

Nuttall Consulting

Regulation and business strategy

Review of the SP AusNet Non-Contestable Roll-in value

A report to Australian Energy Regulator

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Table of contents

1.	Introduction	4
2.	Background	5
3.	Overview of review process	7
4.	The review	9
	4.1. SP AusNet's methodology for calculating the roll-in values	9
	4.2. Nuttall Consulting assessment of the methodology	11
	4.2.1. Inflation calculations	11
	4.2.2. Depreciation calculations	12
	4.2.3. Calculation of PTRM/RFM remaining life	12
	4.3. The Nuttall Consulting project reviews	12
	4.3.1. Assessment of the agreement parameters applied in the spreadsheets	13
	4.3.2. Assessment of allocations to PTRM/RFM asset categories	15
	4.3.3. Nuttall Consulting's assessment of the scope of the projects	16
5.	Summary of findings	17
6.	Appendix A - Overview of the five selected projects (CONFIDENTIAL)	21

Nuttall Consulting does not take responsibility in any way whatsoever to any person or organisation other than Australian Energy Regulator in respect of information set out in this report, including any errors or omissions therein, arising through negligence or otherwise.

1. Introduction

The Australian Energy Regulator (AER), in accordance with its responsibilities under Chapter 6A of the National Electricity Rules (NER), is determining SP AusNet's maximum allowed revenue during the 2008/09 to 2013/14 period for its prescribed transmission services. In accordance with the NER, SP AusNet has submitted a revenue proposal to the AER that sets out SP AusNet's revenue requirements for this period.

Within the revenue proposal, SP AusNet has proposed to "roll-in" an additional \$118 million into its Regulated Asset Base (RAB) at the commencement of the next period¹. This roll-in value reflects the transfer of assets into the RAB that are associated with some of the non-contestable prescribed transmission services that occurred during the current period. These non-contestable services are provided by SP AusNet, but initiated by SP AusNet's customers (e.g. VENCORP, DNSPs, generators, etc). The revenue for these services is not controlled under SP AusNet's existing revenue cap. Therefore, the capital expenditure associated with these services is not due to be added to the RAB through the AER's existing RAB roll-forward mechanism. However, under a NER derogation, SP AusNet is allowed to roll-in to the RAB a value commensurate with these non contestable services at the commencement of the next period i.e. the revenue for these services will begin to be controlled by the AER under Chapter 6A in the next period.

The AER has requested Nuttall Consulting to review the roll-in value proposed by SP AusNet. The broad aims of this review are:

- to assess the methodology applied by SP AusNet in determining the roll-in value, and confirm that it is in accordance with the NER, and the AER's revenue modelling requirements; and
- if discrepancies are found, provide revised roll-in values suitable for the AER's Post Tax Revenue Model and Roll Forward Model (PTRM/RFM).

This report discusses the review and presents the findings. The report is structure as follows:

- Section 2 provides a background discussion on the Victorian arrangements that give rise to this matter, and the related NER requirements.
- In section 3, the process applied by Nuttall Consulting to conduct the review, and the data provided by SP AusNet, is summarised.
- Section 4 provides a discussion of the review, and the pertinent findings.
- Finally, in Section 5, the review findings are summarised and conclusions are drawn.
- Appendix A provides summary details of 7 projects that have been included as part of the Nuttall Consulting review.

¹ Section 7.4, pg 100 of the SP AusNet revenue proposal.

2. Background

SP AusNet's proposed adjustment to the RAB at the commencement of the next regulatory period, which is in addition to the AER's roll-forward capex mechanism, results from the Victorian transmission arrangements. The Victorian arrangements are summarised in Section 2 of SP AusNet's revenue proposal and are not discussed in detail here. However, the important points of relevance for this review are the role and responsibilities of SP AusNet and its customers, the contractual obligations between these parties, and the associated revenue/pricing control arrangements.

SP AusNet's customers include VENCORP, the distribution network service providers (DNSPs), and the large generators (and market network service providers and some energy users) that connect directly to the Victorian transmission network. VENCORP is responsible for planning and making investment decisions for the augmentation of the shared transmission network. The DNSPs and other directly connected customers are responsible for planning and making investment decisions on the augmentation of the transmission connection assets. SP AusNet must provide and own these transmission augmentations (or parts of) when contestability does not exist in the provision of the augmentation.

The terms and conditions associated with these non-contestable projects, and the resulting transmission service provision, are defined in contracts between SP AusNet and its customers. These normally are in the form of additional network service agreements with VENCORP for augmentations to the shared network, and supplemental connection agreements with directly connected customers for augmentations to their connections.

