Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
TAB 1	**CPI**					
Table 1.1	CPI (historical/estimated)	Actual / forecast / estimate	Forecast	ABS CPI Weighted Average of 8 Capital Cities	Formulas amended to be consistent with ActewAGL Distribution's AAI and 2010 RFM	ActewAGL Distribution has amended so historical CPIs based on sum of 4 quarters to December over sum of previous 4 quarters to December. This has been amended to be consistent with the AER's 2010 final decision RAB Roll Forward Model. ActewAGL Distribution has amended so historical CPIs based on sum of 4 quarters to December over sum of previous 4 quarters to December. This has been amended to be consistent with the AER's 2010 final decision RAB Roll Forward Model. CPI forecast estimates are based on the Feb 2015 Reserve Bank of Australia's (RBA's) Statement of monetary policy and the mid-point of the RBA's target inflation band beyond FY18.
Table 1.2	CPI p.a.	Actuals	*n/a*	Source: AER, *Annexure to the AER's final decision 1 July 2010 to 30 Jun 2015*, Table 3.3 of Addendum to access arrangement information	During the 2010 AA review AAD proposed (and the AER approved) real escalation factors for escalators including as EBA EGW labour, Contract EGW labour, steel, plastic etc. The approved escalators (for the period 2009-10 to 2014-15) are directly sourced from the AER's final decision document. A new column was inserted to record 2009-10 escalators.	N/A
TAB 2	**Escalators**					

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 2.1	Real cost escalators (%)	Forecast	*n/a*	Source: AAD - Capex Forecast Model - v18 - 19 May 15.xlsb, Input|Escalators	The data in the RIN is reported directly from the AAD - Capex forecast model. ActewAGL Distribution engaged BIS Shrapnel to provide an expert opinion regarding the outlook for labour and a range of material cost escalators relevant to gas distribution networks in New South Wales and the Australian Capital Territory over an eight year period from 2013-14 to 2020-21 (i.e. from 1 July 2013 to 30 June 2021). The forecasts reported in the AD - Capex forecast model and in this RIN table are directly sourced from BIS Shrapnel's report.	BIS Shrapnel has provided the methodologies, assumptions and sources used in deriving its raw price changes for materials and labour—these are set out in **appendix 5.3** to ActewAGL Distribution's 2016 AAI

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 2.2	Input / Cost Mix (Weights)	Forecast	n/a	Source: AAD - Capex Forecast Model - v18 - 19 May 15.xlsb, Input|Escalators	The escalator weightings in each distribution capital expenditure category is derived from the actual split of capex in Jemena Asset Management's **(JAM's)** financial year ending 30 June 2014. The FY14 distribution of capital expenditure actuals was extracted from JAMS's accounting system. The escalator weightings in each distribution capital expenditure category is derived from the actual split of capex in Jemena Asset Management's (JAM's) financial year ending 30 June 2014. The FY14 distribution of capital expenditure actuals was extracted from JAMS's accounting system. To calculate the cumulative real unit cost escalator, ActewAGL Distribution proposes a two-step approach as follows: Step 1—real cost escalator (per cent) = sum product of the (a) escalation weights and (b) real cost escalators. Step 2—real unit cost escalator (cumulative factors) = (1+real cost escalator from above) for each year times the previous year's cumulative factor. This methodology is applied consistently to the other capex categories. ActewAGL Distribution has adopted a similar approach for operating expenditure real labour cost escalators. However, the RIN does not request escalator weightings for operating expenditure. ActewAGL Distribution's real cost escalators for operating expenditure are included within the opex model	N/A
TAB 4	**New customer connections**					

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 4.1.1	Number of new customer connections	2012-2014 Actuals 2015-2021 Forecast	n/a	1) GASS+ extract of connection volumes by year as reflected in files: 12 03 2015_ AAD Services Plans MKE forecast.xlsx see sheet 'ACT MKE Forecast | RY15 - RY21' & ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm see sheet 'Historical Data' for all market segments except I&C contract 2) Core Energy Demand Forecast Model as reflected in file: ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm see sheet 'Summary'	1) 2012-2014 actual volumes extracted from GASS+ were used to populate the actual volumes of new connections from 2010-2013 for all market segments except I&C contract 2) 2015-2021 forecast populated using Core Energy new customer connection forecast by market segment	1) New connection forecast from 2015-2021 is Core Energy Group's New Connection forecast and reflects the number of new end customers connecting to the AAD network
Table 4.1.1 (RY06-RY07) Actual	New customer connections – Electricity to gas, New Estates, Medium Density and I&C Contract and Tariff. (volumes)	New customer connections (volumes)		As Jemena Asset Management Pty Ltd (JAM) was unable to source any credible volume data for the RY06 and RY07 periods, JAM used data from its internal budget as its best estimate with the agreement of its experienced Commercial Manager for the ActewAGL client.	JAM completes and annual budget which provides volumes for these categories.	In the absence of credible actual volume data, JAM used the volumes from its annual budget. Budgeted figures assumed as an estimate to the actual.
Table 4.1.1 (RY08-RY11) Actual	New customer connections – Electricity to gas, New Estates, Medium Density and I&C Contract and Tariff. (volumes)	New customer connections (volumes)		As part of JAM's monthly billing process to AAD, it also supplies the associated volumes as support information. JAM sourced the actual volume data from the billing support schedules.	The volume data is collected as support information and is sourced from "GASS+" that is mainframe legacy system inherited from AGL. As JAM invoices AAD monthly, the associated volumes form the basis of revenue calculation against agreed unit rates which formed the basis of the DAMS agreement with AAD. This revenue calculation is done outside of JAM's financial systems and records.	n/a

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 4.1.1 (RY12-RY14) Actual	New customer connections – Electricity to gas, New Estates, Medium Density and I&C Contract and Tariff. (volumes)	New customer connections (volumes)		Data as reflected in Jemena Core Energy Demand Forecast Model.	RY12 to RY 14 volumes as per Core Energy new customer connection forecast by market segment, extract of connection volumes by year from GASS+.	n/a
Table 4.1.2	Volume of mains / services / metres per connection [Column L:R]	2012-2014 Actuals 2015-2021 Forecast	n/a	1) GASS+ extract of connection volumes by year as reflected in files: 12 03 2015_ AAD Services Plans MKE forecast.xlsx see sheet 'ACT MKE Forecast | RY15 - RY21' for all market segments except I&C contract	1) 2012-2014 actual volumes extracted from GASS+ were used to populate the actual volumes of new connections from 2010-2013 for all market segments except I&C contract 2) Divided both the number of services by meters and mains by meters for each market segment except I&C contract to determine ratios for 2012-2014.	1) Assumed 3 year average (2012-2014) of service/meter and mains/meter ratios will carry forward between 2015-2021
Table 4.2.1	Unit rates - mains / services / meters (un-escalated direct expenditure) [Column L:R]	Estimated [Column L] Forecast [Column M:R]	*n/a*	*Formula looking up other tables in Tab 4.*	*Forecast capex of mains/services/metersper market segment divided by the number of new connections for that market segment.*	*n/a*
Table 4.2.1 (RY06 to RY14) actual	Unit rates - mains / services / meters (direct expenditure)	RY06 to RY14		These are calculated fields. Actual revenue data from Tables 4.2.2.through to 4.2.6, and divide by the actual volumes in Table 4.1.1	Actual revenue data from Tables 4.2.2.through to 4.2.6, and divide by the actual volumes in Table 4.1.1	n/a
Table 4.2.2	Electricity to gas expenditure	Actual	*n/a*	*Project data from Oracle projects is uploaded into TM1 by project type, expense type & financial year. Projects are categorised by project types. All connections market expansion activities are categorised into AER categories that best fit the description.*	*Sourced directly from Oracle by executing the standard Oracle transactions, which deliver the reports for this activity. This activity is mapped to the specific regulatory category. These costs are exclusive of any related party margins applicable for the period 2005/06 to 2013/14. A seperate line has been identified for the Related Party Margin.*	*None*

