

Aurora Energy Pty Ltd

Australian Energy Regulator:

Asset Review

3 May 2011

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1 Scope of Work

The scope of services (our Work) was the review of the tax written down values of the assets held by Aurora Energy Pty Ltd ('Aurora') with respect to the requirements of the Australian Energy Regulator ('AER').

1.1 Background and Requirements of AER

Aurora will be regulated by the AER for the first time from the regulatory period starting 1 July 2012. As part of the transition to regulation by the AER, Aurora must submit a regulatory proposal to the AER, in respect of Aurora's distribution services. The regulatory proposal includes a requirement to lodge a post tax revenue model ('PTRM') and a roll-forward model ('RFM') with the AER. These models are required to make an allowance for tax cashflows. Given the tax cashflows are impacted by the tax depreciation within the tax calculation, the tax written down values of assets will have an impact on tax cashflows. Tax written down values are therefore likely to be reviewed by the AER in its analysis of Aurora's regulatory proposal.

The RFM provides for the roll-forward of tax and regulatory asset values from a start date of 1 July 2007 until 30 June 2012, when the values and lives are input into the PTRM from a start date of 2012 until the proposed end of the regulatory control period at 30 June 2017. In order to populate the RFM and PTRM models, Aurora is required to provide the following information:

- Opening tax asset values as at 1 July 2007 for each regulatory asset class code; and
- Opening tax asset lives as at 1 July 2007 for each regulatory asset class code.

In respect of the tax written down value of assets, we understand that the AER's ideal approach is as follows:

- Identify when the entity was first subject to the tax equivalence regime
- Verify the tax value of the assets as at that date
- Identify an historical profile of when assets first became subject to tax
- Calculate a tax roll-forward to the commencement of the regulating period using tax depreciation and actual capital expenditure and disposals
- Depreciation for tax purposes should be determined on a straight line / prime cost basis

1.2 Approach

Our report has been prepared solely for the purpose of assisting the Directors of Aurora with a methodology for determining appropriate tax asset values for the purpose of the AER regulatory proposal. Our report should not be quoted or referred to or used for any other purpose.

Our approach was to consider, with regard to the AER regulatory proposal requirements:

- The tax asset values for assets in the tax fixed asset register
- The appropriateness of the historical depreciation applied to those assets
- The original acquisition cost of those assets
- When the assets commenced depreciation
- The appropriate base value for a recomputation of the tax written down values using straight line depreciation
- The appropriateness of the asset effective lives used by Aurora, with comparison between the lives self-assessed by Aurora and the various lives accepted by the Commissioner of Taxation (the 'Commissioner') over the period of review
- The appropriate model for incorporating the various above considerations

The following excel spreadsheet files (the 'raw data') were provided to Deloitte for us to perform the review procedures:

File Number	File Name	Date Provided
File 1	Tax Book 30 June 02	8 April 2010
File 2	Asset Additions 03-07	2 November 2010
File 3	Asset Disposals 03-07	2 November 2010
File 4	Shared Use Assets	15 November 2010

1.3 Overview and Summary of Findings

For the purposes of the model ('the Model'), the acquisition cost values were determined using the following methodology:

- For assets acquired up to 30 June 2002, using the acquisition cost of assets as stated in Aurora's tax fixed asset register as at 30 June 2002 (File 1)
- For assets acquired in the period from 1 July 2002 to 30 June 2007, using the acquisition cost of assets as per Aurora's accounting fixed asset register (File 2)
- Disposals in the period from 1 July 2002 to 30 June 2007 (File 3) were offset against each individual asset they related to, using the fixed asset numbers (whether acquired pre or post 30 June 2002). In some cases, the disposal amount was greater than the asset value, or related to assets no longer appearing on the asset register. These surplus amounts were treated as a gain on disposal and excluded from the Model.
- Further adjustments were made to asset costs within the Model for shared use assets, alternative control assets, fibre assets used in Telco business, retail assets, land, fully depreciated assets, NEM assets and MDMS assets.

Aurora's self-assessed effective lives were used in the Model. Given their specific determination by Aurora employees at the time when each asset was originally entered into the fixed asset register, and their consistency with the lives used for tax purposes under the National Tax Equivalence Regime (NTER), the self-assessed effective lives were considered the most appropriate. While legislative changes following the Ralph Review of Business Taxation were considered, they have not necessitated a change to the way in which the Model computes the written down values of assets.