These agreements cover a range of factors including: the provision of the network augmentation project; the on-going transmission service provision; and the pricing and charging to the customer for this service provision.

As non-contestable services by their nature are monopoly services, the Victorian arrangements have rules on how charges must be developed for these services. These require SP AusNet to calculate the charges in line with the building block approach and relevant regulatory determinations. In this regard, the calculation of the charges is defined in the agreements based upon a *return of* and *return on* the agreed capital cost of the project, plus incremental operations and maintenance – with the relevant building block parameters defined in the agreements.

The important point to note in these arrangements is that the revenue requirements for these charges are initially set through the customer revenue mechanisms. That is, the revenue required for the payment of charges related to VENCORP's additional network agreements occurring in the current regulatory period, was set through VENCORP's revenue control arrangements for that period, and similarly for the DNSP's supplemental connection agreements. Therefore, SP AusNet's capital expenditure associated with these projects is not due to be rolled into the RAB through the AER's existing roll forward mechanism at the commencement of the next period.

However, the ACCC's 2002 decision allowed a RAB adjustment at the commencement of the 2003-2007/08 period to account for the non-contestable projects that occurred in the preceding 1997-2002 period. That is, the revenue control for these non-contestable projects was transferred into SP AusNet's revenue cap.

This ability to transfer revenue control of non-contestable projects from the customer's revenue mechanism into SP AusNet's is protected by Clause 11.6.21 of the NER. Clause 11.6.21 details SP AusNet's savings and transitional provisions relating to the economic regulation of transmission services. More specifically, Clause 11.6.21 (c) defines the method of adjustment of the value of the RAB that the AER must apply. In this regard, it states:

“For the avoidance of doubt, in adjusting the previous value of the regulatory asset base for SPI PowerNet's transmission system as required by clause S6A.2.1(f), the previous value of the regulatory asset base must be increased by the amount of capital expenditure specified in, or that forms the basis of, agreements pursuant to which SPI PowerNet constructed assets during the previous regulatory control period used to provide prescribed transmission services, adjusted for outturn inflation and depreciation in accordance with the terms of those agreements.”

Based upon the above NER definition, the adjustment to the RAB must be the sum of the adjustments resulting from the individual customer agreements. The adjustment for each individual agreement must be the agreed capital cost with the following adjustments:

- the effective depreciation to the roll-in date of the agreed capital cost that has occurred in accordance with the depreciation building block component specified in the agreement charging formula; and
- the effective inflation to the roll-in date that has occurred to the agreed capital cost in accordance with the allowed inflation of charges in the agreement.

Furthermore, the RAB adjustment must be specified in a form suitable for the AER's PTRM/RFM. This requires the adjustment to be apportioned between the PTRM/RFM asset categories, and appropriate average remaining lives to be calculated.

It is clear from the discussion above, the review of SP AusNet's proposed roll-in value for non-contestable projects is not an ex post prudence and efficiency review. The prudence of the project is due more to the customer who initiated the project i.e. the prudence of VENCORP initiated projects would be assessed through the ex post review of VENCORP proposal. Furthermore, adjustments due to an assessment of the efficiency of the project delivery are not allowed for under Clause 11.6.21 (c), whereby the roll-in value must reflect the terms of the agreement, rather than SP AusNet's actual or efficient costs.

Therefore, Nuttall Consulting has approached the review very much as a review of the “process” SP AusNet has applied to calculate the roll-in value. The main aim of this review has been to determine whether this process reflects the intent of the Clause 11.6.21 (c), and specifically, that it has accurately calculated the inflation and depreciation in accordance with the customer agreements.

3. Overview of review process

As discussed in the previous section, the review of the non-contestable roll-in value is not an ex post review of the prudence and efficiency of the non-contestable projects. Rather this is a review of the process applied by SP AusNet to calculate the roll-in value, to confirm:

- that it is in accordance with Clause 11.6.21 of the NER, and
- the AER's PTRM/RFM requirements.

The approach Nuttall Consulting has applied to conduct this review has included two main elements:

- 1) The first is an assessment of the methodology applied by SP AusNet to calculate the roll-in values for the PTRM/RFM. This assessment has covered:
 - a) the approach to calculate individual project roll-in values, including inflation, depreciation, and the PTRM/RFM requirements; and
 - b) the approach to aggregate the project level calculations to the PTRM/RFM asset categories;
- 2) The second is a review of a selection of the project agreements, and associated documents. The project review has included:
 - a) a comparison of the parameters applied in the methodology with the those in the individual agreements, and more specifically with the agreed capital cost of the project, the depreciation assumption within the charging formula, and the agreed inflation of charges;
 - b) the allocation of the project roll-in value to the different PTRM/RFM asset categories; and
 - c) the scope of the project, and specifically whether it is a non contestable prescribed transmission service.