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
		Forecast [Column M:R]	n/a	*Source for capex and overhead calculations: AAD - Capex Forecast Model - v19 - 04 Jun 15.xlsb* *Source for blended unit rates: AAD - ACT ME Unit Rates Model - v3 - 07May15.xlsx* *Source for escalation: AA17 - AAD Capex Cost Escalation Weights - V4 - 070515.xlsx* *Source for contributions: AAD AA15 - Historical capital contributions to capex ratio Market expansion - 16 Jun 15.xlsx* *Source for workings: AAD AA RIN working file 17Jun15.xlsx*	*Forecast direct un-escalated costs are derived from forecast routine volumes (from CORE Energy) and blended unit rates, which are based on a 4 years historical volume mix (FY10 to FY14) applied to the respective ASA unit rates.* *The forecast escalation and capital contributions are calculated in the capex forecast model. It is based on the BIS Shrapnel forecasted escalators and weights derived from FY14 actuals.* *For the forecast RPM, refers to the Global Basis of preparation.* *The forecast overheads are based on an estimated 6% AAD cost allocation methodology, commencing from FY16.*	*Un-escalated direct costs are reported under 'contractor expenditure'. However, escalations are forecasted based on the 'contractor expenditure' splits into labour, sub-contractor and other direct costs . This approach is adopted in the capex forecast model.*
Table 4.2.2 (RY06 to RY14) actual	Electricity to gas expenditure	RY06 to RY14 actual Direct contractor expenditure • Distribution mains • Service pipes • Meters and Related party margin expenditure for Electricity to gas	n/a	*Financial data is sourced from SAP - the ERP system that JAM uses to capture its financial information. Data is collected into cost collectors within SAP which are known as WBS Elements. Data can be captured at a lower level with SAP. These lower level cost collectors are known as Network Orders. The data in these cost collectors will form the basis of the billing to AAD.*	*Data is extracted from SAP projects (WBS Elements). This data is then mapped to asset classes and expenditure categories based on codes assigned to the data within the SAP project records.* *As part of the project naming convention for this client, JAM, includes the words "ACT" or "Nowra" as part of the project description. This assists with the separation of the "Nowra" project revenue and costs from the RIN. Nowra projects are excluded from the JAM ActewAGL RIN for regulatory purposes.* *Project financial data is mapped to RIN categories that allow the data to be populated in Tables 4 through to Table 8. Jemena used its experienced engineering team for this client to provide the mapping.* *As part a component of the profit margin calculation, JAM allocated its indirect costs to its capex projects on the basis of project revenue associated with this client. Indirect costs include corporate costs, sourced from the Jemena Group Corporate Cost Allocation Model and residual costs from capex related overhead expenses.*	*JAM assumed that its revenue less total costs equals profit margin*

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 4.2.3 (RY06 to RY14) actual	New homes	RY06 to RY14 actual Direct contractor expenditure • Distribution mains • Service pipes • Meters and Related party margin expenditure for Electricity to gas [Column L]	Same as for Table 4.2.2	Financial data is sourced from SAP - the ERP system that JAM uses to capture its financial information. Data is collected into cost collectors within SAP which are known as WBS Elements. Data can be captured at a lower level with SAP. These lower level cost collectors are known as Network Orders. The data in these cost collectors will form the basis of the billing to AAD.	Data is extracted from SAP projects (WBS Elements). This data is then mapped to asset classes and expenditure categories based on codes assigned to the data within the SAP project records. As part of the project naming convention for this client, JAM, includes the words "ACT" or "Nowra" as part of the project description. This assists with the separation of the "Nowra" project revenue and costs from the RIN. Nowra projects are excluded from the JAM ActewAGL RIN for regulatory purposes. Project financial data is mapped to RIN categories that allow the data to be populated in Tables 4 through to Table 8. Jemena used its experienced engineering team for this client to provide the mapping. As part a component of the profit margin calculation, JAM allocated its indirect costs to its capex projects on the basis of project revenue associated with this client. Indirect costs include corporate costs, sourced from the Jemena Group Corporate Cost Allocation Model and residual costs from capex related overhead expenses.	JAM assumed that its revenue less total costs equals profit margin.
		Forecast [Column M:R]	Same as for Table 4.2.2	Same as for Table 4.2.2	Same as for Table 4.2.2	Same as for Table 4.2.2
Table 4.2.4	Medium density / high rise	Estimated [Column L]	Same as for Table 4.2.2	Same as for Table 4.2.2	Same as for Table 4.2.2 Direct un-escalated cost for meter data loggers are also included.	Same as for Table 4.2.2
		Forecast [Column M:R]	Same as for Table 4.2.2	Same as for Table 4.2.2	Same as for Table 4.2.4	Same as for Table 4.2.2

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 4.2.4 (RY06 to RY14) actual	Medium density / high rise	RY06 to RY14 actual Direct contractor expenditure • Distribution mains • Service pipes • Meters and Related party margin expenditure for Electricity to gas		Financial data is sourced from SAP - the ERP system that JAM uses to capture its financial information.	Data is extracted from SAP projects (WBS Elements). This data is then mapped to asset classes and expenditure categories based on codes assigned to the data within the SAP project records. As part of the project naming convention for this client, JAM, includes the words “ACT” or “Nowra” as part of the project description. This assists with the separation of the “Nowra” project revenue and costs from the RIN. Nowra projects are excluded from the JAM ActewAGL RIN for regulatory purposes. Project financial data is mapped to RIN categories that allow the data to be populated in Tables 4 through to Table 8. Jemena used its experienced engineering team for this client to provide the mapping. As part a component of the profit margin calculation, JAM allocated its indirect costs to its capex projects on the basis of project revenue associated with this client. Indirect costs include corporate costs, sourced from the Jemena Group Corporate Cost Allocation Model and residual costs from capex related overhead expenses.	JAM assumed that its revenue less total costs equals profit margin.

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 4.2.5 (RY06 to RY14) actual	I&C tariff	RY06 to RY14 actual Direct contractor expenditure • Distribution mains • Service pipes • Meters and • Related party margin expenditure for Electricity to gas [Column L]		Financial data is sourced from SAP - the ERP system that JAM uses to capture its financial information. Data is collected into cost collectors within SAP which are known as WBS Elements. Data can be captured at a lower level with SAP. These lower level cost collectors are known as Network Orders. The data in these cost collectors will form the basis of the billing to AAD.	Data is extracted from SAP projects (WBS Elements). This data is then mapped to asset classes and expenditure categories based on codes assigned to the data within the SAP project records. As part of the project naming convention for this client, JAM, includes the words “ACT” or “Nowra” as part of the project description. This assists with the separation of the “Nowra” project revenue and costs from the RIN. Nowra projects are excluded from the JAM ActewAGL RIN for regulatory purposes. Project financial data is mapped to RIN categories that allow the data to be populated in Tables 4 through to Table 8. Jemena used its experienced engineering team for this client to provide the mapping. As part a component of the profit margin calculation, JAM allocated its indirect costs to its capex projects on the basis of project revenue associated with this client. Indirect costs include corporate costs, sourced from the Jemena Group Corporate Cost Allocation Model and residual costs from capex related overhead expenses.	JAM assumed that its revenue less total costs equals profit margin.

