VicHub Pipeline

Basis of Preparation

Public

Year ended 31 December 2020

Jemena

OVERVIEW

The Australian Energy Regulator (**AER**) issued a non-scheme pipeline financial reporting guideline (**the Guideline**) in December 2017 issued under Part 23 of the National Gas Rules. This Guideline requires service providers of such pipelines to publish certain financial information about those pipelines.

This Guideline applies to the VicHub Pipeline (**VicHub**) covering the reporting period 1 January to 31 December 2020.

To apply the Guideline we have adopted the following general interpretations:

- All Jemena Group[1] legal entities that have a controlling interest in VicHub are 'service providers' and so all costs incurred, revenue earned or assets owned by those entities that relate to the pipeline should be captured and consolidated in the financial reporting templates.
- Similarly, because SGSPAA is the parent company of the Jemena Group acquisition costs and associated dates (mainly in the Recovered Capital Method (**RCM**) template) are determined by reference to that entity for the purposes of complying with the Guideline. This means for instance that the acquisition of VicHub occurred on 1 Aug 2007 when the Jemena Group acquired the pipeline from the Alinta Group.
- VicHub has amended some of the formulae in the templates where the resultant outcome was inconsistent with the intent of the Guideline. These changes are explained in this basis of preparation (**BoP**) document.
- Actual information includes information calculated directly from information contained in the Jemena Group's systems and other records without material judgement required. Estimated information is anything other than actual information.
- To meet the requirements of the Guideline when compiling the RCM valuation (section 4.1) VicHub undertook all reasonable steps to obtain historical information where this was not already available to Jemena. These steps are further explained in the RCM section (section 13) of this basis of preparation.
- All 'Previous reporting period' amounts have been sourced from the prior year published Gas Market Reform (GMR) templates (refer to Tables: 2.1, 2.1.1, 3.1, 3.3).
- Jemena Group costs can be are direct or indirect in nature. Direct costs, such as maintenance, program management, engineering support are directly allocated to specific assets within the Jemena Group. Jemena Group shared or indirect costs such as IT, finance, legal, people, safety and environment are allocated to specific assets within the Jemena Group in accordance with the principles of the Jemena Group Cost Allocation Methodology procedure. These principles are further explained in the Revenue and Expenses section (section 3) of this basis of preparation.

The rest of this basis of preparation document explains how we have populated each of the templates required by the Guideline, including by identifying where estimated data was used when actual data was not available.

As per the Jemena Group access user guide, Jemena VicHub Pipeline Pty Ltd is the service provider for VicHub, being the licensed operators. The other service providers in the Jemena Group have appointed Jemena VicHub Pipeline Pty Ltd as the responsible service provider for the purposes of publishing the financial information.

[1] The Jemena Group includes SGSP (Australia) Assets Pty Ltd (**SGSPAA**) and its subsidiaries excluding Zinfra Pty Ltd and its subsidiaries. Jemena Group costs may include charges from Zinfra Pty Ltd and its subsidiaries where they relate to the pipeline.

1. PIPELINE INFORMATION

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 1.1: Pipeline Details	No BoP Reference cells in the template	Pipeline details	Actual	Pipeline Location and Length The data is sourced either from the original as-built survey data, or where that is not available from the results of intelligent pigging data. Number of Customers PypIT System (defined below) per description below for the Table 5.1 Weighted Average Prices. Service Type As per pipeline type on AEMC's gas scheme register https://www.aemc.gov.au/energy-system/gas/gas-scheme-register and meets the definition of a transmission pipeline under the National Gas Law.	Pipeline Location and Length The pipeline lengths are calculated in the Geographic Information System (**GIS**) by summing the geometric lengths of the pipeline and all its laterals. Number of Customers Determined from a revenue report run in PypIT outlining the breakdown of revenue by service type and shipper. The report was run for the relevant period to determine the number of shippers whom we have earnt revenue from.	N/A
Table 1.2: Pipeline Services Provided	No BoP Reference cells in the template	Pipeline services provided	Actual	PypIT (Is the billing/invoicing system used by VicHub which provides the detailed breakdown of volumes and revenue data by service type and shipper as well as the corresponding contract information).	Based on current service offerings as described below. Service description A revenue transaction report that discloses revenue by service types, was downloaded from PypIT for the reporting period. A Subject Matter Expert mapped the revenue service types against the relevant 'Service description' categories based on the nature of the underlying revenue transactions and customer contracts.	

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					Provided to non-related parties All services were provided to non-related parties in accordance with PypIT customer listing and relevant supporting contracts. Provided to related parties No services were provided to related parties.	

2. FINANCIAL PERFORMANCE MEASURES

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 1.1.1: Return on assets	No BoP Reference cells in the template	Earnings before interest and tax, Total assets, Return on assets	Actual	N/A – Populated based on formulas referencing supporting schedules.	All categories in this template are based on the Australian Energy Regulator's (**AER**) designed formulae that references the supporting tables within the workbook. Earnings before interest and tax References earnings before interest and tax (**EBIT**) in 'Table 2.1: Statement of pipeline revenues and expenses'. Total assets References total assets in 'Table 3.1: Pipeline assets' Return on assets Calculated as: Earnings before interest and tax divided by Return on Assets.	

3. REVENUES AND EXPENSES

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 2.1 Statement of pipeline revenues and expenses	2.1.a	Total service revenue, Other direct revenue, Other revenue	Actual	Populated based on formulas referencing supporting schedules.	Total service revenue References 'total direct revenue' 'Table 2.1.1: less 'Other Direct Revenue'. Other direct revenue References 'other direct revenue' in 'Table 2.1.1: Revenue by service'. Other revenue References the total 'other indirect revenue' in 'Table 2.3.1: Indirect revenue allocation'.	
Table 2.1 Statement of pipeline revenues and expenses	2.1.b	Direct Costs, Shared Costs, Earnings before interest and tax (**EBIT**)	Actual	ERP System (**SAP**)	Most of the entities within SGSPAA and its controlled entities use an Enterprise Resource Planning (**ERP**) system known as SAP to collect costs. VicHub as part of the Jemena Group, uses SAP to record its financial transactions. Costs are collected in planned maintenance orders (**PMO**) that cascade up to projects (**WBS elements**) in SAP based on the activity, on which an employee works or where an external supplier provides goods/services. A reporting tool (**BI**) is used to download the operating expenditure costs from SAP. The data is aggregated by	

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					WBS element and general ledger account code (**cost element**) and mapped into the relevant cost category of the template. <u>Related party and non-related party</u> The majority of costs that VicHub incurs are sourced from a related entity, the Eastern Gas Pipeline (**EGP**), which is part of the Jemena Group. EGP records costs that are attributable to VicHub as these business units are on the same site. The EGP and VicHub Maintenance Manager did a cost build up calculation for wage costs attributable to VicHub. An appropriate financial transaction was recorded in the accounting systems. These costs are reported in the 'related party transactions' column. Where project costs are collected directly to the pipeline and not through a related party entity they were reported in the 'amounts excluding related party transactions' column. <u>Direct costs and Shared costs</u> Direct cost classification is based upon the activity being performed. Category codes included as part of the WBS element structure for each project. An activity mapping table is used to map activities into relevant cost categories:	

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					• Direct Costs: Asset Management (Asset: Strategy, Planning, Investment, Information and Management system activities), Service Delivery (Construction & Supply Chain, Maintenance & Faults, Network Control & Emergency Maintenance, Metering, Customer Service). • Shared Costs: The Jemena Group does not allocate any shared costs to VicHub as the underlying drivers for cost allocation to VicHub is negligible. Mapping into the template categories The cost element description field from costs within VicHub was used to map into the template's categories, which was only 'employee costs'. VicHub has interpreted direct wages as the payroll costs assigned to staff who directly work on the VicHub. Earnings before Interest and tax (**EBIT**) EBIT is calculated as: Total revenue less Total costs	
Table 2.1 Statement of pipeline revenues and expenses	2.1.c	Depreciation, Shared Asset Depreciation	Actual	SAP – Fixed Asset Movement Report (**FAMR**) and Equipment Register	A detailed FAMR was downloaded from SAP.	