To commence this review, the AER requested² further information from SP AusNet including:

- information to reconcile the detailed project level roll-in values in SP AusNet's proposal with the asset category PTRM/RFM values; and
- customer agreements and associated documentation for 5 non contestable projects - this number was considered to be a sufficient sample size to assess the approach adopted by SP AusNet.

In response to this request, SP AusNet provided the following³:

- spreadsheets that detailed the calculation of the roll-in parameters for the PTRM/RFM from the individual non-contestable projects; and

² Email from AER to SP AusNet dated 23 May 2007

³ Provided in email to the AER dated 31 May 2007. Hard copy versions of the agreements and related documents were also provided to the AER.

- agreements, and other related documentation, for the 5 non-contestable projects under review.

During the course of the review, a significant number of discrepancies were found between the SP AusNet spreadsheets and the terms in the agreements for the 5 projects under review. These matters were raised with SP AusNet⁴, resulting in SP AusNet providing a revised version of the spreadsheets detailing the roll-in calculations⁵. To provide greater confidence that similar discrepancies did not exist in other projects, a further two projects were selected by Nuttall Consulting following the provision of the revised spreadsheets⁶. The 7 projects represented 60% of the roll-in value. The 7 projects reviewed are listed in Table 1 below.

In the discussions in the following sections, the first set of spreadsheets provided by SP AusNet are called the “original spreadsheets”. The revised set – which were actually provided as a single consolidated workbook – are called the “revised spreadsheets”. The nature of the discrepancies between the original spreadsheets and the project agreements is discussed in more detail in the next section.

Table 1 Non contestable projects included in Nuttall Consulting review.

Project title	Customer	Roll-in value ⁷ (\$ millions)
Original 5 projects		
Z164 Augmented SNOVIC Interconnector Services Project	VENCorp	16.2
Z212 Additional Network Services Agreement -Cranbourne Terminal Station Project	TRU Energy, Alinta, VENCorp	26.1
Z325 Murraylink Regulated Status Run-back Scheme	VENCorp	11.0
Z334 SVTS 4th 220/66kV 150 MVA Transformer ⁸	Alinta	6.3
Z345 New JA 66 kV feeder at West Melbourne Terminal Station (WMTS)	CitiPower	1.3
Additional 2 projects		
Z134 2nd 220 / 66 kV Transformer for Altona Terminal Station (ATS)	PowerCor	5.0
Z424 Additional Network Services Agreement - For Brooklyn Series Reactors Project	VENCorp	6.5

⁴ Email from AER to SP AusNet dated 20/6/07

⁵ Email from SP AusNet to AER dated 28/6/07.

⁶ Email from SP AusNet to AER dated 2/7/07. Hard copies of the agreements and related documentation was delivered to the AER 6/7/07.

⁷ This is the original roll-in value provided in the Appendix D of the SP AusNet proposal.

⁸ The title of this project in Appendix D of the SP AusNet proposal is “Provision of additional connection services associated with the uprate TSTS DC #2 66 kV feeders to 960A”.

4. The review

In this section, first the methodology applied by SP AusNet to calculate the non contestable project roll-in value is described.

Following this, the Nuttall Consulting review and its finding are discussed in terms of the two main elements of the review, namely

- the SP AusNet methodology; and
- the project reviews.

4.1. SP AusNet's methodology for calculating the roll-in values

The methodology discussed here is based on Nuttall Consulting's review of the roll-in calculation spreadsheets provided by SP AusNet. These spreadsheets detail the bottom-up calculation of the roll-in value, covering the individual project roll-in values provided in Appendix D of the SP AusNet proposal, and the PTRM/RFM asset category roll-in parameters.

To understand the methodology for calculating the roll-in value from individual customer agreements, it is useful to first define two dates that arise in the customer agreements.

- The first is the **reference date**, which is the date that the agreed capital cost is referenced to. This date is required to calculate the agreed inflation of the charges from that date.
- The second is the **commencement date**, which is the date that charging for the transmission service commences, and normally is equivalent to the date the assets began to provide the contracted transmission services. As such, this is the date that depreciation of the agreed capital cost commences.