The revised written down values of Aurora assets as at 30 June 2007, in the Model, is summarised as follows:

Outcomes of Model

Original Cost	RAB Cost Base	RAB WDV as at 30 June 2007
819,401,225	807,380,859	526,092,396

Only standard control assets were included in the Model, with alternative control and unregulated assets excluded. Of these, to the extent they were shared use assets, only a percentage of their cost was included in the Model (in proportion to their use in the distribution business). Some asset classes had no assets entered, despite potentially containing standard control assets. A summary of the treatment of assets classes, together with the average remaining effective lives for assets included in each asset class, as at 30 June 2007 (weighted according to the RAB value of assets in each asset class), is below:

Regulatory Codes	RAB value 30-Jun-07	Written Down Value 30-Jun-07	Average Effective Life	Average Remaining Effective Lives
Connection Assets - Business LV	3,053,346	2,803,825	36	34
Connection Assets - Domestic LV	20,077,571	18,473,372	36	34
Connection Assets - HV	551,354	507,069	36	34
Connection Assets - HV/LV	955,788	879,420	36	34
NEM ASSETS	4,777,446	2,955,378	3	2
Non - Operational Assets - Minor Assets	32,300,130	16,036,034	5	2
Non - Operational Assets - Motor Vehicles	21,903,466	14,981,586	9	7
Non - Operational Assets - Property	39,278,308	32,087,390	35	29
Operational Assets - Distribution Substations HV Ground	6,468,314	4,260,710	33	26
Operational Assets - Distribution Substations HV Pole	576,779	501,149	38	34
Operational Assets - Distribution Substations LV (Ground)	18,774,037	12,919,218	34	27
Operational Assets - Distribution Substations LV (Pole)	37,738,314	30,162,216	37	32
Operational Assets - Distribution Switching Stations (Ground)	25,533,413	17,490,522	36	30
Operational Assets - Overhead High Voltage Lines Rural	239,599,101	135,829,588	33	24
Operational Assets - Overhead High Voltage Lines Urban	72,636,415	63,355,286	35	32
Operational Assets - Overhead Low Voltage Line Underbuilt Rural	7,184,524	6,108,194	39	35
Operational Assets - Overhead Low Voltage Line Underbuilt Urban	35,161,475	31,552,515	37	35
Operational Assets - Overhead Low Voltage Lines Rural	24,512,049	17,373,273	37	30
Operational Assets - Overhead Low Voltage Lines Urban	39,048,518	31,750,230	35	31
Operational Assets - Overhead Subtransmission Lines (Urban)	2,564,201	2,180,268	45	39
Operational Assets - SCADA	1,203,737	1,022,720	33	30
Operational Assets - Underground High Voltage Lines	148,163,478	61,399,843	31	16
Operational Assets - Underground Low Voltage Common Trench	863,815	732,180	43	37
Operational Assets - Underground Low Voltage Lines	6,309,411	5,300,679	42	38
Operational Assets - Underground Subtransmission Lines (Urban)	89,813	88,928	50	50
Operational Assets - Urban Zone Substations	18,056,054	15,340,805	33	30
Total	807,380,859	526,092,396		

1.4 Limitations

This report provides the findings of the scope of services of our Work set out above. You are responsible for determining whether the scope of our work is sufficient for your purposes and we make no representations regarding the sufficiency our Work for your purposes. If we were to perform additional procedures outside of our scope of services, other matters might have come to our attention that would be reported to you. This report should not be taken to supplant any other enquiries and procedures that may be necessary to satisfy the requirements of the recipients of the report. We note our review was not a due diligence review of the tax asset register, and in particular, involved no review of the integrity of the historical data provided. We understand that you will have KPMG review the assumptions and approach adopted and ensure that it is consistent with your, and the AER's, requirements.

The Work we performed did not constitute an audit of any kind and we have not expressed any opinion or drawn any conclusions other than in accordance with the scope of our Work. Deloitte has relied on your representations and this report is provided expressly on the condition that you acknowledge that Deloitte is entitled to rely on representations by you.

This report is prepared solely for the use of Aurora Energy Pty Ltd. This report is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity. The report has been prepared for the purpose set out in the addendum to our engagement letter dated 4 March 2010. You should not refer to or use our name or the advice for any other purpose.

1.5 Basis of Work

Our Work is provided to you on the basis of all of the following:

- that you and KPMG are responsible for determination of whether the approach and methodology are sufficient for the AER and whether it is consistent with integration into your AER Model
- an assumption (without independent verification) the assets were acquired as contemplated in the Information
- an assumption that the Information provided, including the raw data, is true, correct and complete and not misleading. If the Information is untrue, incorrect, incomplete or misleading then our Work may be incorrect or inappropriate for you. If the Information provided contains a misstatement, omission or the Information changes after we receive it, then our Work may be wrong
- the law, regulations, cases, rulings and other tax authorities (Tax Laws) in effect at the date of the Work. If there are any significant changes to any Tax Law (for which we shall have no responsibility to advise you), then our Work may be incorrect or inappropriate for you. If this happens you may wish to ask us to reconsider our Work