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					Total depreciation was classified to direct depreciation only as VicHub does not have any shared assets. Depreciation is based on the mapping of the individual assets in the FAMR applied in Table 3.3 Depreciation. VicHub used the FAMR Asset descriptions, category and equipment register descriptions to map individual assets into specific categories. All depreciation expenses are recorded directly within the Pipeline and are not transferred from a related party entity and therefore are reported in the 'Amounts excluding related party transactions' column.	

4. REVENUE BY SERVICE

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 2.1.1: Revenue by service	2.1.1.a	Description, Reporting period - Amount excluding related party transactions, Reporting period - Related party transactions	Actual	PypIT and SAP	Description The 'description' categories are pre-populated by the AER for this template. Reporting period -Amount excluding related party transactions Direct Revenue Revenue by service is sourced from the WAP template where a revenue transaction report that discloses revenue by service types, was downloaded from the PypIT for the reporting period. A Subject Matter Expert mapped the revenue service types against the relevant 'Service description' categories based on knowledge and the nature of the underlying revenue transactions. VicHub has included other service related revenue items that is sourced from PypIT. Revenue Reporting period -Related party transactions VicHub did not have any revenue from its related parties.	
	2.1.1.b	Customer Contributions Revenue	Actual	SAP	Customer Contributions Revenue References 'revenue contributions' in 'Table 2.2'	

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
	2.1.1.c	Profit from sale of fixed assets	Actual	SAP	Profit from sale of fixed assets VicHub did not record any profit from sale of fixed assets which was checked against the trial balance (**TB**)	
	2.1.1.d	Other Direct Revenue	Actual	SAP/PypIT	Other Direct Revenue Includes: • Items that are not pipeline service related and is miscellaneous in nature. QGP collects such items using costs elements and projects; and • That is exempt WAP services.	

5. REVENUE – CONTRIBUTIONS

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 2.2.1: Customer contributions received	No BoP Reference cells in the template	N/A	Actual	SAP	No customer contributions revenue was received during the reporting period as such amounts would have been recorded against an appropriate cost element in VicHub's TB.	
Table 2.2.2: Government contributions received	No BoP Reference cells in the template	N/A	Actual	SAP	No government contributions revenue was received during the reporting period as such amounts would have been recorded against an appropriate cost element in VicHub's TB.	

6. INDIRECT REVENUE

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 2.3.1: Indirect revenue allocation	N/A	N/A	Actual	SAP	No Indirect revenue was allocated to VicHub during the reporting period as such amounts would have been recorded against an appropriate cost element in VicHub's TB.	

7. SHARED COSTS

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 2.4.1 Shared Cost Allocation	2.4.1.a	Description categories, Shared costs excluding related parties, Shared costs paid to related parties (Gross shared costs), Percentage allocated to pipeline, Total allocated to pipeline excluding related parties.	Actual	SAP	The Jemena Group does not allocate any shared costs to VicHub as the underlying drivers for cost allocation to VicHub is negligible.	

8. STATEMENT OF PIPELINE ASSETS

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 3.1: Pipeline assets	3.1.a	Initial construction cost, Initial purchase cost, Additions, Additions and improvements capitalised, Capitalised maintenance, Asset disposal (at cost), Depreciation.	Actual	Table 3.3.1: Fixed assets at cost - pipeline assets Table 3.3.2: Shared assets at cost (less straight line depreciation)	All items were populated based on Australian Energy Regulator (**AER**) designed formulas which referenced the supporting 'Table 3.3.1: Fixed assets at cost - pipeline assets' and 'Table 3.3.2: Shared assets at cost' <u>Reclassification of pipeline assets out of the shared asset category</u> Our interpretation of Table 3.1 has been revised in the current year. Table 3.1 is structured as follows: • **A. Total pipeline assets (Direct)** comprising of sub-categories 'Pipelines', 'Compressors', 'City Gates, supply regulators and valve stations', 'Metering', 'Odorant plants', 'SCADA (Communications)', 'Buildings', 'Land and easements', 'Other depreciable pipeline assets', 'Leased assets', and 'Other non-depreciable pipeline assets'. • **B. Total shared supporting assets allocated (Shared)** comprising of sub-categories 'Shared supporting assets', 'Shared leased assets', 'Inventories', 'Deferred tax assets', and 'Other assets'. In reviewing the template for the 2020 disclosures, and noting that the overall templates place an emphasis on identifying direct versus shared costs (this can be seen in the structure of Table 2.1, Table 2.4, Table 3.4.1, Table	

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					4.1), we interpret that greater emphasis is to be placed on the higher level asset categories ('Total pipeline assets' versus 'Shared supporting assets allocated'). Accordingly, we have reclassified assets from 'Inventories', 'Deferred tax assets' and 'Other assets' to other 'non-depreciable pipeline assets' and 'other depreciable pipeline assets' as these assets are not shared assets. This change not only affects Table 3.1 but also requires changes to Table 2.1 and Table 3.3.1. Previously assets were reported in this section based on the nature of the asset aligning with the row descriptions (i.e. Inventory, deferred tax asset etc.) in conjunction with BoP disclosures flagging that the assets were direct pipeline assets (and not shared assets). <u>Non-core pipeline assets</u> No allocation of non-core pipeline assets has been included in Table 3.1 where there is a remote nexus with the pipeline activities such as treasury hedging financial instruments, defined benefit assets, minor assets sitting in JAM (receivables etc.), and other corporate assets etc.	
			Actual	SGSPAA Group Consolidation support schedule (Business Combination Adjustments and Goodwill)	The SGSPAA Group consolidates its business combination adjustments at the SGSPAA level, meaning that it does not distribute any business combination adjustments to its subsidiary entities. The business combination adjustments are maintained in an excel spreadsheet. Business combination adjustments (original	VicHub believes that the allocation is reasonable as it based on information contained in the Business combination uplift schedule maintained by SGSPAA. This

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					cost and accumulated depreciation) that relate to VicHub have been allocated to the categories in the template on the basis fixed asset information contained in a Business combination uplift schedule and input from a subject matter expert who assisted in the categorisation of these adjustments into the template categories.	schedule has sufficient VicHub pipeline fixed asset categorisation that formed the basis of the allocation of the assets as categorised in the template.
Table 3.1: Pipeline assets	3.1.a.1	Other non-depreciable pipeline assets	Actual	SAP	Other non-depreciable pipeline assets – SAP TB Amounts have been extracted from VicHub's Trial Balances for the reporting period and include GL accounts such as accrued receivables and amounts due from related parties. SAP has functionality that records and identifies any transactions from related parties to VicHub, known as trading partner. Related party loan accounts with each trading partner entity were aggregated, where the receivable amount was greater the payable amount the net amount was reported in 'Other non-depreciable pipeline assets'. Where the payable amount was greater than the receivable amount the balance was a net liability and therefore not included in 'Other non-depreciable pipeline assets' in the template. VicHub has a legally-enforceable right to set off the recognised amounts and VicHub intends either to settle on a net basis or realise the asset and settle the liability simultaneously. In accordance with accounting standards VicHub has netted off deferred tax and liabilities in its Balance Sheet.	

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					Reclassification of pipeline assets out of the shared asset category VicHub's Inventories, deferred tax assets and other assets have been reclassified from the shared supporting assets section to 'Other non-depreciable pipeline assets' (refer to BoP reference 3.1.a above for further details).	
Table 3.1: Pipeline assets	3.1.b	Inventories, Deferred tax assets, Other assets	Actual	SAP	Reclassification of pipeline assets out of the shared asset category VicHub's Inventories, deferred tax assets and other assets have been reclassified from the shared supporting assets section to 'Other non-depreciable pipeline assets' (refer to BoP reference 3.1.a for further details).	