The SP AusNet methodology entails three main steps, involving a detailed bottom-up calculation from the individual projects, and then aggregating these calculations to produce the PTRM/RFM parameters.

The first step operates at the individual project agreement level, and calculates the capital cost of the project at the charging commencement date. This step takes as input:

- the agreement reference date;
- the agreement capital cost at the reference date;
- the agreement commencement date; and
- the agreement inflation method, which is either based upon ABS CPI "all groups Melbourne" or "all groups weighted average of the 8 capital cities".

If the capital cost is subject to inflation from the reference date to the commencement date, via the terms of the agreement, the inflation is calculated and the effective capital cost at the commencement date is calculated. The inflation is

calculated based upon the relevant CPI data for the quarter prior to the commencement date, divided by the CPI data for the quarter prior to the reference date.

The second step also operates at the individual agreement level, and calculates the further inflation and depreciation from commencement date to the roll-in date. This step also calculates the project level PTRM parameters, namely the asset category level parameters covering the:

- roll-in value;
- remaining life;
- roll-in value for tax purposes; and
- remaining life for tax purposes.

To perform the agreement level depreciations and PTRM asset category calculations, the individual agreements are disaggregated in this step. This disaggregation ensures that different depreciation terms in a single agreement can be accounted for in the calculations. The disaggregation is also required to allow the project roll-in value to be allocated across the various PTRM asset categories.

This second step takes as its inputs:

- the capital cost at the commencement date (as calculated in the first step);
- the agreement commencement date;
- the agreement inflation method, which is either based upon ABS CPI “all groups Melbourne” or “all groups weighted average of the 8 capital cities”;
- the agreement depreciation terms at the disaggregated level;
- the assignment of the PTRM/RFM asset category at the disaggregated level;
- the capital cost proportions into the disaggregated depreciation and PTRM asset category; and
- the PTRM asset category lives.

The calculations performed in step 2 at the disaggregated agreement level include:

- the inflation, calculated from the CPI forecast for the quarter prior to the roll-in date (January-March 2008) divided by the CPI data for the quarter prior to the commencement date;
- the depreciation, calculated as straight-line based upon the number of days from the commencement date to the roll-in date, and the assumed depreciation life;
- the PTRM asset category remaining life, calculated by subtracting the period of depreciation (in years) that will have occurred at the roll-in date from the PTRM standard asset life;
- the PTRM roll-in value for tax purposes, is the depreciated value without inflation; and
- the PTRM remaining life for tax purposes, assumes the agreement depreciation life rather than PTRM standard asset life.

Finally, the third step summates the disaggregated agreement level PTRM/RFM parameters, calculated in Step 2, to produce the total PTRM/RFM asset category parameters that are required for the AER's PTRM/RFM. This step is essentially an automated calculation from the outputs of step 2.

For each PTRM/RFM asset category:

- the roll-in value (and roll-in value for tax) is the “simple” sum of the relevant disaggregated components of the individual agreements; and
- the average remaining life is the weighted average of the relevant disaggregated components of the individual agreements using the associated component roll-in value as the weighting.

4.2. Nuttall Consulting assessment of the methodology

The SP AusNet methodology applied to calculate the roll-in value is a detailed “bottom-up” build at the individual agreement level. The methodology allows for the inflation and depreciation of the agreed capital cost to be calculated in accordance with the terms of the relevant agreements. More specifically, the disaggregation that occurs in step 2, allows the roll-in value to precisely reflect the agreement terms without the need for simplifying assumptions at the agreement, or higher, level. Furthermore, the disaggregation allows the roll-in value of individual agreements to be apportioned to the appropriate PTRM/RFM asset categories.

Nuttall Consulting has reviewed the spreadsheets, the underlying formulas, and CPI data. Based upon this review, no evidence has been found to indicate that the SP AusNet methodology is not in accordance with the requirements of Clause 11.6.21 of the NER, and the AER's PTRM/RFM.

During the course of the review, Nuttall Consulting has noted a number of matters related to SP AusNet's methodology. These matters are discussed further below to aid in the transparency of the methodology applied by SP AusNet.

4.2.1. Inflation calculations

In reviewing the original spreadsheets, two errors were noted and advised to SP AusNet. Both of these errors related to the CPI data used to calculate the inflation.

- One error concerned two incorrect dates assigned to the 2002 July-September and October-December quarters for the “all groups Melbourne” CPI data. This resulted in the incorrect CPI value being selected when inflation was calculated for some projects.
- The second error concerned only step 2 of the methodology. The step 2 inflation calculations only referenced the “all groups Melbourne” CPI data. This resulted in the incorrect inflation being calculated for any agreement for which inflation referred to “all groups weighted average of the 8 capital cities”.