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 4.2.6 (RY06 to RY14) actual	I&C contract	RY06 to RY14 actual Direct contractor expenditure • Distribution mains • Service pipes • Meters and • Related party margin expenditure for Electricity to gas [Column L]		Financial data is sourced from SAP - the ERP system that JAM uses to capture its financial information. Data is collected into cost collectors within SAP which are known as WBS Elements. Data can be captured at a lower level with SAP. These lower level cost collectors are known as Network Orders. The data in these cost collectors will form the basis of the billing to AAD.	Data is extracted from SAP projects (WBS Elements). This data is then mapped to asset classes and expenditure categories based on codes assigned to the data within the SAP project records. As part of the project naming convention for this client, JAM, includes the words "ACT" or "Nowra" as part of the project description. This assists with the separation of the "Nowra" project revenue and costs from the RIN. Nowra projects are excluded from the JAM ActewAGL RIN for regulatory purposes. Project financial data is mapped to RIN categories that allow the data to be populated in Tables 4 through to Table 8. Jemena used its experienced engineering team for this client to provide the mapping. As part a component of the profit margin calculation, JAM allocated its indirect costs to its capex projects on the basis of project revenue associated with this client. Indirect costs include corporate costs, sourced from the Jemena Group Corporate Cost Allocation Model and residual costs from capex related overhead expenses.	JAM assumed that its revenue less total costs equals profit margin.
Table 4.2.7	Total new customer connection expenditure [Column L:R]	Estimated [Column L] Forecast [Column M:R]	Formula summing up Tables 4.2.2 to 4.2.6.	Formula summing up Tables 4.2.2 to 4.2.6.	Formula summing up Tables 4.2.2 to 4.2.6.	n/a
TAB 5	**Augmentation growth capacity**					

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 5.1 (RY06 to RY14) actual	Network Augmentation/ Growth capacity development (actual/forecast)	Estimated [Column P]		Financial data is sourced from SAP - the ERP system that JAM uses to capture its financial information. Data is collected into cost collectors within SAP which are known as WBS Elements. Data can be captured at a lower level with SAP. These lower level cost collectors are known as Network Orders. The data in these cost collectors will form the basis of the billing to AAD.	Data is extracted from SAP projects. This data is then mapped to asset classes and expenditure categories based on codes assigned to the data within SAP project records. Project financial data is mapped to RIN categories that allow the data to be populated in Tables 4 through to Table 8. Jemena used its experienced engineering team for this client to provide the mapping. As part a component of the profit margin calculation, JAM allocated its indirect costs to its capex projects on the basis of project revenue associated with this client. Indirect costs include corporate costs, sourced from the Jemena Group Corporate Cost Allocation Model and residual costs from capex related overhead expenses.	JAM assumed that its revenue less total costs equals profit margin.
		Forecast [Column Q,S:W]	n/a		Forecast direct un-escalated costs are based on individual cost estimation model (for projects > $200k). The forecast escalation is calculated in the capex forecast model. It is based on the BIS Shrapnel forecasted escalators and weights derived from FY14 actuals. For the forecast RPM, refers to the Global Basis of preparation. The forecast overheads are based on an estimated 6% AAD cost allocation methodology, commencing from FY16.	Project timings are subject to project assessments and budget.
Table 5.2	Network augmentation / Growth capacity development (approved)	Approved from 2 005 to 2015				
TAB 6	**Mains & services renewal**					

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 6 (RY06 to RY14) actual	Mains & Services Renewal Capital Expenditure		RY06 to RY14 actual Direct contractor expenditure and Related party margin expenditure	No applicable data - not populated. As these costs were paid by the Third Party other than AAD.	n/a	n/a
Table 6.1.1	Proactive mains replacement expenditure [Columns P:V]	Estimated [Column Q:V] Forecast [Column M:R]	There is no proactive mains replacement projects planned in the access arrangement period of 2016-2021.			
Table 6.1.2	Ad hoc/reactive mains and services replacement					
		Estimated [Column Q:V]	FY15 data is an estimate based on 7 months actuals and 5 months forecast.	*<u>Source for direct un-escalated costs:</u> AAD - Capex Forecast Model - v19 - 04 Jun 15.xlsb* *<u>Source for escalation:</u> AA17 - AAD Capex Cost Escalation Weights - V4 - 070515.xlsx* *<u>Source for workings:</u> AAD AA RIN working file 17Jun15.xlsx*	Estimated capital expenditure is based on 7 mths actuals and 5 months forecast. Estimated escalation is based on the forecast escalators and escalation weights dervied from the FY14 actuals.	n/a
		Forecast [Column M:R]	n/a		Forecast direct un-escalated costs for ActewAGL Funded Relocation Projects is an allocation for relocation projects identified durng the year. The forecast escalation is calculated in the capex forecast model. It is based on the BIS Shrapnel forecasted escalators and weights derived from FY14 actuals. For the forecast RPM, refers to the Global Basis of preparation. The forecast overheads are based on an estimated 6% AAD cost allocation methodology, commencing from FY16.	n/a

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 6.1.3	Total mains replacement expenditure [Columns P:V]	Estimated [Column Q:V] Forecast [Column M:R]	Formula summing up Tables 6.1.1 and 6.1.2.	Formula summing up Tables 6.1.1 and 6.1.2.	Formula summing up Tables 6.1.1 and 6.1.2.	n/a
TAB 7	**Facilities renewal & Upgrade**					
Table 7.1	Facilities renewal and upgrade expenditure (actual / forecast)	Actual	Chris Walker			
		Estimated [Column P]	FY15 data is an estimate based on 7 months actuals and 5 months forecast.	*Source for direct un-escalated costs: AAD - Capex Forecast Model - v19 - 04 Jun 15.xlsb* *Source for escalation: AA17 - AAD Capex Cost Escalation Weights - V4 - 070515.xlsx* *Source for workings: AAD AA RIN working file 17Jun15.xlsx*	Estimated capital expenditure is based on 7 mths actuals and 5 months forecast. Estimated escalation is based on the forecast escalators and escalation weights dervied from the FY14 actuals.	n/a
		Forecast [Column Q,S:W]	n/a		Forecast direct un-escalated costs are based on individual cost estimation model (for projects > $200k). The forecast escalation is calculated in the capex forecast model. It is based on the BIS Shrapnel forecasted escalators and weights derived from FY14 actuals. For the forecast RPM, refers to the Global Basis of preparation. The forecast overheads are based on an estimated 6% AAD cost allocation methodology, commencing from FY16.	Project timings are subject to project assessments and budget.