9. ASSET USEFUL LIFE

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 3.1.1: Asset useful life	3.1.1.a	Description (list each individual balance sheet item), Acquisition date, Useful life years, Reason for choosing this useful life	Actual	Table 3.3.1: Fixed assets at cost - pipeline assets Table 3.3.2: Shared assets at cost (less straight line depreciation)	Description (list each individual balance sheet item) The 'Description' column was referenced from the 'Description' column as listed in: • Table 3.3.1: Fixed assets at cost - pipeline assets • Table 3.3.2: Shared assets at cost (less straight line depreciation) Acquisition date The assets in the FAMR sourced from SAP, have been aggregated into similar 'Description' items in Table 3.1.1. As there were numerous individual assets in the FAMR therefore the acquisition date is reported as 'various acquisition dates'. Useful life years A FAMR lists individual assets that contain the following information: • Asset description (text field) • Depreciation start date (date field) • Estimated useful life (years) • Original Cost ($) • Acquisition ($) (includes Transfers) • Disposals/retirements ($) • Accumulated depreciation ($) • Depreciation for the year ($) • Depreciation retirements ($)	

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					• Closing book value ($) The useful life for each category was calculated based on the calculated weighted average cost useful life formula below with the information sourced from FAMR. Weighted average cost useful life equals: $\sum \frac{(Opening\ Cost + Aquisitions + Retirements)}{Total\ 'Description'\ Cost} * Asset\ useful\ life$ Note that the Total Description Costs is the sum of Opening cost + Additions– Retirements. <u>Reason for choosing this useful life</u> The economic useful life of individual assets is defined in terms of the Australian Accounting Standards and the assets expected use to VicHub which may not fall within the Guideline's Appendix A – Pipeline asset lives. The estimation of the economic useful life of an asset is a matter of judgement based on the Jemena Group's experience with similar assets. Additionally, economic useful life shall be considered in relation to the life assigned to similar assets within the asset category.	

10. ASSET IMPAIRMENT

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 3.2.1: Assets impaired	BoP reference field not included in table	Asset description, Impairment amount $ nominal, Impairment date, Basis for impairment	Actual	SAP	Management tested the VicHub Cash Generating Unit, including allocated goodwill for impairment as part of its usual annual impairment testing for December 2020 financial reporting purposes in accordance with Australian Accounting Standard requirements, with no impairment recognised. In assessing the position as at December 2020, management considered both external and internal indicators of impairment such as; changes in the regulatory environment, current and future performance, asset characteristics, physical damage, business environment and market conditions. No impairment was noted as part of testing indefinite life intangible assets therefore no impairment has been recognised for the year ended 31 December 2020.	
Table 3.2.2: Asset impairment reversals	BoP reference field not included in table	Asset description, Prior Impairment amount, Impairment date, Basis for impairment, Reversal amount $nominal, Reversal date, Basis for Reversal	Actual	SAP	No assets impairment reversals were recorded during the reporting period.	

11. DEPRECIATION

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 3.3.1: Fixed assets at cost - pipeline assets & Table 3.3.2: Shared assets at cost (less straight line depreciation)	3.3.1.a 3.3.2.a	Description, Category, Acquisition date, Useful life, Estimated residual value, Construction or acquisition cost, Additions, Capitalised Maintenance Disposals, Cost Base, Prior years' accumulated depreciation Current year accumulated depreciation, Written Down Value	Actual	SAP FAMR and equipment listing report	The FAMR lists individual assets that was downloaded from SAP. <u>Category</u> Each asset was mapped into the relevant categories provided in the AER template drop down list (e.g. Pipeline, Compressor, City Gates etc.) based on: • analysis of the FAMR Asset description & Asset class; • input from engineers and subject matter experts; and • where relevant, analysis of a separate corresponding equipment listing report which contains more detailed information than the FAMR. VicHub used subject matter experts to map its asset categories to that in the template as VicHub's SAP system was designed prior to the establishment of the GMR reporting regime. <u>Description</u> The asset description was mapped to the categories in the template. <u>Acquisition date</u> Refer to 'Acquisition date' explanation for Table 3.1.1 Asset useful life. <u>Useful life</u>	

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					Refer to 'Useful life' explanation for Table 3.1.1 Asset useful life. Estimated residual value VicHub has estimated there to be no residual value for all pipeline assets which is in accordance with its internal Property, Plant and Equipment policy and aligns with AASB 116 Property, Plant and Equipment which recognises that in practice, the residual value of an asset is often insignificant and therefore immaterial in the calculation of the depreciable amount (AASB 116(53)). Construction or acquisition cost The 'Construction or acquisition cost' column value ($) was populated for each 'Description' item based on the FAMR data which was aggregated because there were too many separate assets in the FAMR to report them separately in Table 3.3.1. The 'Original cost' of assets in the FAMR were aggregated based on asset 'Description' where the 'Depreciation start date' value was prior to the SGSPAA acquisition of the pipeline in August 2007. Fair value uplift adjustments has been applied to the applicable categories in the template. Prior year disposal removed from the 'Construction or acquisition cost' were added back to report a life to date 'Construction or acquisition cost' (refer to disposal explanation below for methodology explanation) prior to SGSPAA acquisition of the pipeline during August 2007.	

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					Additions The 'Additions' column was populated for each description item based on the FAMR data which was aggregated because there were too many separate assets in the FAMR to report them separately in Table 3.3.1. The 'Original cost' and the 'Acquisition' value of assets in the FAMR were aggregated based on asset 'Description' where the 'Depreciation start date' value was after SGSPAA's acquisition of the pipeline during Aug 2007. Prior year disposals removed from the original cost were added back to report a life to date original cost after SGSPAA's acquisition of the pipeline during Aug 2007. Capitalised Maintenance VicHub does not have any capitalised maintenance. Maintenance costs such as day to day servicing including labour, consumables and spare parts are excluded from measurement of an item of PPE in accordance with the SGSPAA Group's PPE policy and AASB 116 (12). Disposals VicHub did not have any asset disposals. Prior years' accumulated depreciation The prior year GMR template's 'current year accumulated depreciation' is the source for 'Prior years' accumulated depreciation'. Current year accumulated depreciation	

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					The 'Accumulated depreciation' and the 'Current year depreciation' values in the FAMR were aggregated for each 'description' row and then populated in this column of the table. Accumulated fair value uplift depreciation has been applied to the applicable categories in the template. Written down value The 'Written down value' of all assets in table 3.3.1 was aggregated.	

12. SHARED SUPPORTING ASSETS

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 3.4.1: Shared supporting asset allocation	3.4.1.a	Description (list each individual shared asset category greater than 5 percent), Category of shared assets, Total amount, Percentage allocated to pipeline, Total allocated to pipeline	Actual	SAP – FAMR	No Shared Assets are allocated to VicHub.	

13. RECOVERED CAPITAL METHOD - PIPELINE ASSETS

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
Table 4.1: Recovered capital method - pipeline assets	Pipeline Assets	2003 – 2020	Construction cost, Additions BoP Reference: 4.1.a	Actual	SAP FAMR: • Jemena VicHub Pipeline Pty Ltd (VicHub)	The assets were aggregated by year, based on the year within the field 'Capitalisation date'. Asset additions would be understated to the extent that assets purchased in the past have since left the fixed asset register, either because they were replaced or disposed of. *Mid-point Net Capital Expenditure Gross Up* Capex additions and disposals for each year are escalated to a mid-year point to account for the return on capital for capital expenditure incurred during the year. $Mid\ Point\ Gross\ Capex$ $= Capex\ \times (1 + Rate\ of\ Return\ percentage)^{0.5}$ The Rate of Return percentage input calculation methodology is further explained below (refer to 'Rate of Return' item).	No material replacements or disposals over the life of the pipeline. Pipelines are a stable asset and it is reasonable to expect that there would be minimal disposals.

[2] For all Estimates, refer to the following table explaining why estimates were required, steps taken to locate actual information, the basis for the estimate and why the estimate represents the best estimate possible and has been arrived at on a reasonable basis.