Both of these errors were corrected in the revised spreadsheets provided by SP AusNet during the course of this review.

It is also worth noting that the spreadsheets allow for only two CPI bases for the calculation of inflation: the ABS CPI “all groups Melbourne”, and ABS CPI “all groups weighted average of the 8 capital cities”. This assumption has been found to be sufficient to ensure the correct calculations for the 7 projects reviewed. However, it can only be inferred from the project review that this assumption is sufficient for all other agreements included in the roll-in calculations.

4.2.2. Depreciation calculations

All depreciation calculations in the SP AusNet approach assume a “straight line” depreciation method. This assumption has been shown to be sufficient to ensure the correct calculations for the 7 projects reviewed. However, as with the CPI data assumption discussed above, it can only be inferred that this assumption is sufficient for all other agreements included in the roll-in calculations.

4.2.3. Calculation of PTRM/RFM remaining life

When calculating the PTRM/RFM remaining life at the disaggregated agreement level (Step 2 in SP AusNets methodology), the PTRM asset category life may not equal the agreement depreciation term. In fact, in many cases, for the agreements reviewed, there are significant differences. This results in the possibility of adopting two different approaches to calculating the PTRM remaining life from the level of depreciation that has occurred from the commencement date to the roll-in date.

- The first is simply to assume that the proportions are equivalent e.g. if x % of depreciation has occurred under the contract to the roll-in date then the PTRM remaining life is set to x %.
- The second is based upon subtracting the period from the commencement date to the roll-in date, from the PTRM asset life e.g. if 5 years will have elapsed from the commencement date to the roll-in date, for a capital value that will be allocated to the PTRM asset category with a 45 year life, then the remaining life will be set at 40 years.

SP AusNet has adopted the second approach to calculate the PTRM remaining life. Nuttall Consulting has accepted this as an appropriate method, noting that this approach will result in the asset values entering the RAB on a consistent remaining life basis to the existing RAB. Although, it should be noted that this results in the relationship being lost between: the RAB value, the remaining life, and the past depreciation.

4.3. The Nuttall Consulting project reviews

The aim of the project reviews was threefold:

- to confirm that the correct agreement parameters have been applied in the SP AusNet spreadsheets;
- assess the allocation of the project roll-in value to the different PTRM/RFM asset categories; and

- to confirm that the project scopes are reasonable, and constitute prescribed transmission services.

The findings on these three points are discussed in turn in the sections below. Summaries of the 7 projects reviewed are contained in Appendix A.

4.3.1. Assessment of the agreement parameters applied in the spreadsheets

Nuttall Consulting has reviewed the project agreements and related documents provided by SP AusNet. The aim of this review was to confirm that the correct parameters for each of these projects have been applied in the spreadsheets, and the underlying calculations in the spreadsheets were operating correctly. The important agreement parameters that have been checked in this review are as follows:

- the agreement total capital cost;
- the reference date for the agreement capital cost;
- the commencement date for charging;
- the inflation method, and associated ABS CPI data reference (either “all groups Melbourne” or “all groups weighted average of the 8 capital cities”); and
- the depreciation method, including any disaggregation of the capital value for depreciation purposes, and the assumed lives for depreciation.

Initially, the documentation provided for the original 5 projects was reviewed. However, this review found a significant number of discrepancies between the agreement terms and the parameters input into the SP AusNet’s original spreadsheets. These discrepancies are summarised below.

Z164 Augmented SNOVIC Interconnector Services Project

- The agreed commencement date is 13/12/2002. The original spreadsheet applied a number of different commencement dates for different elements of the project, via the disaggregated calculations Step 2.
- The agreement used a number of different lives for the depreciation of various elements of the capital cost. These ranged from 30 years down to 10 years, with an average life of approximately 23 years. However, a single 30 year life was applied in the spreadsheet to calculate the depreciation to the roll-in date for all elements of the project.
- The SNOVIC project was also subject to both general CPI data errors discussed in the section above on the assessment of the methodology.

Z212 Cranbourne Terminal Station Project

- The contract cost was correctly escalated from the reference date to the commencement date in step 1 of the methodology, resulting in a commencement date value of \$25.428 million. However, this cost was not used into the step 2 calculations, where a commencement date capital cost of \$25.529 million was used.