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 7.1 (RY06 to RY14) actual	Facilities renewal and upgrade expenditure (actual / forecast)	RY06 to RY14 actual Direct contractor expenditure and Related party margin expenditure		Financial data is sourced from SAP - the ERP system that JAM uses to capture its financial information. Data is collected into cost collectors within SAP which are known as WBS Elements. Data can be captured at a lower level with SAP. These lower level cost collectors are known as Network Orders. The data in these cost collectors will form the basis of the billing to AAD.	Data is extracted from SAP projects. This data is then mapped to asset classes and expenditure categories based on codes assigned to the data within SAP project records. Project financial data is mapped to RIN categories that allow the data to be populated in Tables 4 through to Table 8. Jemena used its experienced engineering team for this client to provide the mapping. As part a component of the profit margin calculation, JAM allocated its indirect costs to its capex projects on the basis of project revenue associated with this client. Indirect costs include corporate costs, sourced from the Jemena Group Corporate Cost Allocation Model and residual costs from capex related overhead expenses.	JAM assumed that its revenue less total costs equals profit margin.
Table 7.2	Facilities renewal and upgrade expenditure (approved)	Approved from 2010 to 2015				
TAB 8	**Meter renewal & Upgrade**					
8.1	Number of meters removed (actual/forecast	Actual		*Sourced from GASS report of all meters removed in the period Data recorded on installation date*	*Gass enquiry on NetWplay,*	*Data is actual meters removed by date removed, hence there may be a mismatch across years due to delays in invoicing*

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
		Forecast	Forecast by Select solutions based on aged replacement Water meters as per OBs, Defective rate based on historical rates/OBs	*Source data for forecast based on RIN Data supplied by Select Solutions (utilised in Tables 8.7,8 & 9) plus estimate for defective removals* *Water meter data sourced from defective and planned replacement opportunity briefs*	*Forecast data provided Select Solutions. Plus defective forecasts (water and gas) as detailed in Opportunity briefs*	
Table 8.2.1 & 8.2.2	Meter replacement expenditure [Columns M:S]	Estimated [Column M]	*FY15 data is an estimate based on 7 months actuals and 5 months forecast.*	*Formula summing up Tables 8.3, 8.5 and 8.6.*	*Formula summing up Tables 8.3, 8.5 and 8.6.*	*n/a*
		Forecast [Column N:S]	*n/a*			

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 8.2 (RY06 to RY14) actual	Facilities renewal and upgrade expenditure (actual / forecast)		RY06 to RY14 actual Direct contractor expenditure and Related party margin expenditure	*Financial data is sourced from SAP - the ERP system that JAM uses to capture its financial information. Data is collected into cost collectors within SAP which are known as WBS Elements. Data can be captured at a lower level with SAP. These lower level cost collectors are known as Network Orders. The data in these cost collectors will form the basis of the billing to AAD.*	*Data is extracted from SAP projects (WBS Elements). This data is then mapped to asset classes and expenditure categories based on codes assigned to the data within the SAP project records.* *As part of the project naming convention for this client, JAM, includes the words "ACT" or "Nowra" as part of the project description. This assists with the separation of the "Nowra" project revenue and costs from the RIN. Nowra projects are excluded from the JAM ActewAGL RIN for regulatory purposes.* *Project financial data is mapped to RIN categories that allow the data to be populated in Tables 4 through to Table 8. Jemena used its experienced engineering team for this client to provide the mapping.* *As part a component of the profit margin calculation, JAM allocated its indirect costs to its capex projects on the basis of project revenue associated with this client. Indirect costs include corporate costs, sourced from the Jemena Group Corporate Cost Allocation Model and residual costs from capex related overhead expenses.*	*JAM assumed that its revenue less total costs equals profit margin.*
8.3	Replacement meter installation expenditure (actual/forecast)	Historical	Volume data	*Volume data for meters sourced from GASS report of replaced gas meters*	*Data Sourced from GASS*	*Volume data is actual date replaced from gass data* *Water meter volumes actual meters removed* *Potential of some slippage between volume and $ due to delays in invoicing*
		Historical	Cost data	*Cost date Sourced from SAP*		*Data provided is the related party margins only*
Table 8.3.1 to 8.3.3	Meter replacement installation expenditure - Residential / Industrial and commercial / Water	Estimated [Column M]	*FY15 data is an estimate based on 7 months actuals and 5 months forecast.*	*Source for gross capex: (1) AAD - Capex Forecast Model - v19 - 04 Jun 15.xlsb and (2) AAD - ACT SIB meter replacement unit rate model - v4 - 07May15.xlsx* *Source for escalation: AA17 - AAD Capex Cost Escalation Weights - V4 - 070515.xlsx* *Source for workings: AAD AA RIN working file 17Jun15.xlsx*	*Estimated capital expenditure is based on 7 mths actuals and 5 months forecast.* *Forecast capex is based on replacement volumes and ASA unit rates.* *Installation expenditure is forecasted based on the actual FY14 weightings for ZNX labour and contract labour reported in the financial reports.*	*n/a*
		Forecast [Column N:S]	*n/a*			

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 8.3.4	Total meter replacement installation expenditure	Estimated [Column M]	*FY15 data is an estimate based on 7 months actuals and 5 months forecast.*	*Formula summing up Tables 8.3.1 to 8.3.3.*	*Formula summing up Tables 8.3.1 to 8.3.3.*	*n/a*
		Forecast [Column N:S]	*n/a*			
Table 8.4	Meter replacement expenditure (approved)	Approved from 2 005 to 2015		*Data from previous AA*		*Data to be provided by Actew AGL regulatory group*
Table 8.5	Meter replacement expenditure (actual/forecast)	Historcal costs		*Material costs sourced from SAP to be consistent with other financial data*	*Material costs are not tracked post 2013*	*The material costs have not been deducted form the total installation costs in table 8.3* *2012 and onwards, including forecast, are based the DAMS rates. DAMS rates are inclusive of all costs and hence materials costs are not separately tracked in the SAP system* *Material costs are a subset of 8.3 ie material costs have not been deducted from 8.3 data*
Table 8.5.1	Meter replacement expenditure - New meters acquired	Estimated [Column M]	*FY15 data is an estimate based on 7 months actuals and 5 months forecast.*	*Source for gross capex: (1) AAD - Capex Forecast Model - v19 - 04 Jun 15.xlsb and (2) AAD - ACT SIB meter replacement unit rate model - v4 - 07May15.xlsx* *Source for escalation: AA17 - AAD Capex Cost Escalation Weights - V4 - 070515.xlsx* *Source for workings: AAD AA RIN working file 17Jun15.xlsx*	*Estimated capital expenditure is based on 7 mths actuals and 5 months forecast.* *Forecast capex is based on replacement volumes and ASA unit rates.* *Installation expenditure is forecasted based on the actual FY14 weightings for ZNX materials and other direct costs reported in the financial reports.*	*New residential gas meters and water meters are assumed in the replacement programs.* *Refurbished I&C meters are assumed in the replacement programs.*
		Forecast [Column N:S]	*n/a*		*Refer 8.3 notes re source of volume data*	*All domestic meters and water meters are new* *Refer 8.3 notes re source of volume data*
	New Meters Acquired Water meters	historical	*Material costs*		*Prior to 2010 water meter materials were accounted for in the Residential meter cost codes, hence no data is available from SAP for water meters.*	*2010/11 appears to have only some of the materials accounted for in the year resulting in a low unit cost.* *Ie accounting separately from Residential metes possible only occurred for part of the year*

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 8.5.2	Meter replacement expenditure - Meters refurbished	Estimated [Column M]	*FY15 data is an estimate based on 7 months actuals and 5 months forecast.*			
		Forecast [Column N:S]	*n/a*			
Table 8.6	Other meter replacement expenditure	Estimated [Column M]	*FY15 data is an estimate based on 7 months actuals and 5 months forecast.*	*Source for gross capex: (1) AAD - Capex Forecast Model - v19 - 04 Jun 15.xlsb and (2) AAD - ACT SIB meter replacement unit rate model - v4 - 07May15.xlsx* *Source for escalation: AA17 - AAD Capex Cost Escalation Weights - V4 - 070515.xlsx* *Source for workings: AAD AA RIN working file 17Jun15.xlsx*	*This table includes estimated/forecast capex expenditures for metering devices other than meters.* *Estimated capital expenditure is based on 7 mths actuals and 5 months forecast.* *Forecast capex is based on replacement volumes and ASA unit rates.*	*n/a*
		Forecast [Column N:S]	*n/a*			