- our Work is not binding on the Australian Taxation Office (ATO), the AER, or any local or foreign revenue authority or any court or tribunal and should not be considered a representation, warranty, or guarantee that the AER, ATO and other revenue authority or courts or tribunals will agree with our Work
- any draft of our Work (Draft Work) we provide you is done so on the basis that you may not rely on it. You may have access to our Draft Work solely to confirm that the Information on which we have relied in producing the Draft Work is accurate and complete, that there are no matters contained in the Draft Work that are inconsistent with your understanding of the transaction or circumstances and that you have brought to our attention all facts and matters that are relevant to the Services
- only the specific tax issues and tax consequences dealt with in our Report are covered and no other Commonwealth, State or foreign taxes of any kind are covered
- Aurora is responsible for determining whether the Report is sufficient for Aurora's purposes. We make no representations regarding the sufficiency of the Report or our Work for Aurora's purposes
- Aurora is responsible for making any decisions in relation to our advice or recommendations and for their implementation, including any results or consequences.

2 Determination of Original Cost of Assets

Limited historical information was available to enable the written down cost base of the tax assets to be determined. An examination of Aurora's current and historical records determined that the most complete and reliable information was the tax fixed asset register as at 30 June 2002 (File 1), supplemented by additions and disposals per the accounting fixed asset register for each of the years ended 30 June 2003 to 30 June 2007 inclusive (Files 2 and 3 respectively). Aurora's accounting system has since inception undergone significant change and renewal. In 2002 Aurora migrated to a new accounting system and as part of this, transferred all asset values to a new tax fixed asset register. That information was revised for incorporation into the new accounting system, and the historical data required was, as a result, not able to be extracted as it continued to be held in the prior system and not in the new accounting system. The prior fixed asset registers are no longer supported. We note that the tax fixed assets register as at 30 June 2002 contained the acquisition costs of all assets acquired up to that date. Given the acquisition cost of an asset is a fixed amount for NTER purposes, the acquisition cost of the same asset in the 30 June 2002 and 30 June 1998 fixed asset registers is identical (provided the asset had been acquired by 30 June 1998 and had not been subsequently disposed of in full or in part). It was therefore preferable to use the 30 June 2002 data, as opposed to an earlier year, given it incorporated all additions and disposals up to this date.

The method developed to determine the appropriate asset balances as at 30 June 2007 in the Model was determined as follows:

- For assets acquired up to the period ended 30 June 2002, using:
 - The acquisition cost of assets as stated in Aurora's tax fixed asset register at 30 June 2002
 - The depreciation start date as stated in the tax fixed asset register
 - The prime cost rate of depreciation determined using the effective life as stated in the tax fixed assets register or, where this was not available, converting the diminishing rate of depreciation stated in the tax fixed asset register to the equivalent prime cost rate for an asset with the same effective life.
- For assets acquired in the period from 1 July 2002 to 30 June 2007, using:
 - The acquisition cost of assets as per Aurora's accounting fixed asset register
 - The depreciation start date as stated in the accounting (additions) fixed asset register
 - The prime cost rate of depreciation determined using the effective life as stated in the accounting fixed assets register
- Disposals as per the accounting fixed asset register in the period between 1 July 2002 and 30 June 2007 were tracked to individual assets, and deducted from the cost of those identified assets (using the fixed asset number)

- Shared use assets were identified and a percentage of their values were included in the Model, based on the percentage use of those assets in Aurora's distribution business as at 30 June 2007 (File 4). This point in time was considered the most appropriate reflection of the use of assets at for the purposes of the Model. The percentages themselves were extracted from allocation percentages used in Aurora's ring-fenced accounts, which are based on Aurora's indirect cost allocation methodology
- Alternative control assets, where separately coded as meters or streetlights, were removed from the Model
- NEM and MDMS assets, where separately identifiable according asset descriptions, were analysed and separated into shared use, retail and standard control assets
- Retail assets were separately identified according to department code 600-699 and removed from the Model, as were new ventures assets (department code 310). New ventures assets comprises expenditure for new ventures not in Aurora's distribution business
- Fibre assets, which related to the Telco business, were identified from asset descriptions and removed from the Model
- Fully depreciated assets were removed from the Model (including low value tax pooled assets)
- Land assets were excluded from the Model on the basis they are not standard control assets.

By using Aurora's tax fixed asset register as at 30 June 2002, this provided consistency between how Aurora actually depreciates assets for tax purposes under the NTER, with the method to account for tax depreciation under the RFM and PTRM models in terms of the measurement of the effective lives of Aurora's assets. The written down values in the Model differ to the tax fixed asset register written down values due to the use of the straight line, or prime cost method of depreciation for all assets, as required under the RFM and PTRM models. The tax fixed asset register acquisition values were not used for the period from 30 June 2002 to 30 June 2007 for the following reasons:

- The tax fixed asset register pools low value assets under concessional accelerated depreciation rules in Division 40 of the *ITAA 1997*
- The accounting fixed asset register does not pool assets enabling all additions in the period to be separately identified and depreciated using specific prime cost rates
- The effective lives as per the accounting fixed asset register are determined under the same principles as for the tax fixed asset register
- The tax pooled assets include alternative control assets, being street lights and meters, which can only be separately identified and excluded using the accounting fixed asset register
- The cost base in the accounting fixed asset register was the same as the cost base in the tax fixed asset register. That is, there were no cost base adjustments such as capitalised interest or asset revaluations.