13 — RECOVERED CAPITAL METHOD - PIPELINE ASSETS

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
Table 4.1: Recovered capital method - pipeline assets	Pipeline Assets	2003 – 2020	Negative residual value BoP Reference: 4.1.b	Estimate	EGP Expert Engineering Report date updated for VicHub data Inflation rate: SGSPAA internal 2020 budgeted CPI Discount rate: 5 year average rate for 15 year Australian Government Securities (AGS) bonds	Negative residual value is calculated as: $PV(Decommissioning)_t = C_{T_E} \times \frac{(1+i)^{T_D - T_E}}{(1+r)^{T_D - t}}$ Where: • C_{T_E} is the estimated cost of decommissioning in dollars as at time T_E • T_D is the expected year of decommissioning • i is the estimated inflation rate • r is the estimated discount rate • t is the year of the estimate A Subject Matter Expert utilised the EGP expert Engineering report as a basis for estimating the decommissioning cost ($\boldsymbol{C_{T_E}}$) for VicHub. Phasing of Negative Residual value The year 1 value of the decommissioning cost was reported in year 1. The cost of debt incremental was then reported for each subsequent year.	Negative residual value is interpreted as the current value of the forecast decommissioning cost that the service provider will pay when the pipeline is removed from service in the future. The expert engineering report is an accurate basis for estimating the cost to decommission the pipeline. The 5 year average of the 15 year AGS bonds are appropriate to estimate rate of return for present value calculation purposes.
Table 4.1: Recovered capital method - pipeline assets	Pipeline Assets	2003 - 2004	Maintenance capitalised BoP Reference: 4.1.c	Estimate	Pipeline Asset – Maintenance capitalised (2005 – 2020)	Data for capitalised maintenance was not available prior to the service providers ownership of the pipeline. Estimate pre-acquisition maintenance capitalised based on post-acquisition actual maintenance capitalised data, therefore estimated no capitalised maintenance.	Post-acquisition actual maintenance capitalised data is an appropriate basis for estimating pre-acquisition maintenance. No transactions recorded pre-acquisition for Maintenance capitalised.

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
Table 4.1: Recovered capital method - pipeline assets	Pipeline Assets	2005 - 2020	Maintenance capitalised BoP Reference: 4.1.c	Actual	SAP Trial Balance and FAMR for: • VicHub	No data for capitalised maintenance was noted in the review of the SAP FAMR and the relevant SAP Trial Balances.	
Table 4.1: Recovered capital method - pipeline assets	Pipeline Assets	2003 - 2004	Disposals (at cost) BoP Reference: 4.1.d	Estimate	Pipeline Assets – Disposals (at cost) (2005 – 2020)	VicHub estimated there to be no proceeds of disposals for the pipeline in the pre-acquisition period. This estimate is based on analysis of the actual data for the SGSPAA post-acquisition period when there were no proceeds of disposals for the pipeline.	Disposal (at cost) has been interpreted to mean cash proceeds from the sales of property, plant and equipment which is the equivalent to the cost paid by the 3rd party which acquired the asset. Post-acquisition actual data is an appropriate basis for estimating pre-acquisition disposals. No material proceeds on disposals over the life of the pipeline. Pipelines are a stable asset and it is reasonable to expect that proceeds on disposals of pipeline assets would be immaterial.

13 — RECOVERED CAPITAL METHOD - PIPELINE ASSETS

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
Table 4.1: Recovered capital method - pipeline assets	Pipeline Assets	2005 - 2020	Disposals (at cost) BoP Reference: 4.1.d	Actual	SAP Trial Balance and SAP FAMR: • VicHub	No proceeds of disposals were noted in the review of the SAP FAMR and the relevant SAP Trial Balance transaction data.	Disposal (as cost) has been interpreted to mean cash proceeds from the sales of property, plant and equipment which is the equivalent to the cost paid by the 3rd party which acquired the asset. No material proceeds on disposals over the life of the pipeline. Pipelines are a stable asset and it is reasonable to expect that proceeds on disposals of pipeline assets would be immaterial.

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
Table 4.1: Recovered capital method - pipeline assets	Shared Assets	2003 - 2020	Additions BoP Reference: 4.1.f	Actual	SAP FAMR: • VicHub	No Shared asset additions were noted based on the performing the following review. The SAP FAMR was exported into an excel file. Asset were aggregated by year based on the year within the Capitalisation date (date field). Shared assets were identified based on: • analysis of the FAMR Asset description & Asset class; • input from engineers and subject matter experts; and • where relevant, analysis of a separate corresponding equipment listing report which contains more detailed information than the FAMR. Shared asset additions were aggregated by year based on the year within the field 'Capitalisation date'. Asset additions would be understated to the extent that assets purchased in the past have since left the fixed asset register, either because they were replaced or disposed of.	No material replacements or disposals over the life of the pipeline. Pipelines are a stable asset and it is reasonable to expect that there would be minimal disposals.

13 — RECOVERED CAPITAL METHOD - PIPELINE ASSETS

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
Table 4.1: Recovered capital method - pipeline assets	Shared Assets	2003 – 2004	Construction cost or acquisition cost (where allowed) apportioned, Maintenance capitalised , Disposal (at cost) BoP Reference: 4.1.e	Estimate	Shared Assets 2005 – 2020 Actual Data	Data for the following items was not available prior to the SGSPAA acquisition of the pipeline: • Construction cost or acquisition cost (where allowed) apportioned, • Maintenance capitalised , • Disposal (at cost)	Post-acquistion actual maintenance capitalised data is an appropriate basis for estimting pre-acquisition maintenance No transactions recorded pre-acquisition for: • Construction cost or acquisition cost (where allowed) apportioned, • Maintenance capitalised, • Disposal (at cost)
Table 4.1: Recovered capital method - pipeline assets	Shared Assets	2005 - 2020	Construction cost or acquisition cost (where allowed) apportioned, Maintenance capitalised, Disposal (at cost) BoP Reference: 4.1.e	Actual	2005-2020: SAP Trial Balance and FAMR for: • VicHub	No data for the following items were noted in the review of the SAP FAMR and the relevant SAP Trial Balances: • Construction cost or acquisition cost (where allowed) apportioned, • Maintenance capitalised, • Disposal (at cost) FAMR was not available for the period prior to SGSPAA ownership.	

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
Table 4.1: Recovered capital method - pipeline assets	Return of capital	2004	Revenue, Operating expenses BoP Reference: 4.1.g	Estimate	Return of capital – Revenue, Operating expenses (2004)	Actual 2005 data was used as a basis to estimate 2004 revenue and operating expenses. The 2005 amounts were adjusted for inflation using Australian Bureau of Statics (ABS)/Reserve Bank of Australia (RBA) CPI rates to estimate 2004 revenue and operating expenses.	The only revenue of the entity was pipeline revenue. Assume no material non-cash items included in revenue receipts and operating expenditure.
Table 4.1: Recovered capital method - pipeline assets	Return of capital	2005 - 2020	Revenue, Operating expenses BoP Reference: 4.1.g	Actual	SAP Trial Balance for: • VicHub	A calendar year trial balance was generated from SAP and the revenue and operating expenditure general ledger accounts were aggregated. A review was performed on the relevant general ledger accounts included in the SAP Trial Balance to identify any non-cash general ledger accounts including: • Profit/(Loss) on disposal of assets • Bad Debt expense SAP trial balances were relied upon because statutory accounts are not prepared for the pipeline.	The only revenue of the entity was pipeline revenue. Revenue per the trial balance after removing non-cash items is assumed to align with the cash flow from operating the pipeline.