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 8.6 (RY06 to RY14) actual	Other meter replacement expenditure (actual/forecast)		*RY06 to RY14 actual Direct contractor expenditure and Related party margin expenditure*	*Financial data is sourced from SAP - the ERP system that JAM uses to capture its financial information. Data is collected into cost collectors within SAP which are known as WBS Elements. Data can be captured at a lower level with SAP. These lower level cost collectors are known as Network Orders. The data in these cost collectors will form the basis of the billing to AAD.*	*Data is extracted from SAP projects (WBS Elements). This data is then mapped to asset classes and expenditure categories based on codes assigned to the data within the SAP project records.* *As part of the project naming convention for this client, JAM, includes the words "ACT" or "Nowra" as part of the project description. This assists with the separation of the "Nowra" project revenue and costs from the RIN. Nowra projects are excluded from the JAM ActewAGL RIN for regulatory purposes.* *Project financial data is mapped to RIN categories that allow the data to be populated in Tables 4 through to Table 8. Jemena used its experienced engineering team for this client to provide the mapping.* *As part a component of the profit margin calculation, JAM allocated its indirect costs to its capex projects on the basis of project revenue associated with this client. Indirect costs include corporate costs, sourced from the Jemena Group Corporate Cost Allocation Model and residual costs from capex related overhead expenses.*	*JAM assumed that its revenue less total costs equals profit margin.*
Table 8.7	Other meter replacement expenditure	Estimated [Column M]	*Forecast by Select solutions based on aged replacement strategy*			
		Forecast [Column N:S]	*Forecast by Select solutions based on aged replacement strategy*			
Table 8.8	In service compliance testing results	Actual/Historical		*Sourced from Select Solutions Report of statistical testing results*	*Compilation of statistical testing results*	

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 8.9	Meter removals		*Forecast by Select solutions based on aged replacement strategy*	*Source data for forecast based on RIN Data supplied by Select Solutions*		
TAB 9	**Captalised regulatory exp.**					
Table 9.1	Capitalised regulatory expenditure (actual / estimate)	Actual	*n/a*	*Project data from Oracle projects is uploaded into TM1 by project type, expense type & financial year.*	*Sourced directly from Oracle by executing the standard Oracle transactions, which deliver the reports for this activity. This activity is mapped to the specific regulatory category. This activity has no related party margins & was treated as capital in the regulatory period before 2010. After 2010 it was treated as operating expenditure.*	*None*
Table 9.2	Capitalised regulatory expenditure (approved)	Nil				
TAB 11	**Other non-distb**					
Table 11.1	Other non-distribution capital expenditure (actual / forecast)	Actual	*n/a*	*No data exists for this caregory*		
Table 11.2	Other non-distribution capital expenditure (approved)	Nil				
TAB 12	**IT & Communications**					
Table 12.1	IT & communications					

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
	expenditure	Forecast	*n/a*	*Source for gross capex: AAD - Capex Forecast Model - v19 - 04 Jun 15.xlsb* *Source for escalation: AA17 - AAD Capex Cost Escalation Weights - V4 - 070515.xlsx* *Source for workings: AAD AA RIN working file 17Jun15.xlsx*	*Forecast capex is documented in the Opportunity Brief.* *The forecast escalation and capital contributions are calculated in the capex forecast model. It is based on the BIS Shrapnel forecasted escalators and weights derived from FY14 actuals.* *For the forecast RPM, refers to the Global Basis of preparation.* *The forecast overheads are based on an estimated 6% AAD cost allocation methodology, commencing from FY16.*	*n/a*
Table 12.2	IT & communications expenditure (approved)	Approved from 2010 to 2015				
TAB 14	**Overheads**					
Table 14.1	Total overhead expenditure (actual/forecast)					
Table 14.2	Internal labour overhead expenditure (actual/forecast)	Actual	*n/a*	*The numbers were sourced from the current payroll system) and reconciled back to Salary and Wages including Applied Payroll Costs in the General Ledger*	*Labour ($) - The numbers were sourced from the current payroll system) and reconciled back to Salary and Wages including Applied Payroll Costs in the General Ledger as per RIN guidelines. Where variances arose between the numbers in the bud_salary cube and the General Ledger, the variance was appropriately apportioned (using weighting) over each of the categories to ensure that the numbers matched back to what was in the General Ledger. For the 2008/09 year, the information available was not as detailed as for the other years. Using total salary and wages including APC's taken directly from the GL, the amounts were apportioned into respective categories by using a weighted average of the category costs from 2009/10 to 2013/14.The classifications were based on their classification levels as set out in ActewAGL's current Enterprise Bargaining Agreement (EBA). The total for contractors was taken from the General ledger. A weighting was applied to determine the split between direct skilled and direct unskilled.*	

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
				The information above has been taken from the bud_salary cube for 2009/10 onwards and the FTE_Summary cube for 2008/09	*FTE's - The information above has been taken from the bud_salary cube for 2009/10 onwards and the FTE_Summary cube for 2008/09. For the 2008/09 year, the information available was not as detailed as for the other years. Using total FTE's (as sourced from the FTE cube in TM1), the FTE's were apportioned into respective categories by using a weighted average of the FTE's from 2009/10 to 2013/14.*	
Table 14.3	Capex/opex overhead apportionment (actual/forecast)					
Table 14.4	Capex overhead rates - Capex overhead amount	Forecast	*n/a*	*Formula summing up overhead in the summary tables in Tab 4,5,6,7,8,11,and 12.*	*The forecast overheads are based on an estimated 6% AAD cost allocation methodology, commencing from FY16.*	*n/a*
Table 14.5	Capex overhead rates (approved)	Nil				
TAB 15	**Related party transactions**					
Table 15.1	Payments made by ActewAGL Distribution to Related Party	Actual Forecast	*n/a*	*Source for workings: AAD AA RIN working file 17Jun15.xlsx*	*For forecast RPM, refer to the Global Basis of Preparation.* *Nominated JAM (nil RPM) & ZNX (5% in CMF + 5% on NRW <$500k)*	*n/a*
Table 15.2	Payments Received by ActewAGL Distribution from Related Party					
Table 15.3	Related party margin expenditure	Actual Forecast	*n/a*	*Formula summing up RPM in the summary tables in Tab 4,5,6,7,8,11,and 12.*	*For forecast RPM, refer to the Global Basis of Preparation.* *There is nil RPM from JAM.*	*n/a*
Table 15.4	Related party margin expenditure (approved)					
Table 15.5	Per cent of capex outsourced to related party (actual/forecast)					
TAB 16	**Capex Allocation**					