The tax fixed asset register acquisition values used up until 30 June 2002 included low value tax pooled assets. While the pooled assets potentially included alternative control assets, given these assets are written off under the Model prior to 30 June 2007 due to their short effective lives, and so are not included in the 30 June 2007 values under the Model, they are not impacting the outcomes of the Model. The remainder of assets that would have fallen within the low value pool, such as tools,

computer and communications equipment, were considered to have short effective lives, meaning that they would have had little, if not a nil, written down value as at 30 June 2007 even if separate effective lives were determined and used for these assets. On this basis, it was considered the use of the tax then accounting fixed asset register data was appropriate given the AER's requirements.

In addition, this method is also consistent with the subsequent NTER requirements in that:

- Where an entity that was under a State TER, and commenced being under the NTER prior to 30 June 2002, the NTER entity's commencing position for the purposes of the NTER was required to be equal to its closing positions in the TER (Paragraph 91 of the NTER Manual). In this respect, Hydro commenced under the State TER in 1990. While Aurora was also initially under the State TER, a transfer of assets at written down values is in line with the subsequent NTER requirements;
- Where there is a transfer of assets from one NTER entity to another under a government imposed restructure, the restructure should be treated in a tax neutral manner for NTER purposes (Paragraph 103 of the NTER manual). A tax neutral manner would also suggest that assets are transferred at tax written down values, meaning there is no gain or loss, or step up or down of cost base from the transfer of depreciable assets from one NTER entity to another. For instance, a revaluation of assets for accounting purposes would result in a step up or step down in asset values that is not considered tax neutral from an NTER perspective.

The method of depreciation was also considered appropriate given:

- It uses straight-line / prime cost depreciation;
- Is consistent with the effective lives of assets as used for NTER tax depreciation purposes;
- It depreciates assets from the time the assets were acquired as per Aurora's historic records; and
- The effective lives are based on accounting book effective lives determined by Aurora's operational managers.

Effective lives as published by the Australian Taxation Office ('ATO') and accepted by the Commissioner of Taxation ('the Commissioner') were not considered appropriate in the circumstances. These rates are generalised and are not used by Aurora under the NTER. Due to the large number and variety of depreciable assets held by Aurora, difficulties would also arise in applying to the Commissioner's rates to each individual asset (i.e. on an asset by asset basis). To be able to implement the Commissioner's rates, effective lives could be allocated based on asset categories. However, this is less precise than the self-assessed lives allocated by Aurora, which were made on an asset by asset basis. For this reason, it is considered that using Aurora's self-assessed effective lives provides a more accurate basis for determining the effective lives of assets, given they were determined upon the initial entry of each individual asset into the fixed asset register.

Once the Model was completed, the total cost of assets per the Model, after all adjustments, was reconciled to the source data to ensure the data had maintained its integrity during the modelling process. This revealed a slight difference of \$2 million, being a 0.2% difference to source data total asset values. The slight difference

arises from the matching of assets disposed of (File 3) to assets within the Model. Where the disposed asset did not match an asset in the Model, or the disposal value exceeded the cost of the asset in the Model, a gain on disposal was treated as arising and assets costs were not reduced below zero. This resulted in the cost of assets in the Model not reducing by the full \$18 million of disposals listed in File 3. The process of the reconciliation is documented as follows:

Reconciliation to Source Data

	\$
Per source data	
2002 raw data (File 1)	558,257
2003-2007 Additions report (File 2)	431,344
Less assets removed from data:	
2003-2007 Disposals report (File 3)	(18,312)
New Ventures Dept. Assets (310)	(78)
Retail Assets (600-699)	(31,646)
Fibre assets (Telco business)	(4,398)
Total	935,167
Per Model	
Standard control assets	819,401
Alternate control	34,176
Land	1,361
Fully depreciated	82,502
Total	937,440
Difference due to unmatched disposals	(2,273)

3 Classification of Assets

3.1 Determination of Regulated Assets to be Included in Model

The raw data included assets that were not standard control assets and were required to be excluded in determining the RAB value for the purposes of the regulatory model. Assets were initially classified by reference to the Fixed Asset Class Code ('FA Code') originally assigned to them in the asset register into six different classes as follows:

- Standard Control
- Alternative Control, being meters and streetlights
- Standard Control – Land
- Standard Control – Fully depreciated
- Standard Control – Disposed

Alternative control assets, where separately coded as meters or streetlights, were removed from the Model. Prior to the commencement of tax pooling on 1 July 2001, meters were historically written off immediately and were therefore not listed in the tax fixed asset register as at 30 June 2002. Streetlights were also not included as an asset category in File 1. Meters and street-lights acquired from the period from 1 July 2002 to 30 June 2007 were separately identified according to asset class code and excluded from standard control assets in the Model. These assets are therefore not included in the written down values of assets in the Model, given that any alternative control assets that were included in the tax pooling prior to 30 June 2002, would be for material purposes fully depreciated under the Model as at 30 June 2007, and so will not impact the written down value of assets for the purposes of the RFM and PTRM models.