13 — RECOVERED CAPITAL METHOD - PIPELINE ASSETS

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
Table 4.1: Recovered capital method - pipeline assets	Return of capital	2007 – 2020	Operating expenses BoP Reference: 4.1.g	2007 – 2018: Estimate due to VicHub cost allocation 2019 - 2020: Actual	2007 – 2018: EGP RCM Model 2019 - 2020: SAP Trial Balances	Maintenance operating expenses were undertaken on behalf of VicHub by the EGP over the period from 2010 to 2018, inclusive. The maintenance operating expenditure was estimated based on a 2018 engineering estimate which was then adjusted for inflation. 2019 - 2020 actual Maintenance operating expenditure was sourced from the VicHub SAP trial balance.	No material non-cash items are included in the operating expenditure general ledger accounts reported. Depreciation is the key non-cash item which has been removed. There are no other shared costs within Jemena Group that need to be allocated to VicHub.
Table 4.1: Recovered capital method - pipeline assets	Return of capital	2004 - 2020	Net tax liabilities BoP Reference: 4.1.h	Estimate	• 2004: Estimated using 2015 SAP Trial Balances – Revenue & Expenses: VicHub • 2005-2020 SAP Trial Balances – Revenue & Expenses: VicHub	The pipeline is part of a consolidated tax group and does not pay corporate tax as a stand-alone entity. Therefore the net tax liability needs to be estimated. Net tax liability is calculated as: (Profit/(loss) before interest, tax, depreciation and amortisation Less tax depreciation Less interest expense) Multiplied by the tax rate (i.e. 30 percent). Where: Profit/(loss) before interest, tax, depreciation and amortisation equals Revenue less Operating expense	'Net tax liability' is interpreted as the notional cash tax payable that would be payable if the pipeline was a stand-alone entity. When estimating each year's tax depreciation, current year net capex was assumed to be incurred mid-year and therefore only a half year of tax depreciation was incurred. The value of imputation

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
						explained above. • Tax Depreciation (2007-2020) sourced from the SAP Fixed Asset Tax Register. • Tax Depreciation (2004 – 2006) was calculated as: equal to 2007 straight line depreciation expense. • Interest Expense (2008-2020) was sourced from the tax note calculated as: SGSPAA Group interest expense divided by Pipeline total assets divided by SGSPAA Group Total Assets. • Interest Expense (2004-2007) was calculated as: Opening assets multiplied by gearing ratio multiplied by cost of debt. The accounting profit and loss has been reviewed to identify material non-cash items that may require adjustment for when estimating the net tax liability cash flow (E.g. Accounting depreciation expense). After 2007 interest costs were not allocated down to the pipeline asset level. A notional interest allocation has been included in the net tax liabilities calculation based on analysis of the SGSPAA statutory accounts segment note disclosure. Interest expense was allocated to total pipelines in the segment note for 2008 to 2011, instead of the specific	credits to shareholders are not included in the RCM valuation. The aggregate 2012 and 2013 percentage split of interest expense between EGP, VicHub and QGP is appropriate to apply to the years 2008 – 2011 when interest expense was not allocated to the specific pipelines.

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
						pipelines Eastern Gas Pipeline (EGP), Queensland Gas Pipeline (QGP) and VicHub. The aggregate 2012 and 2013 percentage split of interest expense between EGP, Vic Hub and QGP was used to allocate total pipeline interest between pipelines for the period 2008 – 2011.	
Table 4.1: Recovered capital method - pipeline assets	Return of capital	2004-2020	Return on capital BoP Reference: 4.1.i	Estimate	Refer to Table 4.1 - Return on Capital (Rate of return)	Return on capital for a given year is estimated as the opening asset value for that year multiplied by the rate of return percentage for that year until the asset base is fully depreciated. When asset base becomes zero, the return on capital is calculated as Revenue – Operating expenditure – Net tax liabilities. Both the opening asset value and the rate of return are explained below. 2019 Revision The 2019 Return on Capital has been adjusted by $(1,395,590) because the asset was fully depreciated.	

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
Table 4.1: Recovered capital method - pipeline assets	Return of capital	2004-2020	Return on capital (Opening asset value) BoP Reference: 4.1.i	Estimate – Due to the impact of Rate of return components.	Prior period within the RCM Calculation	Aggregation of Prior period Life-to-date (LTD) RCM Inputs. Opening Asset Value = Prior year Closing Asset Value = Prior year Opening Asset + Prior year net Capex (adjusted to end of year timing) – Prior year Return of capital. Where Return of capital is, Revenue – Operating expenditure – Net tax liabilities - Return on Capital	
Table 4.1: Recovered capital method - pipeline assets	Return of capital	2003-2020	Return on Capital (Rate of return) BoP Reference: 4.1.i	Estimate	The rate of return is estimated with reference to the following source inputs. *Gearing assumption input source*: • Asset betas adopted by Australian Competition and Consumer Commission (ACCC) and	<u>Weighted Average Cost of Capital (WACC)</u> VicHub estimates the rate of return as the nominal vanilla WACC. This approach estimates the rate of return as the weighted average of opportunity costs assessed across two sources of capital funding: debt and equity. $WACC^{vanilla} = gearing \times r_d + (1 - gearing) \times r_e$ Where: r_d is the cost of debt, and r_e is the cost of equity. <u>Gearing</u> The proportion of debt funding 'gearing' has been sourced based on guidance from previous, current,	<u>Gearing assumption</u> The proportion of debt funding to capital is referred to as 'gearing'. VicHub applies an assumption of 50 percent gearing, constant over time. The gearing assumption reflects reliance on the regulatory risk assumption but takes into account evidence that the gearing adopted by unregulated businesses is lower than that of regulated

					AER since 1998. • Asset betas identified by TDB and Frontier	forecast financial information used in statutory, management and budgeting reporting. The asset beta that we use is calculated as: • the regulatory asset betas adopted by the ACCC and AER since 1998, which has been paired with a gearing assumption of 60 percent; plus • the asset beta for samples of businesses with unregulated revenues identified by TDB and Frontier described above), at gearings of 39 percent and 28 percent respectively; less • the asset beta for samples of businesses with regulated revenues identified by TDB and Frontier (described above), at gearings of 40 percent and 43 percent respectively. The service provider considers that a gearing that is consistent with the formulation of asset beta is 50 percent.	businesses. Imputation credits assumption VicHub assumes the value of imputation credits ('gamma') is equal to zero reflecting SGSPAA shareholders' tax status in Australia. This assumption is also applied to previous shareholders.
					Cost of debt and risk free rate input source: Reserve Bank of Australia, Indicative Mid Rates of Australian Government Securities – 1992 to 2008 – F16, and Indicative Mid Rates of Australian Government Securities – 2009 to 2015	<u>Cost of debt</u> The cost of debt in each year is estimated as a prevailing cost of debt across the RCM capital base using the yield on corporate bonds with a broad BBB rating, and terms ranging from one to 10 years. A 10 year yield on Australian Government Securities (**AGS**) was calculated on each day using linear interpolation between the yield of the bond with the highest term that is less than 10 years and the yield of the bond with the lowest term that is more than 10 years. Each interpolated 10 year yield was then converted from the semi-annual basis that the RBA reports them on to	Cost of debt and tenor assumptions The cost of debt is calculated under the assumptions that: • VicHub aims to achieve a debt portfolio that is 'staggered' so that debt falls due in relatively equal amounts on a year to year basis, limiting refinancing risk; and • VicHub aims to achieve a debt portfolio with an

Table Name	Base Information			Population Approach	Source	Methodology	Assumptions
	Asset Description	Year	Item & Basis of Preparation (BoP) Reference	Actual / Estimate[2]			
					Equity beta input source: ACCC – final decision PTS (Oct 1998); ACCC – final decision PTS (Nov 2002); AER – electricity and distribution WACC parameters (May 2009); AER – rate of return guideline (Dec 2013); AER – rate of return instrument (Dec 2018) *Market Risk*	an annualised basis to reflect their application consistent with the calculation of the asset valuation;3 and An average 10 year yield was calculated for each period as the average of the 12 month-end values in that period. <u>Cost of equity.</u> The cost of equity for each year since the construction of the VicHub is estimated using the Sharpe-Lintner capital asset pricing model (S-L CAPM). $r_e = r_f + \beta_e(r_m - r_f)$ where: r_e is the cost of equity; r_f is the risk free rate; $r_m - r_f$ is the MRP; and β_e is the equity beta.	average term to maturity from issuance of 10 years. <u>Cost of equity assumptions</u> VicHub estimates the cost of equity based on an acceptable return that is commensurate with the expected risk SGSPAA shareholders expect from this asset. This value is calculated under the assumption that, for the duration of each gas transportation contract for capacity agreed on the VicHub, the cost of equity applying to the capital expenditure associated with that capacity is held constant at the rate applying at the