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 16.1 [Table 16.1.1 to 16.1.13]	Allocation of capital expenditure driver classes to asset classes	Actual/Forecast	*N/A*	*GN Capex Model 2015*	*Capex by asset class by capex category.*	*There has been some slight adjustments between asset classes before 2010. Thus the Roll Forward Model produced in 2010 is different for the years 2005/06 to 2008/09 but in totality are the same.*
TAB 17	**Gross capex**					
Table 17.1	Gross capex including RPM	Actual Forecast	*n/a*	*Source for gross capex: AAD - Capex Forecast Model - v19 - 04 Jun 15.xlsb Sheet: Output|Reg*	*Gross capex by asset class. For forecast RPM, refer to the Global Basis of Preparation.*	*n/a*
Table 17.2	Gross capex including RPM (approved)					
Table 17.3	Gross capex excluding RPM	Actual Forecast	*n/a*	*Source for gross capex: AAD - Capex Forecast Model - v19 - 04 Jun 15.xlsb Sheet: Output|Reg*	*Gross capex by asset class. For forecast RPM, refer to the Global Basis of Preparation.*	
Table 17.4	Gross capex excluding RPM (approved)					
TAB 18	**Tax Depreciation**					
Table 18.1	System asset class	Actual	*n/a*	*The AER's 2010 final decision.*	*ActewAGL Distribution has compared the depreciation rates used in the 2010 final decision with ActewAGL Distribution's actual depreciation rate of these asset classes and concluded that they are reasonable.*	*See the column 'Methodology' to the left.*
Table 18.2	Non-system assets				*In relation to non-network assets, ActewAGL Distribution has updated the AER's pre-populated asset classes with the only non-network asset class that ActewAGL Distribution has: GIS networks.*	
TAB 19	**Depreciation & asset lives**					
Table 19.1	System asset class	Actual	*n/a*	*The AER's 2010 final decision.*	*ActewAGL Distribution has compared the depreciation rates used in the 2010 final decision with ActewAGL Distribution's actual depreciation rate of these asset classes and concluded that they are reasonable.*	*See the column 'Methodology' to the left.*
Table 19.2	Non-system assets				*In relation to non-network assets, ActewAGL Distribution has updated the AER's pre-populated asset classes with the only non-network asset class that ActewAGL Distribution has: GIS networks.*	
TAB 20	**Changes in Provision**					

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 20.1	Changes in provisions (including RPM)	Actual	*N/a*	*Historic expenditure data from Oracle General Ledger is uploaded into TM1 by balance sheet natural account & financial year.*	*Sourced directly from Oracle by executing the standard Oracle transactions, which deliver the reports for specific provision accounts.*	*None*
Table 20.2	Changes in provisions by provision (including RPM)	Nil				
TAB 21	**Indicative bill impacts**					
Tabel 21.1 & Table 21.2	Typical Gas Bill - Residential Customer & Business customer	Actual & forecast	n/a	1) ActewAGL Network Charges for Period Ending 30 June 2016 see http://www.actewagl.com.au/About-us/The-ActewAGL-network/Natural-gas-network/About-ActewAGL-Distribution-Gas-Networks/Natural-gas-network-prices.aspx 2) ActewAGL Retail Standaring Residential and Industrial & Commercial offers see http://www.actewagl.com.au/Product-and-services/Prices/Residential/ACT/Natural-gas-prices.aspx	1) Cell D19 calculated using 2014-15 AAD Network reference rates GST exclusive divided by ActewAGL Retauk 2014-15 standard rates GST exclusive 2) This sheet is used to calculate network revenues for typical customers. This sheet is designed to use % of network bill as an input and current end customer bills to validate the price path. JGN/AAD expertise in in calculating network bills. Using the indicative % from cell D19 the end customer bills were calculated to give the correct network charge for these typical customers.	1) Assumed 45 GJ/a is average Residential customer 2) Assumed 480 GJ/a is average usage for Business customer
Table 21.3	Indicative annual average distribution price impact	forecast	*n/a*	*1) ActewAGL submission PTRM used to source smoothed nominal / real price path* *2) Forecast of Energy Delivered for the Volume market taken from Core Energy Submission Demand Forecast model see 'Summary' sheet in file: ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm*		*1) Smoothed revenues are indicative of the Volume Market only 2) Energy Delivered is indicative of the Volume market only 3) CPI assumed is reflective of the submission PTRM model*
Table 21.4	Distribution bill component - Residential customer	Nil				

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 21.5	Distribution bill component - Business customer	Nil				
TAB 23	**Opex incl. RPM**					
TAB 23.1	Opex incl. RPM	Actual historical / estimated historical	*N/a*	*Historic expenditure data from Oracle Projects & General Ledger is uploaded into TM1 by project type, expense types & financial year.*	*Sourced directly from Oracle by executing the standard Oracle transactions, which deliver the reports for this activity/Expense Type. This activity/Expense type is mapped to the specific regulatory category.*	*None*
		Forecast	*N/a*	*ActewAGL Distribution's opex model*	*Equal to forecasts in table 23.2*	*No RPM included in forecast*
Table 23.2	Operating expenditure excluding RPM	Actual historical	*N/A*	*Historic expenditure data from Oracle Projects & General Ledger is uploaded into TM1 by project type, expense types & financial year.*	*Sourced directly from Oracle by executing the standard Oracle transactions, which deliver the reports for this activity/Expense Type. This activity/Expense type is mapped to the specific regulatory category. Table 23.2 is a replication of table 23.1 but has been adjusted by the actual Related Party Margin percentages that have been calculated by Jemena. The related party margin for Asset Management & Asset Services has been aggregated together to produce an average margin for both services.*	*None*
		Forecast	*N/A*	*ActewAGL Distribution's opex model*	*Refer to:* *• section 5.4.2 of the access arrangement information – attachment 5: Operating expenditure; and* *• ActewAGL Distribution's opex model*	*No RPM included in forecast*

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
TAB 23.3	Opex rate-of-change	Forecast	*N/A*	*ActewAGL Distribution's opex model*	*ActewAGL Distribution identified errors in the formulas of this table and has amended these to reflect AAD's approach and understanding of the AER's standard approach.* *'Efficient recurrect opex' formula has been updated to exclude prior year's step changes* *'Total opex' formula has been updated to reflect ActewAGL Distribution's and AER's standard approach.* *Note: this table excludes other allowable/category specific forecasts.*	
TAB 24	**Cost category matrix - Capex**					
Table 24.1	Cost category matrix - Capex	Actual Forecast	*n/a*	*Formula summing up un-escalated direct expenditures in the summary tables in Tab 4,5,6,7,8,11,and 12.*	*Formula summing up un-escalated direct expenditures in the summary tables in Tab 4,5,6,7,8,11,and 12.*	*n/a*
Table 24.2	Cost category matrix - opex					
TAB 25	**ARS**					
Table 25.1	Volume of Ancillary Reference Services	2006-2010 estimated history	*AAD's financial records for the period 2006-2010 provide the actual total revenues recovered from Ancillary Reference Services but not a break down by each service.*	*1) SAP extract of GL balances provided by finance in file TAB 25 ARS_JJ_sent by finance.xlsx see sheet ' 25. ARS ' which shows total revenue from ARS for 2006-2010*	*1) Allocate 2006-2010 total ARS revenue for each year to each service by applying an average % based on 4 years of actual revenues by service (2011-2014).* *2) Divide allocated revenue by service by the price of the particular service in that year to estimate the volume*	*1) Applied 4 year average of actual revenues by service (2011-2014) ratios to apportion total revenues to each service for period 2006-2010. Ratios determined are 0.02% to RFS hours, 6.35% to Disconnections, 0.82% to Disconnections & 92.80% to Special Meter Reads (%s indicate proportion of total revenue assigned to each service)*