- The asset life for depreciation purposes in the agreements is 45 years. However, the original spreadsheets used lives of 45 years and 35 years for different parts of the project.
- The Cranbourne project agreement applied the CPI data related to “all groups weighted average of the 8 capital cities”. As such, this project was also subject to the CPI data error discussed in the section above on the methodology.

Z325 Murraylink Regulated Status Run-back Scheme

- The asset lives for depreciation purposes in the agreements are 45 and 20 years for different parts of the project. However, the original spreadsheets used lives of 45, 40, and 35 years for different parts of the project.
- This project agreement applied the CPI data related to “all groups weighted average of the 8 capital cities”. As such, this project was also subject to the CPI data error discussed in the section above on the methodology.

Z334 SVTS 4th 220/66kV 150 MVA Transformer

- The agreed contract value was \$5.752 million. However, the spreadsheets stated a contract value of \$6.131 million. This increase reflected a possible variation in the cost that SP AusNet was negotiating with the customer. As, at the present time, there is no agreement for this variation, it is not considered appropriate to include this additional amount. However, should the variation be agreed, prior to the AER’s final decision, then SP AusNet may seek to have this amount added to the roll-in value.

Z345 New JA 66 kV feeder at WMTS

- The asset life for depreciation purposes in the agreements is 30 years. However, the original spreadsheets used a life of 25 years.
- The agreed commencement date is 25/2/2005. The date applied in the Step 1 of the methodology in the original spreadsheets was 28/2/2005.

As discussed in Section 3 of this report, SP AusNet was requested to provide clarifications on the discrepancies found during the initial review of the 5 projects. This resulted in SP AusNet providing revised spreadsheets. The total roll-in value in the revised spreadsheet is \$115.9 million, down \$2.1 million from the \$118.0 million in the original spreadsheet.

The comparative review of these 5 projects has been repeated using the revised spreadsheets. In addition, to confirm that systemic issues did not exist in other projects, an additional 2 projects were selected for review following receipt of the revised spreadsheets.

The review of these 7 projects has found 4 further discrepancies, three of which are in the original 5 projects. However, the materiality of these discrepancies is far lower. Due to the time requirements on this review, Nuttall Consulting has not sought further clarification from SP AusNet on these discrepancies, or requested revised spreadsheets. The summary findings of the 7 project reviews, and an estimate of the impact on the roll-in value, are provided in Table 2 below. The analysis undertaken by Nuttall Consulting indicates that the discrepancies found in the revised spreadsheets only result in a 0.1% error in roll-in value.

Table 2 Summary findings of 7 project reviews

Project ID	Discrepancy	Roll-in impact
Z134	None	n/a
Z164	<ul style="list-style-type: none"> Life for 220 kV primary works component - 30 years is applied in spreadsheet, 20 years is life in agreement. Reference date - 14/12/2001 in spreadsheet, 7/12/2001 in agreement. 	Reduced by \$77 thousand
Z212	None	n/a
Z325	<ul style="list-style-type: none"> Commencement date - 27/1/2006 in spreadsheet, 17/1/2006 in agreement. 	Reduced by \$9 thousand
Z334	None	n/a
Z345	None	n/a
Z424	<ul style="list-style-type: none"> Inflation from reference date to commencement date – “all groups Melbourne” in spreadsheet, “all groups 8 capital cities” in agreement. 	Increase by \$24 thousand

4.3.2. Assessment of allocations to PTRM/RFM asset categories

Step 2 of the SP AusNet methodology requires the project to be disaggregated to assign appropriate PTRM/RFM asset categories. This requires a portion of the project value to be allocated to an asset category. Nuttall Consulting asked SP AusNet to provide a description of the method applied by SP AusNet to calculate these allocations. SP AusNet’s response⁹ to this query was:

“The cost of labour, materials, overheads etc. are allocated to assets according to project managers estimates of the appropriate splits once these assets are in service. Once these costs are allocated to assets, the aggregated value by asset class can be calculated.”

Nuttall Consulting has also reviewed the allocations to asset categories for the 7 projects. This involved a high level comparison of the allocation of the agreement capital cost to the PTRM asset categories, against the scope of works detailed in the agreements. This showed the projects costs to be reasonably apportioned across the asset categories. However, during the review of the “Z164 SNOVIC” project, it was noted that a significant portion of the project that should be allocated to the “towers and lines” asset category had actually been allocated to the “switchgear” asset category. The response from SP AusNet¹⁰ to a query on this issue was:

“The contract set various asset categories up front for cost allocation for the project, unfortunately no category for lines was set up. During the course of

⁹ Email AER to SP AusNet 20/6/2007

¹⁰ Email from SP AusNet to AER dated 12/7/2007

the project, cost allocations were attributed to work on tower and lines that had no specific category. To achieve the right pricing outcomes, given that the terms used for depreciation were the same, it was decided that allocations would be made to the switchgear asset category.”