We note that standard control assets included in the tax pooling to 30 June 2002, included tools, telecommunications and computer equipment. These assets were considered to have relatively low effective lives (being 5, 6.67, and 4 years respectively under the Commissioner's rates) and accordingly their value as at 30 June 2007 would have been minimal, if not nil.

Land assets that were excluded ensuring they did not distort the determination of remaining effective lives for standard control assets. These assets were identified by reviewing asset descriptions in the fixed asset register and were not considered to be standard control assets.

Standard control assets that were fully depreciated (including low value tax pooled assets), or disposed of were also excluded from the model. These assets had a nil RAB cost base and were therefore not required to be included.

Standard control assets were then reviewed to ensure that no retail assets or new venture assets were included. Retail and new venture assets were identified by reviewing department codes within the Model, with retail being department codes 600-699 and new ventures department code 310.

Within the standard control assets are assets not solely used in distribution, referred to as shared use assets. Shared use assets are listed in the table on the following page. These were separately identified according to their FA Code, with the exception of NEM assets, which were identified by their asset description. The percentages used for the apportionment of shared use assets are as per File 4. These percentages are based on the allocation of shared services within the Ring Fenced Accounts for 2009/10. We understand Aurora has reviewed the previous financial year percentage split and found very little variance in the shared service percentages. Accordingly, it is assumed that the 2009/10 splits provide a robust basis to be used for the whole period.

Asset categorisation is summarised as per the table on the following page, which is categorised based on the FA Codes used in the 2002 raw data and 2007 raw data (except NEM assets which were not categorised by a FA Code). In respect of the outcomes of the shared use asset classifications, we note the following:

- Aurora has advised the reason for the following asset classes containing no data as follows:
 - COMP CORP assets were included in COMP USER in the 2002 raw data
 - There was no expenditure on MEDICAL EQ in all years
 - PORT BDGS expenditure in the 2007 raw data years is nil
 - Leasehold and Building Plant assets are included in BUILDPLANT
 - T/LINE expenditure in the 2007 raw data years is nil
 - The 2002 raw data preceded Aurora's entry into the NEM
- The existence of NEM RETAIL SYSTEMS assets were cross checked by department codes (600 to 699). None were found in the raw data.
- NEM Meter Data Management System (MDMS) assets were identified by asset description and 33% of the full cost was included in the RAB values (as per File 4).
- NEM SYSTEM OTHER described corporate NEM assets. These have been identified by the department codes (200 to 299) and included at 50% in the Model (as per File 4).
- NETWORK NEM ASSETS have been identified by the department codes (500 to 599 and 700 to 799) and included at 100% in the Model (as per File 4).

Fixed Asset Class	Included In 30 June	Included In 2002-	Shared	Unregulated	% Included in Model	
	2002 Raw Data	2007 Raw Data	Asset	Asset	Corporate	Assets Coded as Distribution
COMP CORP	No	Yes	Yes	No	50%	100%
COMP USER	Yes	Yes	Yes	No	84%	100%
MEDICAL EQ	No	No	Yes	No	100%	100%
MINOR COMM	Yes	Yes	Yes	No	100%	100%
MOBILE COM	Yes	Yes	Yes	No	100%	100%
OFFICE	Yes	Yes	Yes	No	80%	100%
PLANT MAC	Yes	Yes	Yes	No	100%	100%
SOFTWARE	Yes	Yes	Yes	No	58%	100%
TOOLS	Yes	Yes	Yes	No	100%	100%
VEHICLE	Yes	Yes	Yes	No	86%	100%
PORT BDGS	Yes	No	Yes	No	100%	100%
Leasehold and Building Plant	No	No	Yes	No	95%	100%
FEEDERS	Yes	Yes	No	No	100%	100%
L AND B	Yes	Yes	No	No	100%	100%
METERS	No	Yes	No	Yes	0%	0%
S/LIGHT	No	Yes	No	Yes	0%	0%
SCADA	Yes	Yes	No	No	0%	0%
T/LINE	Yes	No	No	No	100%	100%
ZONE SUBS	Yes	Yes	No	No	100%	100%
FIBREOPTIC	No	Yes	No	Yes	0%	0%
Appl Syst	Yes	Yes	No	No	100%	100%
Buildplant	Yes	Yes	No	No	100%	100%
Tax (Pooled assets)	Yes	No	No	Yes	0%	0%
NEM MDMS	No	Yes	Yes	No	33%	33%
NEM RETAIL SYSTEMS	No	Yes	Yes	No	0%	0%
NEM SYSTEMS OTHER	No	Yes	Yes	No	50%	50%
NETWORK NEM ASSETS	No	Yes	Yes	No	100%	100%