[3] We convert semi-annual yields to annualised yield using the following formula: $y_{annual} = \left(1 + \frac{y_{semi-annual}}{2}\right)^2 - 1$

					*Premium (**MRP**) input source:* Credit Suisse Global Investment Returns Yearbook, prepared by Dimson, Marsh and Staunton (2017 edition)		time the contract was entered into until the expiry of the contract. Assumptions applied: • a risk free rate estimated by reference to the yield on 10 year Australian government securities (AGS); • a constant MRP of 6.6 percent over the life of the pipeline; and • an equity beta ranging from 0.70 to 0.94 over the period (expressed at a gearing of 50 percent – reflecting regulatory precedent as applied by the ACCC and the AER for gas transmission equity betas, plus a positive adjustment to account for the additional risks associated with operating an unregulated gas transmission business such as VicHub and increased technology risks associated with government's climate change and emission policies). Notes:

							Equity raising costs (i.e. the upfront expenses business may incur when issuing new capital) are assumed to be equal to zero, which is a conservative assumption. MRP The Credit Suisse Global Investment Returns Yearbook, prepared by Dimson, Marsh and Staunton, is a well-accepted source of estimates for average excess returns. The 2017 edition of the yearbook estimates the arithmetic average premium of Australian equities over Australian government bonds to be 6.6 percent over the period from 1990 to 2016.4 Importantly, this estimate includes only the returns from dividends and capital gains, and is not grossed up for the value of imputation credits. This estimate is therefore consistent with a value for gamma of zero. MRP of 6.6 percent represents our best estimate of a historical average of excess market returns, consistent with valuing imputation credits at zero.

Explanation for Estimated Amounts

For estimated amounts, in accordance with the Guideline Section 7 Basis of preparation, the following table explains:

- why it was not possible for the service provider to provide actual information;
- what steps the service provider took to locate actual information;
- if an estimate has been provided, the basis for the estimate, including the methods, assumptions and inputs used
- why the estimate represents the best estimate possible in the circumstances and has been arrived at on a reasonable basis.

[4] Dimson, E., Marsh, P. and Staunton, M., *Credit Suisse Global Investment Returns Yearbook 2017*, February 2017, Table 13, p 72

ESTIMATED INFORMATION

Table Name	Base Information			Population Approach	Why it was not possible for the SGSPAA to provide actual information	Steps SGSPAA took to locate actual information;	Basis for the estimate, including the methods, assumptions and inputs used	Why the estimate represents the best estimate possible in the circumstances and has been arrived at on a reasonable basis.
	Asset Description	Year	Item	Actual / Estimate				
Table 4.1: Recovered capital method - pipeline assets	Pipeline Assets	2003 – 2020	Negative residual value	Estimate	Cost have not yet been incurred to decommission the pipeline, therefore an estimate is inherently required to measure future costs. Further, the actual timing the of decommissioning the pipeline in the future is also uncertain, therefore increasing the level of estimation required. In addition, the CPI escalation factor and the discount rate inputs are estimates used to inflate for forecast future price increases and then discount to the present value respectively.	No steps taken as actual information does not exist	The EGP engineering estimate was updated with VicHub data replacing the EGP data as a basis to estimate the cost of decommission the pipeline.	The estimate is a best estimate because it has been calculated based on the following inputs which are sourced based on best available information: • Independent technical engineering estimate for EGP adapted to estimate of the VicHub pipeline. • Discount rate: 5 year average for the 15 year Australian Government Securities (AGS) bond rate. • CPI escalation: SGSPAA internal CPI estimate (reasonable when compared with Australian Bureau of Statistics (ABS) rate). • Estimated year of decommissioning the pipeline.

Table Name	Base Information			Population Approach	Why it was not possible for the SGSPAA to provide actual information	Steps SGSPAA took to locate actual information;	Basis for the estimate, including the methods, assumptions and inputs used	Why the estimate represents the best estimate possible in the circumstances and has been arrived at on a reasonable basis.
	Asset Description	Year	Item	Actual / Estimate				
Table 4.1: Recovered capital method - pipeline assets	Pipeline Assets, Shared Assets	2003 – 2004	• Pipeline Assets: – Maintenance capitalised • Shared Assets: – Construction cost or acquisition cost (where allowed) apportioned, – Maintenance capitalised , – Disposal (at cost)	Estimate	Data for these items was not available prior to the service providers ownership of the pipeline.	Information requests were sent to previous owners but no response was received.	No transactions for these items were noted over the SGSPAA ownership period. Estimated that there were no transactions for these items in the pre-acquisition period based on the assumption that the data would be consistent.	Data from the post-acquisition period is actual data. This actual data represents the best source for arriving at a best estimate.
Table 4.1: Recovered capital method - pipeline assets	Pipeline Assets	2003 – 2006	Disposals (at cost)	Estimate	SAP FAMR and general ledger transactional data was not available prior to the SGSPAA ownership period.	Information requests were sent to previous owners but no response was received.	Analysis of SAP FAMR reports for each year since 2007 did not identify a significant level of disposals. Therefore it is unlikely that there would be a material level of proceeds on disposal to use as an input. The SAP FAMR does not report on proceeds on disposals but it can be used as a reference point to assess the level	Data from the SGSPAA ownership period is actual data. This actual data represents the best source for arriving at a best estimate.

Table Name	Base Information			Population Approach	Why it was not possible for the SGSPAA to provide actual information	Steps SGSPAA took to locate actual information;	Basis for the estimate, including the methods, assumptions and inputs used	Why the estimate represents the best estimate possible in the circumstances and has been arrived at on a reasonable basis.
	Asset Description	Year	Item	Actual / Estimate				
							of disposals. Pipelines are a stable asset and it is reasonable to expect that there would be low levels of asset disposals and therefore proceeds on disposals of pipeline assets would be immaterial.	
Table 4.1: Recovered capital method - pipeline assets	Return of capital	2004	Revenue, Operating Expenditure	Estimate	The 2004 period is prior to the service provider's acquisition of the pipeline therefore the service provider does not have the relevant data.	Information requests were sent to previous owners but no response was received.	Actual 2005 data was used as a basis to estimate 2004 revenue and operating expenses. The 2005 amounts were adjusted for inflation using Australian Bureau of Statics CPI rates to estimate 2004 revenue and operating expenses. The operations of the pipeline would be stable over the missing data	Actual 2005 data before the missing data period is the best data source to use as an input for estimating 2004 revenue and operating expenses because it is reasonable to expect that the operations of the pipeline would not change significantly year on year.