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 25.1	Volume of Ancillary Reference Services	2011- 2014 Actuals 2015-2021 Forecast	*n/a*	*1) RFS actual volumes from 2011-2014 were sourced from file RFS hours ACTEWAGL July 2010- June 2015.xlsx, see 'Sheet 1' as provided by Billing.* *2) Actual volumes of special meter reads from 2011-2014 were sourced from GASS+ see file Special read historical data incl FY2010-11.xlsx see 'Sheet 1'* *3) Disconnection and Reconnection actual volumes from 2011-2014 were sourced from GASS+ in file 30 12 2014 Ancillary Services.xlsx see sheets ' From Sonny 141212' & ' Disconnection Summary'* *4) Forecast of ARS volumes from 2015-2021 in existing ARS structure sourced from Core Energy Demand Forecast model file name: ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm, see sheets 'Pricing Block Summary' , 'Tariff_Residential_Volume' , 'Tariff_Business_Volume' , 'Residential Pricing Block' & 'Business Pricing Block'*	*1) ARS will change from 2017. RFS and Special meter reads will remain however, disconnections and reconnections will be removed. Instead they will be replayed by residential disconnections, residential reconnections, business disconnection, business reconnection, decommission & meter removal - residential & decommission & meter removal - business.*	*1) ARS forecast from 2015-2021 as per Core Energy's Demand Forecast model in file ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm, see sheets 'Pricing Block Summary' , 'Tariff_Residential_Volume' , 'Tariff_Business_Volume' , 'Residential Pricing Block' & 'Business Pricing Block'*

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 25.2	Revenue from Ancillary Reference Services	2006-2010 estimated history / actuals	*AAD's financial records for the period 2006-2010 provide the actual total revenues recovered from Ancillary Reference Services but not a break down by each service.*	*1) SAP extract of GL balances provided by finance in file TAB 25 ARS_JJ_sent by finance.xlsx see sheet ' 25. ARS ' which shows total revenue from ARS for 2006-2010*	*1) Allocate 2006-2010 total ARS revenue for each year to each service by applying an average % based on 4 years of actual revenues by service (2011-2014).*	*1) Applied 4 year average of actual revenues by service (2011-2014) ratios to apportion total revenues to each service for period 2006-2010. Ratios determined are 0.02% to RFS hours, 6.35% to Disconnections, 0.82% to Disconnections & 92.80% to Special Meter Reads (%s indicate proportion of total revenue assigned to each service)*
Table 25.2	Revenue from Ancillary Reference Services	2011- 2014 Actuals 2015-2021 Forecast	*n/a*	*1) This table is a calculation of Volume in table 25.1 and price in Table 25.3* *2) ARS Prices applied are reflective of ActewAGL 2006-2016 Tariff Schedules* *3) Forecast ARS prices applied are as reflected in ActewAGL's AA submission Post Tax Revenue Model*	*1) Multiply actual and forecast volumes of ancillaries (table 25.1) with actual and forecasted network prices (table 25.3)*	*1) ARS price forecast reflective of ActewAGL's submission Post Tax Revenue Model / internal pricing model 2) ARS Prices applied are reflective of ActewAGL 2006-2016 Tariff Schedules*
Table 25.3	Price - Ancillary Reference Services	2006-2016 Actuals 2017-2021 Forecast	*n/a*	*1) ARS price forecast reflective of ActewAGL's submission Post Tax Revenue Model / internal pricing model* *2) ARS Prices applied are reflective of ActewAGL 2006-2016 Tariff Schedules*	*1) ARS price forecast reflective of ActewAGL's submission Post Tax Revenue Model / internal pricing model 2) ARS Prices applied are reflective of ActewAGL 2006-2016 Tariff Schedules*	*1) ARS will change from 2017. RFS and Special meter reads will remain however, disconnections and reconnections will be removed. Instead they will be replayed by residential disconnections, residential reconnections, business disconnection, business reconnection, decommission & meter removal - residential & decommission & meter removal - business.*

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 25.4 (added)	Volume Backcast of Ancillary Reference Services	2006-2016 actual estimates 2017-2021 forecast	*The forecast ARS structure beginning 2017 has not existed historically. This table aims to estimate how the historical volumes of ARS would be allocated to the future ARS structure, if the future structure existed historically.*	*1) Historical and forecast volumes of ARS sourced from Table 25.1* *2) Forecast of ARS in new structure from Core Energy Demand Forecast model ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm, see sheets 'Residential Pricing Block' & 'Business Pricing Block'*	*1) Aggregated actual volumes of disconnections and reconnections for 2006-2011 period* *2) Calculated 5 year average (2017-2021) proportions of forecast ARS in Core Energy's Demand forecast model. Determined disconnection & decommission Residential / Business split (98%:2%) then Disconnection / Decommission split for both residential (13%:87%) & business (62%:38%) and finally Reconnection split by Residential / Business (87%:13%) 3) Applied proportions (%) to historical volumes of disconnections and reconnections to estimate these volumes in the future ARS structure*	*1) ARS will change from 2017. RFS and Special meter reads will remain however, disconnections and reconnections will be removed. Instead they will be replayed by residential disconnections, residential reconnections, business disconnection, business reconnection, decommission & meter removal - residential & decommission & meter removal - business.*
TAB 26	**Allocation of total revenue**					
Table 26.1	Allocation of Total Revenue	forecast 2017-2021	*n/a*	*1) Cost of Service Model for estimates of tariff classes, stand alone & avoidable costs* *2) 2016-2020 revenue estimates sourced from JGN pricing model as at 19/05/2014*	*1) Stand alone and avoidable cost estimates as reflected in submission Cost of Service model* *2) Revenues and pricing model estimates for individual tariffs as at 10/06/2015*	
Table 26.2	Ancillary reference services	Nil				
Table 26.3	Rebateable services	Nil				
Table 26.4	Non-reference services	Nil				
TAB 27	**Customer numbers**					
Table 27.1	Tariff Customer Numbers					

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 27.1.1	Volume Market Customer Numbers - Residential	2007-2014 actuals 2015 - 2021 forecast	*n/a*	*1) 2007 - 2014 actual customer numbers sourced from GASS+. Same data source used to report customer numbers in the annual RINS. See 'Sheet 1' in file ACT historical Customer Numbers.xlsx* *2) Forecast of customer numbers from 2015-2021 sourced from Core Energy's Demand Forecast model in file ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm, see sheets 'Residential Pricing Block', 'Business Pricing Block' & 'Pricing Block Summary'* *3) 2008-2016 new connections sourced from Tab 4 of the AA RIN for VRI tariff.* *4) Forecast of new connections by new tariffs from 2017-2021 sourced from Core Energy's Demand Forecast model in file ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm, see sheets 'Residential Pricing Block', 'Business Pricing Block' & 'Pricing Block Summary'* *5) Forecast of disconnections by Residential / Business tariff groups from 2017-2021 sourced from Core Energy's Demand Forecast model in file ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm, see sheets 'Residential Pricing Block', 'Business Pricing Block' & 'Pricing Block Summary*	*1) 2007-2014 actual and 2015-16 forecast Volume market residential customer numbers allocated to VRI tariff as this is equivalent of the current tariff market.* *2) 2017-2021 allocation of customers to new tariff structures as per Core Energy Demand Forecast model 3) New connections from 2017-2021 were allocated to new tariffs as per Core Energy Demand forecast model* *4) Disconnections from 2017-2021 were allocated to new tariff structure by multiplying total disconnections for Residential / Business tariff groups by the connection share (%) of each tariff class as per Core Energy Demand Forecast model.* *5) Important to note Core Energy's Demand Forecast model forecasts average number of customers for June 30 ending years for billing purposes. The customer numbers populated in this RIN are reflective of total customer numbers*	*1) Uptake of VRB tariff will reduce the number of customers in the VRI tariff over 2016-2020 period* *2) VRB customer numbers are representative of total billable customers as opposed to total end customers forecast as part of new connections (Core assumed 30 end customers per VRB site)* *3) Core Energy Group's forecast of disconnections is the number of customer who will permanently leave the network as opposed to AAD's disconnection services where customers may be disconnected and reconnected etc* *4) New tariff structures will only be available from 1 July 2016*