3.2 Regulatory Asset Codes

For regulatory purposes, the assets are required to be divided into specified regulatory asset class codes, consistent with the requirements of the RFM. These are the asset groups listed in the summary of results under Section 1.3 of this report (less the exclusions noted below). This required an asset code allocation process given the 2002 raw data contained FA Codes which were broader than the regulatory asset class codes. In addition, while the 2002 raw data did contain asset descriptions, these were not sufficiently similar to class code names required by the regulator, and were often unique for each asset.

The 2007 raw data also included FA Code descriptors for each asset, while also including Book Depreciation Codes which for feeder and zone subs assets matched, or were similar to the regulatory asset codes.

As a result, the Aurora Commercial Analysis team was requested to undertake work on the Model to categorise the 2002 and 2007 raw data in accordance with the regulatory asset class codes. This was based on the use of an allocation matrix and work category codes:

1. Each project undertaken by Aurora is given a work category code, which forms the cost centres to which capital expenditures are allocated. Work category codes were assigned to each asset in the Model on a line by line basis. The analysis and assignment of assets to work category codes was performed by Network staff engineers;
2. The assets in each work category code were then assigned to regulatory asset codes based on an allocation matrix inserted into the Model. The allocation matrix used is based on the allocation of work category code costs for regulatory account purposes. This assigns a fixed percentage of asset values included in each work category code to regulatory class codes.

We have reviewed the reallocation process conducted by the Aurora Commercial Analysis team through:

- Discussing the process and methodology of regulatory asset class code allocation with Aurora staff
- Analysing the allocation matrix for reasonableness of allocation rules
- Sample testing the spreadsheet formulae (which looks up and assigns regulatory asset class codes to all assets) to determine whether it is accurately picking up regulatory codes for assets from the allocation matrix
- Checking the total values of the assets in the revised Model to values in the Model prior to the allocation of asset class codes
- Comparing regulatory asset class code classification of assets from the 2002 raw data to assets from the 2007 raw data for consistency

Our comments in respect of the regulatory class code allocation process are as follows:

- Some asset regulatory class codes were not listed in the summary data of the Model. For instance, all NEM assets have been grouped together as a single asset category (NEM ASSETS), despite the regulatory codes being broken down into three categories, being:
 - NEM Assets - FRC Systems
 - NEM Assets - Network Distribution Systems
 - NEM Assets - Network RC Systems

While this grouping was therefore not in strict accordance with the given regulatory coding, we understand that going forwards NEM assets will be using one regulatory asset class code for regulatory purposes. As discussed in section 3.1 of this report, NEM assets were analysed for any retail, MDMS and shared use asset component and the RAB value adjusted accordingly, such that within the summary NEM ASSETS class code, assets have been analysed for appropriate treatment.

- Metering assets were excluded from the Model as alternative control assets, resulting in metering regulatory asset class codes having a nil total. These excluded metering assets categories are:
 - Metering Assets - Business LV
 - Metering Assets - Domestic LV
 - Metering Assets – HV
 - Metering Assets - HV/LV
 - Metering Assets – LV
 - Metering Assets - Off Peak Electronic
 - Metering Assets - Off Peak Mechanical
- Other class codes had a nil value, meaning that they did not have any matching assets in the raw data, being the following categories:
 - Connection Assets - HV Metering
 - Connection Assets – HVST
 - Connection Assets - LV Business Metering
 - Non - Operational Assets - Spare Parts
 - Operational Assets - Emergency Spare Stock
 - Operational Assets – Rural Zone Substations

- Operational Assets - Underground High Voltage Lines SWER
 - Operational Assets – Voltage Regulators on Distribution Feeders
 - Streetlighting assets and Wholesale metering
- A small number of assets were found to contain both alternative control and operational asset amounts within the one asset value. After consideration by the Aurora Commercial Analysis team and based on historical data, such assets were assigned a shared use asset value of 80%.
 - Some assets were initially considered to be land and were not assigned to a regulatory asset class code. On further investigation by the Aurora Commercial Analysis team, these assets were found to be buildings and were reclassified to the appropriate regulatory asset class categories and given an effective life of 40 years, which is consistent with the ATO safe harbour effective lives for such assets. The analysis was based on asset descriptions in the fixed asset register. In this process, a small number of assets were found to be land, held by corporate division. They were not considered to be standard control assets and were excluded from the Model.