Table Name	Base Information			Population Approach	Why it was not possible for the SGSPAA to provide actual information	Steps SGSPAA took to locate actual information;	Basis for the estimate, including the methods, assumptions and inputs used	Why the estimate represents the best estimate possible in the circumstances and has been arrived at on a reasonable basis.
	Asset Description	Year	Item	Actual / Estimate				
							period. The only revenue of the entity was pipeline revenue.	
Table 4.1: Recovered capital method - pipeline assets	Pipeline Assets	2010 - 2018	Operating expenses	Estimate relating to VicHub costs recorded within EGP	Maintenance operating expenses were undertaken on behalf of VicHub by the EGP over the period from 2010 to 2018, inclusive. Records were not retained to enable the VicHub component to be measured.	Reviewed internal records and concluded that data does not exist to enable the VicHub component to be measured, therefore no further steps were taken to locate actual information.	The maintenance operating expenditure was estimated based on an engineering experts cost build-up of the standard maintenance activities and costs incurred each year for VicHub.	This represents a best estimate because it is built-up based on an asset specific information and understanding i.e. an engineering experts understanding of the standard maintenance activities and costs incurred each year for VicHub.
Table 4.1: Recovered capital method - pipeline assets	Return of capital	1990 – 2020	Net tax liabilities	Estimate	VicHub is part of a consolidated tax group and does not pay corporate tax as a stand-alone entity. Therefore the net tax liability needs to be estimated. Actual total asset data was not available for each	No steps taken as actual information does not exist for net tax liabilities. Actual total asset data was not available for each of the pipelines EGP, QGP and VicHub from 2008 to 2011.	Estimated based on calculation of 30 percent of Profit/(Loss) before tax. Less Tax Depreciation Less notional interest) Multiplied by the corporate tax rate (30	The estimate represents a best estimate because wherever possible an actual reference data point has been used as a basis to calculate the estimate Accounting profit is the best approach for calculating the cash flows each year and therefore is the most appropriate input into

Table Name	Base Information			Population Approach	Why it was not possible for the SGSPAA to provide actual information	Steps SGSPAA took to locate actual information;	Basis for the estimate, including the methods, assumptions and inputs used	Why the estimate represents the best estimate possible in the circumstances and has been arrived at on a reasonable basis.
	Asset Description	Year	Item	Actual / Estimate				
					of the pipelines EGP, QGP and VicHub from 2008 to 2011. Therefore total assets could not be used as a basis to allocate interest costs across the pipelines. .	Therefore not steps were taken to locate actual information.	percent). The accounting profit and loss has been reviewed to identify material non-cash items that may require adjustment when estimating the net tax liability cash flow The aggregate 2012 and 2013 percentage split of interest expense between EGP, Vic Hub and QGP was used to allocate total pipeline interest between pipelines for the period 2008 – 2011.	the net tax liability calculation. Accounting profit has been sourced from actual historic records and therefore has been arrived at on a reasonable basis. The 2012 to 2013 interest split percentages between EGP, QGP and VicHub was the best estimate for the years 2008 to 2011 because it is the closest time periods where actual data was available. Further the average pipeline interest for the 2012 & 2013 period most closely aligned with the average pipeline interest for the 2008 to 2011 period.
Table 4.1: Recovered capital method - pipeline assets	Return of capital	1989 – 2020	Rate of return	Estimate	The Guideline advises that the rate of return should be determined each year and should be commensurate with the prevailing conditions in the market for funds and	Actual information does not exist for the rate of return. SGSPAA estimated the rate of return as a	Refer to Table 4.1: Recovered capital method - pipeline assets -rate of return explanation above.	Using a WACC as an estimate for rate of return is an accepted methodology adopted by the AER and therefore represents

Table Name	Base Information			Population Approach	Why it was not possible for the SGSPAA to provide actual information	Steps SGSPAA took to locate actual information;	Basis for the estimate, including the methods, assumptions and inputs used	Why the estimate represents the best estimate possible in the circumstances and has been arrived at on a reasonable basis.
	Asset Description	Year	Item	Actual / Estimate				
					reflect the risk the service provider face in providing pipeline services. The Guideline Explanatory Statement (pg. 25) advises with regard to the 'Commercial rate of return' that 'Service provides will be able to determine how this input is estimated'. Usage of the term 'estimated' in the Guideline Explanatory Statement implies that SGSPAA is required to estimate this data input.	WACC and sourced actual data to input into the WACC calculation. The rate of return is a theoretical concept and does not reference VicHub costs, rather it references regulatory decisions that have been applied to the relevant time period.		the best estimate possible. The data inputs into the WACC have been sourced from published AER accepted sources and therefore is a best estimate which has been arrived at on a reasonable basis.

14. PIPELINE DETAILS

Table Name	Item	Actual / Estimate	Source	Methodology	Assumptions
Table 4.2: Pipeline details	Construction date	Actual	SAP FAMR	Extracted the year of construction from the FAMR for the construction assets.	Construction date is interpreted as the mid-point of the year when construction commenced based on reference to the FAMR.
Table 4.2: Pipeline details	Negative residual value	Estimate	Refer to 'Table 4.1: Recovered capital method - pipeline assets' source.	Refer to 'Table 4.1: Recovered capital method - pipeline assets' methodology explanation.	Refer to 'Table 4.1: Recovered capital method - pipeline assets' assumptions.

15. CAPITAL EXPENDITURE

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 4.1.1: Capital expenditure greater than 5 percent of construction cost	4.1.1.a	Description of works, Date recognised, Expenditure ($ nominal)	Actual	SAP (Referencing the RCM template)	VicHub analysed the underpinning data for the RCM template and with a view to identifying any capex that is > than 5 percent of the construction cost. VicHub did not have any capex that met the criteria of the template.	VicHub has interpreted that the capex required in the template is for the life to date basis for the pipeline. For the Jun18 disclosures, VicHub interpreted that the capex required in the template only related to the period 1 Jan 18 to 30 Jun 18

16. WEIGHTED AVERAGE PRICES

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 5.1 Weighted average prices	No BoP Reference cells in the template	Volume Weighted average prices	Estimate	The PypIT system is the billing/invoicing system in place which provides the detailed breakdown of volumes and revenue data by service type and shipper as well as the corresponding contract information. Hence, this is the best source to provide data for the purposes of calculating the weighted average price since it is the only system that captures information related to revenue, volume and category breakdown and details in the same place.	Data extracted from PypIT is compared and checked against SAP balances and reference tariffs before being categorised accordingly based on service type per details below. Where necessary data has been manually categorised as follows: **Categorisation of Charge Method** The “Postage Stamp Transportation Services” represents revenue and volumes associated with Firm Injection, As Available Injection and As Available Withdrawal services. Per Section 5 of the Guideline, these services are where the same charge is payable along the length of the pipeline, irrespective of the distance transported. Firm services are charged on a capacity basis i.e. Maximum Daily Quantity (**MDQ**), while As Available services are charged on a volumetric basis (i.e. actual deliveries). **Volume Calculation** The volume used in the weighted average price calculation is based on the service type. For example, Firm Services, volumes are based on MDQ. To obtain the total relevant volumes for a particular month, the MDQ needs to be multiplied out by the number of days in the month. For As Available Services, the actual delivery volumes would apply.	Some specific charges / services are not relevant to the weighted average price calculation (i.e. not part of the service categories required under the weighted average price template as specified in Section 5 of the Guideline. This is discussed further below. In determining the total revenue to be used in calculating the weighted average price, there are certain service types which fall under "Other Direct Revenue" in Table 2.1.1 that should be omitted from the weighted average price calculation as it does not form part of the main pipeline revenue generating services. This includes:

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
					Volume data have been estimated for each service and charge reported in the template by adjusting raw data obtained from the PypIT reports. Manual calculations have been performed to calculate the relevant volumes to be included in the WAP calculations.	- Minimum Monthly Service Charge - Odorisation Charge The invoice data in PypIT reflects actual invoicing and has been used as the basis of allocation. Based on the invoice data retrieved from PypIT, the revenue and volume data used in the weighted average price calculation is included/excluded based on the revenue charge type and service type categorisation. The MDQ used in the calculation (as referred to in the methodology) is the applicable MDQ on the last day of the month. The volume calculated is therefore only an estimated volume because there are instances where MDQ in the month is not constant on all days.

