8	5.1	5.6	6.1	6.6	7.2
113	Book depreciation expense (total)	12.6	13.2	13.6	14.0	14.7	16.0	16.4	17.0	17.5	18.1
114	Accumulated book depreciation	211.8	225.0	238.6	252.7	267.4	283.4	299.8	316.9	334.4	352.5
149	Written down book value (incl gifted assets)	305.5	315.8	321.0	322.3	335.7	369.8	371.0	376.6	379.8	382.7
150	Interest-bearing financial assets (cash)	12.6	9.1	9.5	12.9	7.6	-13.8	-11.2	-11.1	-9.3	-5.0
151	Total assets	318.1	324.9	330.5	335.2	343.3	356.0	359.8	365.5	370.6	377.7
152	Borrowings (gross)	168.7	174.6	179.3	183.2	190.3	202.9	207.3	213.0	218.3	223.6
154	Total liabilities	168.7	174.6	179.3	183.2	190.3	202.9	207.3	213.0	218.3	223.6
157	Gearing (Borrowings as % of total assets)	53%	54%	54%	55%	55%	57%	58%	58%	59%	59%
159	Business Sustainability Indicators										
161	FFO net interest cover (times)	3.4	3.3	3.2	3.2	3.3	3.2	2.8	2.9	2.8	3.0
162		<i>indicative rating</i>	A	A	A	A	A	BBB	BBB	BBB	A
163	Net debt payback period (years)	5.6	5.9	6.1	6.2	6.0	6.4	7.8	7.6	7.6	6.9
164		<i>indicative rating</i>	AA	AA	AA	AA	AA	A	A	A	AA
165	Internal financing ratio (%)	53%	59%	76%	95%	56%	32%	89%	74%	83%	94%
166		<i>indicative rating</i>	A	A	AA	AAA	A	BB	AA	AA	AAA