A reasonableness check of the self-assessed effective lives used by Aurora, to the safe harbour effective lives for electricity distribution assets as published by the ATO. This was done by comparing the average effective lives for all assets within a particular regulatory asset class code, to what was considered the most appropriate ATO safe harbour effective life for that category of assets. The average effective life was weighted according to the RAB value of assets as at 30 June 2007 within each regulatory asset class code. While within each regulatory asset class code there were differing assets having differing effective lives, by comparing the average effective life for each regulatory asset class code, a high level comparison was able to be drawn. The results of the comparison are summarised on the following page. Our comments in respect of the comparison are as follows:

- Overall, the average effective lives were found to follow the same trends as the ATO effective lives.
- The average effective life for NEM ASSETS differed to the ATO lives significantly. However, given the specific nature of these assets and that NEM ASSETS predominantly consists of computer and software assets, the effective lives determined by Aurora were still considered the most appropriate. In this respect, the ATO effective lives for computers and software are 4 and 2.5 years respectively.
- Operational assets contained assets with effective lives of 15 years, which brought down the average for each asset class. However, given the categories also included a large number of assets with effective lives of 40 years or more, as the shorter effective life assets have been specifically identified at the time of being entered into the fixed asset register, their lives were accepted as being correct.

Regulatory Codes	Average Effective Life	ATO Effective Life	ATO Description
Connection Assets - Business LV	36	40	Customers service mains or cable, above ground
Connection Assets - Domestic LV	36	40	Customers service mains or cable, above ground
Connection Assets - HV	36	40	Customers service mains or cable, above ground
Connection Assets - HV/LV	36	40	Customers service mains or cable, above ground
NEM ASSETS	3	10	Control, monitoring, communications and protection systems
Non - Operational Assets - Minor Assets	5	5	Tools (loose)
Non - Operational Assets - Motor Vehicles	9	8	Motor vehicles - cars
Non - Operational Assets - Property	35	40	Capital works
Operational Assets - Distribution Substations HV Ground	33	40	Distributions substations / transformers
Operational Assets - Distribution Substations HV Pole	38	40	Distributions substations / transformers
Operational Assets - Distribution Substations LV (Ground)	34	40	Distributions substations / transformers
Operational Assets - Distribution Substations LV (Pole)	37	40	Distributions substations / transformers
Operational Assets - Distribution Switching Stations (Ground)	36	40	Distributions substations / transformers
Operational Assets - Overhead High Voltage Lines Rural	33	45	Distribution lines: above ground
Operational Assets - Overhead High Voltage Lines Urban	35	45	Distribution lines: above ground
Operational Assets - Overhead Low Voltage Line Underbuilt Rural	39	45	Distribution lines: above ground
Operational Assets - Overhead Low Voltage Line Underbuilt Urban	37	45	Distribution lines: above ground
Operational Assets - Overhead Low Voltage Lines Rural	37	45	Distribution lines: above ground
Operational Assets - Overhead Low Voltage Lines Urban	35	45	Distribution lines: above ground
Operational Assets - Overhead Subtransmission Lines (Urban)	45	45	Distribution lines: above ground
Operational Assets - SCADA	33	10	Control, monitoring, communications and protection systems
Operational Assets - Underground High Voltage Lines	31	50	Distributions lines: underground
Operational Assets - Underground Low Voltage Common Trench	43	50	Distributions lines: underground
Operational Assets - Underground Low Voltage Lines	42	50	Distributions lines: underground
Operational Assets - Underground Subtransmission Lines (Urban)	50	51	Distributions lines: underground
Operational Assets - Urban Zone Substations	33	40	Distribution zone substations

4 Determination of Prime Cost Depreciation Rates

Aurora has traditionally calculated tax depreciation using self-assessed effective lives based on the effective lives assessed for accounting depreciation purposes. In some cases, such as pooled assets, we understand that the Commissioner's published effective lives have been used. Alternatively, Aurora may adopt the Commissioner's recommended lives as a safe harbour estimate for all depreciating assets. The Commissioner's rates are updated intermittently with the list of assets and their effective lives having become more detailed over time.

Under the Model, the prime cost depreciation rate was determined by using the effective life stated for each asset in Files 1, 2 and 3, or where this was not stated (in the case of some assets in File 1), the diminishing value rate of depreciation. Each effective life was stated in years, resulting in the following formula being used:

$$\text{Prime cost rate (\%)} = 100 / (\text{effective life})$$

Where there was no statement of the effective life or the prime cost rate for the assets, the rate was determined using the diminishing value rate of depreciation used in the tax fixed asset register. This was only relevant for assets acquired up to 30 June 2002 (File 1), with all assets acquired after this date having known effective lives (File 2). In this respect, up until 9 May 2006, the diminishing value rate of depreciation was determined by using a gross-up rate of 150%. After this date, the gross-up rate of 200% was used. Therefore, for the period of the File 1 raw data (being the period up to 30 June 2002), the diminishing value rate (as a percentage) was not impacted by the increase in the diminishing value rate, and was determined by the following formula:

$$\text{Diminishing value rate (\%)} = 150/\text{effective life}$$

Following on from this, the self-assessed effective lives used by Aurora in the raw data were then determined using the following formula:

$$\text{Effective life (\%)} = 150/\text{diminishing value rate}$$

Finally, the prime cost rates of depreciation, based on the Aurora self-assessed effective lives were then determined. As there is no gross-up of the rate under the prime cost method (pre-and post 9 May 2006), the following formula was used:

$$\text{Prime cost rate (\%)} = 100/\text{effective life}$$

5 Methodology for Determining 30 June 2007 Values

5.1 Written Down Values

The Model uses the prime cost method for writing down the value of assets, at the rates determined by Aurora's self-assessed effective lives for each asset, or where not available, using the conversion of diminishing value rates of depreciation to prime cost rates (as discussed in section 4 of this report). The assets were depreciated from the depreciation start date provided in the raw data, which included start dates in the 1950s and 1960s and (in a small number of cases) earlier. As a result, many of these assets under this methodology were fully written down as at 30 June 2002, and so are excluded from the Model. In addition, as all assets have been depreciated using self-assessed effective lives, the broad band accelerated depreciation rates available for pre- 21 September 1999 assets, have not been used in the Model. Nor has the Model used re-estimated effective lives for assets acquired after 21 September 1999, on the basis the initial effective life estimates remain appropriate. Accordingly, there is a consistent treatment of depreciation of assets in the Model, pre and post the Ralph Review of Business Taxation.

Acquisition costs of assets in the raw data, as stated in the tax fixed asset register up until 30 June 2002 (and after that date the accounting cost of additions) were used rather than written down values, given the assets were depreciated from the date of acquisition.

From 1 July 2001, assets costing less than \$1,000 were pooled and depreciated at 37.5% diminishing value method. This method was the existing method in Aurora's raw data, and the pooled asset depreciation rate has been used to determine the effective lives and prime cost rate for the pooled assets. While the low value asset pooling rules in Division 40 of the *ITAA 1997* specify a diminishing value rate of 37.5% for low value pools, this rate has been converted to a prime cost rate given the prime cost method is preferred by the AER. Therefore, while not strictly in accordance with the *ITAA 1997*, which proscribes the diminishing value method, given the use of the same effective life, the rate used is considered appropriate in the circumstances. The 37.5% diminishing value converts to an effective life of 4 years, and a prime cost rate of 25%.

Using the abovementioned rate of 25%, these assets would have been fully depreciated by 30 June 2007, and so will not affect the value of assets brought into the Model. Additions from 1 July 2002 to 30 June 2007 have been extracted from the book fixed asset register and so do not contain tax pooling as an asset class. In respect of this period, alternative control assets have been removed based on their FA Codes.

Section 3 of this report contains a detailed summary of assets excluded from the Model.

5.2 RAB Cost Base, Effective Lives and Average Remaining Effective Lives

The asset base values for regulatory purposes (RAB cost base) were based on the acquisition cost of assets as provided in the raw data, reduced by any disposals against that asset. However, as mentioned in Section 3.1 above, a number of standard control assets were shared use assets. The RAB cost base for the purposes of the Model were therefore adjusted according to the percentages relevant to each asset category. For assets that were shared use assets, the RAB values were thereby reduced by the percentage that did not relate to the distribution business. This ensured that RAB cost base were not inflated by shared use assets. The table in Section 3.1 of this report shows the shared use percentages applied to share use assets.

For RFM purposes, it was also a requirement that the average effective lives remaining for each regulatory asset class code be determined and separately stated. As a first step, the effective lives for each individual asset were determined by dividing 100 by the prime cost rate of depreciation for that asset. From this, the average effective lives remaining by regulatory asset class codes were determined by subtracting the number of days each asset had completed in its effective life, being from the time of acquisition, to 30 June 2007 (the date of commencement of the RFM). The balance was the effective life remaining as at 30 June 2007. The average remaining effective lives for each regulatory asset category were then determined by giving each asset (and its remaining effective life) a weighted value within its class code, based on the cost of assets held as at 30 June 2007 against the original cost of all assets within that class at that time. This provided average remaining effective lives for each regulatory asset code, weighted according to their respective original cost. Weighting according to original cost is based on the understanding that the remaining effective lives of assets entering the RFM should reflect the history of assets prior to entering the RFM, that is their original cost and expected rate of depreciation based on original cost, and not just be a reflection of their written down values as at 30 June 2007. Given this, by using the cost of assets on hand as at 30 June 2007, the average remaining effective lives are considered to appropriately reflect their original cost and their respective lives within that class at that time.