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
						For services where calculated volumes are materially different from the total invoiced volumes (typically where there have been curtailments or large MDQ changes), the invoiced volumes have been used.
Table 5.1 Weighted average prices	No BoP Reference cells in the template	Revenue Weighted average prices	Actual	PypIT	Categorisation of data per above Volume Methodology **Revenue Calculation** The revenue obtained in the report to be used in the weighted average price calculation is based on the sum of the relevant charges per the assumptions listed out in this paper. The relevant charges are added together to come to an adjusted revenue figure before it is used in the final weighted average price calculation. **Weighted Average Price Calculation** The final weighted average price calculation is based on the revenue calculated divided by volume calculated per above in line with section 5.1.2 of the Guideline.	As per above assumption, using the invoice data retrieved from PypIT, the revenue and volume data used in the weighted average price calculation is included/excluded based on the revenue charge type and service type categorisation. For services with minimum monthly charges (typically for services charged on a throughput basis), the charges associated with actual usage have been extracted from the minimum service charge and included in the revenue for the

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
						weighted average price calculation.

17. EXEMPT WAP SERVICES

Table Name	Base Information		Population Approach	Source	Methodology	Assumptions
	Reference	Item	Actual / Estimate			
Table 5.1.1 AER Exemptions	No BoP Reference cells in the template	AER exemptions	Actual	PypIT System as per description in Table 5.1	Based on a report run out of PypIT, the number of customers by service type by pipeline can be determined. Based on this information, the service types by zone that have no more than 2 shippers were identified and were listed out to AER for exemptions to apply in accordance with section 5.3 of the Guideline. The AER has confirmed such exemptions.	

18. ESTIMATED INFORMATION

Table Name	Base Information		Population Approach	Source	Why it was not possible for the Jemena Group to provide actual information	Steps Jemena Group took to locate actual information	Basis for the estimate, including the methods, assumptions and inputs used	Why the estimate represents the best estimate possible in the circumstances and has been arrived at on a reasonable basis.
	Reference	Item	Actual / Estimate					
Table 5.1 Weighted average prices	No BoP Reference cells in the template	Volume	Estimate	As Above	This is due to the system limitations of PypIT as it was not built for this reporting purpose.	Jemena Group is currently working towards developing a PypIT report that captures the relevant data for the WAP calculation. A planned completion date for these software changes has not been finalised..	PypIT contains contract details (MDQ, tariff and terms), nominations, invoice amounts, pipeline schedules and actual deliveries for all our shippers and services. Currently there is no report in place in PypIT that provides the data in a way to be used to calculate the WAP. VicHub is required to manually extract the relevant information to be used in the calculations and include/exclude components in the calculations based on the assumptions	This is the best estimate given the information available from PypIT. We are not aware of any alternative information available to us at this time.

Table Name	Base Information		Population Approach	Source	Why it was not possible for the Jemena Group to provide actual information	Steps Jemena Group took to locate actual information	Basis for the estimate, including the methods, assumptions and inputs used	Why the estimate represents the best estimate possible in the circumstances and has been arrived at on a reasonable basis.
	Reference	Item	Actual / Estimate					
							associated with Table 5.1. Due to the recategorisation / split out of the raw data from the report and the calculation of the weighted average prices based on these manually adjusted figures, the data disclosed are only estimates.	

19. APPENDIX A - SUMMARY OF FORMULA UPDATES WITHIN TABLES

#	Table	Worksheet	Cell Ref	Title	Explanation & Justification	Excel formula before change	Excel formula after change
1	Table 2.1: Statement of pipeline revenues and expenses	2. Revenues and expenses	D11	Change to prevent the 'Other direct revenue' item being reported twice	The item 'Other direct revenue' appears on both: - Table 2.1: Statement of pipeline revenues and expenses - Table 2.1.1: Revenue by service To prevent the number being reported twice we updated the Table 2.1.1: Revenue by service total to exclude 'Other direct revenue'.	='2.1 Revenue by service'!**D23**	=SUM('2.1 Revenue by service'!**D11:D21**)
2	Table 2.1: Statement of pipeline revenues and expenses	2. Revenues and expenses	D29:D37	Sumif() formula referenced an incorrect range was not using fixed addresses	The sumif() formula referenced an incorrect range and was not using fixed addresses. It appears that as the formula was dragged down the sumif() range continued to change when it should have remained consistent.	E.g. D29 =SUMIF('2.4 Shared costs'!$D10:$D36,'2. Revenues and expenses'!$C29,'2.4 Shared costs'!**H10:H36**) E.g. D30 =SUMIF('2.4 Shared costs'!$D11:$D37,'2. Revenues and expenses'!$C30,'2.4 Shared costs'!**H11:H37**)	E.g. D29 =SUMIF('2.4 Shared costs'!$C$9:$C$17,$C29,'2.4 Shared costs'!**$H$9:$H$17**) E.g. D30 =SUMIF('2.4 Shared costs'!$C$9:$C$17,$C30,'2.4 Shared costs'!**$H$9:$H$17**)
3	Table 2.1: Statement of pipeline revenues	2. Revenues and expenses	E29:E37	Sumif() formula referenced an incorrect range was not using fixed addresses	The sumif() formula referenced an incorrect range and was not using fixed addresses. It appears that as the formula was dragged down the sumif() range	E.g. E29 =SUMIF('2.4 Shared costs'!$D10:$D36,'2. Revenues and expenses'!$C29,'2.4 Shared costs'!**I10:I36**) E.g. E30 =SUMIF('2.4 Shared costs'!$D11:$D37,'2. Revenues and	E.g. E29 = SUMIF('2.4 Shared costs'!$C$9:$C$18,$C29,'2.4 Shared costs'!**$I$9:$I$17**) E.g. E30 =SUMIF('2.4 Shared

#	Table	Worksheet	Cell Ref	Title	Explanation & Justification	Excel formula before change	Excel formula after change
	and expenses				continued to change when it should have remained consistent.	expenses'!$C30,'2.4 Shared costs'!**I11:I37**)	costs'!$C$9:$C$18,$C30,'2.4 Shared costs'!**$I$9:$I$17**)
4	Table 3.1: Pipeline assets	3. Statement of pipeline assets	D58	Other depreciable assets - Additions not included in the sumif() formula	The sub-heading 'Other depreciable pipeline assets' does not include a row for 'Additions and improvements capitalised'. The sumif() formula was updated to include 'Table 3.3.1: Fixed assets at cost - pipeline assets - Additions' (column I). Note: No amount reported 'Table 3.3.1: Fixed assets at cost - pipeline assets - Capitalised maintenance' (column J), conclude that it ok to replace Column 'J' with 'I' in the formula.	=SUMIF('3.3 Depreciation'!$D$9:$D$52,'3. Statement of pipeline assets'!C57,'3.3 Depreciation'!$H$9:$H$52)+SUMIF('3.3 Depreciation'!$D$9:$D$52,'3. Statement of pipeline assets'!C57,**'3.3 Depreciation'!$J$9:$J$52**)	=SUMIF('3.3 Depreciation'!$D$9:$D$52,'3. Statement of pipeline assets'!C57,'3.3 Depreciation'!$H$9:$H$52)+SUMIF('3.3 Depreciation'!$D$9:$D$52,'3. Statement of pipeline assets'!C57,**'3.3 Depreciation'!$I$9:$I$52**)
5	Table 3.1: Pipeline assets	3. Statement of pipeline assets	D61	Other depreciable assets subtotal does not include the 'disposals' row.	Other depreciable assets subtotal does not include the 'disposals' row. Therefore the table will not reconcile with 'Table 3.3.1: Fixed assets at cost - pipeline assets' inputs	=SUM(D58:**D59**)	=SUM(D58:**D60**)
6	Table 3.3.1: Fixed assets at cost - pipeline assets	3.3 Depreciation	D9	Remove 3.3.1 'City Gates' data validation to enable table 3.1 Sumif() formulas to calculated correctly	Data validation removed to enable input of the text 'City Gates, supply regulators and valve stations'. This change enabled 'Table 3.1: Pipeline assets 'City Gates, supply regulators and valve stations'	N/A	N/A

19 — APPENDIX A - SUMMARY OF FORMULA UPDATES WITHIN TABLES

#	Table	Worksheet	Cell Ref	Title	Explanation & Justification	Excel formula before change	Excel formula after change
					sumif() formula in cells D23:D26 to calculated correctly.		