The explanation of the method to allocate capital costs to the PTRM asset categories appears reasonable, and it is expected that a similar process would be applied to allocate the capex in SP AusNet’s current revenue control. That said, it is noted from the description, and the response on the SNOVIC allocation, that these allocations can be somewhat subjective and arbitrary e.g. although the agreement terms for depreciation may be equivalent, the PTRM applies 45 years for switchgear, but 60 years for towers and lines. However, based upon the project reviews, there does not appear to be any systemic attempt to allocate the roll-in value to either long or short life assets. Therefore, in general Nuttall Consulting considers the asset allocations to be reasonable. However, due to the more significant nature of the “Z164 SNOVIC” project discrepancy, it is recommended that the roll-in value associated with the 330 kV line works elements of this project (~ \$4.7 million) is removed from the “switchgear” asset category and re-allocated to the “tower and line” category.

4.3.3. Nuttall Consulting’s assessment of the scope of the projects

The aim of this part of the review was to assess the scope of the 7 projects, and confirm that they appear reasonable in terms of providing prescribed services. It is important to stress that this part of the review, was conducted at a high level, based upon the information provided in the agreement documents. In line with this review not involving any prudence or efficiency tests, detailed investigations have not been undertaken.

Summary descriptions of the services provided by the 7 projects, and the associated scope of works, are provided in Appendix A. From the description of the service provided in the agreements, Nuttall Consulting considers it reasonable to assume that all can be considered prescribed services. That is, all project either relate to transmission connection services (e.g. at the request of DNSP’s or generators), or use of system services at the request of VENCORP. Furthermore, from the review of the scope of works detailed in the agreements, these works appear to reasonably constitute the assets required to provide the agreed services.

5. Summary of findings

The review undertaken by Nuttall Consulting has found the methodology applied by SP AusNet to calculate the roll-in value is in accordance with the requirements of Clause 11.6.21 of the NER. The methodology involves a detailed “bottom-up” build at the agreement level, and allows for the inflation and depreciation of the contracted capital value to be calculated in accordance with the terms of the relevant agreements. This is a specific requirement of Clause 11.6.21.

However, although the methodology is appropriate, the detailed review of agreements for 5 of the non-contestable projects found a number of discrepancies between agreement terms and the equivalent parameters applied in the methodology. Two other errors relating to the CPI data in the spreadsheets were also found. Due to these findings, SP AusNet has provided revised non contestable roll-in values that supersede those in its original proposal. The revised total roll-in value provided by SP AusNet is \$115.9 million, down \$2.1 million from the \$118.0 million in the SP AusNet proposal.

Following the provision of the revised roll-in calculations, Nuttall Consulting repeated the review of the 5 projects. Two additional projects were also reviewed to check for any systemic problems. This second review of the revised calculations still found four further discrepancies. However, these discrepancies were far less significant, and amount to a reduction in the roll-in value across the 7 projects reviewed of approximately 0.1 % from the revised calculation.

Furthermore, the service provision and associated scope of works of the 7 projects have been reviewed to provide a level of confidence that the non-contestable project constituted prescribed services. This review has not found any evidence to suggest otherwise.

Nuttall Consulting has also performed a high level review of the allocation of the roll-in value to the PTRM asset categories. During the course of the review it was noted that a significant portion (~ \$5 million) of the Z164 SNOVIC project relating to transmission line works had been allocated to the PTRM “switchgear” category. SP AusNet has advised that this was due to a limitation in the original asset allocation of the project. Therefore, it is recommended that this component of the Z164 SNOVIC project is allocated to the “towers and lines” PTRM asset category. No other asset category re-allocations have been recommended.

The three tables below present the PTRM roll-in values assessed during the course of this review. Table 3 presents SP Ausnet’s original values that were provided in its proposal. Table 4 presents SP AusNet’s revised values that were provided during the course of this review. Table 5 presents SP AusNet’s revised values with the additional corrections to remove the remaining discrepancies found in the 7 projects reviewed, plus the transfer of the roll-in value associated with the 330 kV line works item of the SNOVIC project (Z164) from the “switchgear” asset category to “towers and lines”.