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 27.1.2	Volume Market Customer Numbers - Business	2017-2021 Forecast	*n/a*	*1) 2017-2021 customers numbers in Business tariffs sourced from Core Energy's Demand Forecast model in file ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm, see sheets 'Business Pricing Block' & 'Pricing Block Summary'*	*1) Applied the customer number forecast from Core Energy Demand Forecast model from 2017 onwards as the new tariff structures will only be available from 1 July 2016.*	
Table 27.2	Demand Market Customer numbers	2006-2007 Estimate	*Data for this period was unavailable. Assumed there was a 0 net movement in customers from end of 2006- beginning of 2008*	*1) Core Energy Demand forecast model see file ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm, see sheets 'Business Pricing Block' & 'Non-Tariff Pricing Block'*		*1) Assumed a 0 net movement in customers from 2006 - 2008, i.e customer numbers in 2006 & 2007 = 2008*
TAB 28	**Consumption and demand**					
Table 28.1.1 & 28.1.2	Volume Market Consumption - Residential & Business tariffs	2006-2014 Actuals 2015-2021 forecast	*n/a*	*1) Core Energy Demand forecast model see file ActewAGLGAAR_Gas Demand Forecast_Model_FINAL_V7.xlsm, see sheets 'Residential Pricing Block' , 'Business Pricing Block' & 'Non-Tariff Pricing Block'* *2) 2006 & 2007 actuals from Historical Monthly Billing Data_ACT with % Split.xlsx*	*1)Multiplied total Volume market consumption from 2006-2016 to the VRI block structure using the %'s from Core Energy's Demand forecast model (this tariff although being introduced from 1 July 2016 is a default tariff which mirrors the existing tariff)* *2) Used Core Energy's allocation of demand to new tariff structures from 2017 to 2021*	*1) Assumed all historical Volume market consumption would fall into the VRI tariff*
Table 28.2	Demand Market Consumption	2006& 2007 historical estimate	*Data for this period was unavailable. Assumed 2008 consumption was the same in 2006 & 2007*	*1) Tab 28 in this file.*		*1) Assumed 2008 actual consumption was the same in 2006 & 2007 as an estimate*

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
TAB 29.1	**Gas extensions ($)**					
Table 29.1.1	Revenue Information (incl. surcharge or premium revenue)	N/A				
Table 29.1.2	Operations and Maintenance Cost	N/A				
Table 29.1.3	Capital expenditure	N/A				
TAB 29.2	**Gas extensions cust no**					
Table 29.2.1	Tariff customer numbers	N/A				
Table 29.2.1.1	Residential tariff	N/A				
Table 29.2.1.2	Business tariff - customer numbers	N/A				
Table 29.2.2	Contract customer numbers	N/A				
TAB 29.3	**Gas extensions - demand**					
Table 29.3.1	Residential tariff	N/A				
Table 29.3.2	Business tariff	N/A				
Table 29.3.3	Contract demand	N/A				
TAB 29.4	**Gas extensions - tariffs**					
Table 29.4.1	Residential tariffs	N/A				
		N/A				
Table 29.4.3	Contract tariffs	N/A				
TAB 30	**Network characteristics**					
Table 30.1	Network Characteristics - Network Length	Actual [Columns C:K]	*n/a*	*Actual network lengths data is extracted from the GIS system. Source: AAD RIN Tb 30 network lengths - 21May15.xlsx*	*GIS data is pivoted by pipe materials and commissioning year. Data presents the total lengths commissioned in the year.*	*Latest records are dependent on the mapping updates.*

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
		Forecast [Column M:R]	*n/a*	*Forecast network lengths data is based on the forecast capex program. Source: AAD - Capex Forecast Model - v19 - 04 Jun 15.xlsb*	*Data presented in the columns are cumulative from the actuals. The additional lengths from the forecast are based on the forecasted new mains in Market Expansion and Capacity Development projects in which lengths are included at the project completion.*	*The forecasted new mains lengths are dependent on the number and type of connections in Maraket Expansion, as well as the project timings and actual measure-up in the Capacity Development projects.*
Table 30.2	Network Characteristics - City Gates/Regulators	Actual [Columns C:K]	*n/a*	*Actual stations data is provided by Jemena Asset Management. Source: AAD RIN Tb 30 network lengths - 21May15.xlsx*	*Data presented in the columns are cumulative and included to the asset base at commissioning.*	*n/a*
		Forecast [Column M:R]	*n/a*	*Forecast stations data is based on the forecast capex program. Source: AAD - Capex Forecast Model - v19 - 04 Jun 15.xlsb*	*Data presented in the columns are cumulative from the actuals. The additional stations from the forecast are based on the forecasted Capacity Development projects in which stations are included at the project completion.*	*The forecasted stations are dependent on the project timings in the Capacity Development projects.*
Table 30.3	Unaccounted for Gas - distribution	2006-2014 actual 2015-2021 forecast	*n/a*	*1) 2006-2014 actuals provided in email from Commercial Operations with historical receipts and UAG allowances see file: FW AAD historical UAG volumes.msg* *2) 2015-2021 forecast of total receipts and UAG allowance % provided by ActewAGL, see email from Gillian Eckersley containing file: UAG forecast extract from opex model.xlsx*		*1) UAG reported as Allowance % * Total Receipts* *2) Forecast UAG volumes from 2015-2021 as reflected in the ActewAGL AA submission OPEX model.*
TAB 31	**Pass throughs**					
Table 31.1	Pass through event expenditure (actual)	Actual	*n/a*	Where the actual costs were approved the amounts are identical to those in table 31.2. The amounts in the statutory accounts were used for forecast amounts and amounts where the full amount was not passed through (e.g. UAG in 2013/14).	The data was copied from the source data.	No assumptions.

Table Number or variable name/number	Table Name	Actual Historical and/or Estimated Historical, Forecast	Reasons For estimation	Source	Methodology	Assumptions
Table 31.2	Pass through event expenditure (approved)	Actual	*n/a*	For the previous access arrangement period the pass through amounts were taken from the annual pricing models. The current access arrangement period the amounts were taken from the confidential calculation spreadsheet (provided to the AER as part of each tariff variation) which calculated the pass through amount from the change in cost.	The data was copied from the source data.	No assumptions.
TAB 7.5	**EBSS (ActewAGL)**					
Table 7.5.1.1	Opex allowance applicable to EBSS (EBSS target)	Actual	*n/a*	*The AER's 2010 final decision.*	*ActewAGL Distribution has populated Table 7.5.1.1 with the AER's 2010 determined operating expenditure. In relation to the Table to the right that is supposed to be in $2015/16, ActewAGL Distribution has changed cells T18 – T20 and S20 to correct so the cumulative index in row 20 actually transfers the $2009/10 to $2015/16 as stated in the headline of the table to the right.*	*See the column 'Methodology' to the left.*
Table 7.5.1.2	Actual and estimated opex applicable to EBSS			*ActewAGL Distribution's actual operating expenditure incurred.*	*In relation to table 7.5.1.2, ActewAGL Distribution has populated the table with actual operating expenditure incurred. The Table to the right has also been affected by the changes in cells T18-T20 and S20 so that the table converts the figures into $2015/16 (rather than $2014/15).*	