Table 3 SP AusNet's originally proposed PTRM roll-in values

Asset Class	Depreciated Value (\$ millions)	ARL with Standard lives (years)	Depreciated Value TAX (\$ millions)	ARL Tax (years)
Secondary	\$20.729	10.52	\$18.545	24.52
Switchgear	\$67.790	42.09	\$61.884	35.94
Transformer	\$14.102	41.98	\$12.827	32.20
Reactive	\$11.684	37.49	\$10.760	36.92
Towers and Lines	\$0.224	54.58	\$0.192	24.58
Establishment	\$2.272	42.02	\$2.068	40.62
Comms	\$1.202	11.85	\$1.097	20.01
Total	\$118.004		\$107,373	214.7898

Table 4 SP AusNet's revised PTRM roll-in values

Asset Class	Depreciated Value (\$ millions)	ARL with Standard lives (years)	Depreciated Value TAX (\$ millions)	ARL Tax (years)
Secondary	\$17.726	11.51	\$16.007	23.97
Switchgear	\$63.926	42.20	\$58.691	34.33
Transformer	\$15.130	41.86	\$13.751	32.51
Reactive	\$12.506	37.26	\$11.542	33.92
Towers and Lines	\$1.176	54.70	\$1.010	14.70
Establishment	\$4.085	40.97	\$3.638	33.61
Comms	\$1.362	13.13	\$1.289	18.14
Total	\$115.911		\$105.928	

Table 5 Nuttall Consulting’s corrected PTRM roll-in values

Asset Class	Depreciated Value (\$ millions)	ARL with Standard lives (years)	Depreciated Value TAX (\$ millions)	ARL Tax (years)
Secondary	\$17,723	11.51	\$16,005	23.96
Switchgear	\$59,129	42.40	\$54,573	35.70
Transformer	\$15,130	41.86	\$13,751	32.51
Reactive	\$12,513	37.24	\$11,548	33.88
Towers and Lines	\$5,907	54.70	\$5,072	14.70
Establishment	\$4,085	40.97	\$3,638	33.61
Comms	\$1,362	13.13	\$1,289	18.14
Total	\$115,849		\$105,876	

As discussed in Section 2, the main aim of the review has been to assess the process applied by SP AusNet in calculating the roll-in value. The NER is clear that the roll-in value must reflect the terms of the agreement, specifically with respect to inflation and depreciation. This appears to place a high amount of rigor and accuracy on the process. Indeed, it would be expected that this rigor and accuracy would be commensurate with that required to roll any other capital expenditure into the RAB. It is clear from this review, that there have been a significant number of discrepancies between the agreement terms and the calculations performed by SP AusNet. However, it should also be noted that these discrepancies have only resulted in a 2% reduction in the original roll-in value. Nuttall Consulting has not reviewed the quality assurance processes around these calculations, and it is difficult to say whether the errors found due to the discrepancies potentially could have been more significant. However, as the calculations should be fairly mechanistic and objective, they do lend themselves to some form of audit. Therefore, if such a roll-in is required in future revenue resets then it may be useful for the AER to consider whether it should request SP AusNet to undertake some form of audit of the roll-in value. Obviously the regulatory cost of such an audit would need to be weighted against its benefit to customers.

Finally, an important point to note with respect to the roll-in mechanism for non-contestable projects is that it differs from the roll-forward mechanism in Chapter 6A of the NER. In this regard the non-contestable project mechanism rolls-in the depreciated contracted capital cost (which may be an estimate), whereas the Chapter 6A mechanism rolls-forward the depreciated actual capital cost.

It is noted that SP AusNet’s customer may use “variable” agreements, whereby the contract cost is effectively the actual costs – and as such the roll-in value would reflect the depreciated actual cost. However, from the project information provided by SP AusNet during this review, it appears that most non-contestable projects have “fixed” agreements, whereby the charges are based upon an agreed capital cost estimate.

Therefore, the Victorian non-contestable project roll-in mechanism avoids the customer benefit/risk sharing in the Chapter 6A capital expenditure roll-forward mechanism. As such, it may be expected that SP AusNet would be more aggressive at seeking efficiencies in the non-contestable projects. The important point here, in the context of the overall review being conducted by the AER, is that, to ensure current efficiencies are applied in the expenditure forecasts, SP AusNet's process for producing the capital cost estimates for the following period should be cognisant of the actual costs of non-contestable project in this period. For the avoidance of doubt, assessing the efficiency of the project delivery, or the approach to forecasting capital costs, has not been an element of the Nuttall Consulting review.

6. Appendix A - Overview of the five selected projects (CONFIDENTIAL)