

Attachment 2.5

Description of updates to model inputs

30 November 2023



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Abbreviations

The following table provides a list of abbreviations and acronyms used throughout this document. Defined terms are identified in this document by capitals.

Term	Definition
ACS	Alternative Control Services
AER	Australian Energy Regulator
BST	Base Step Trend
СРІ	Consumer Price Index
FY	Financial Year
IT	Information Technology
PTRM	Post-Tax Revenue Model
RAB	Regulatory Asset Base
RFM	Roll-Forward Model
SCS	Standard Control Services
TAB	Tax Asset Base
TSS	Tariff Structure Statement
WACC	Weighted Average Cost of Capital

1 Model changes

This attachment identifies the changes made to the expenditure, revenue, pricing and asset base related models from those adopted for the Australian Energy Regulator's (AER) draft decision or our Initial Regulatory Proposal.

The models are split by service:

- First, into those that relate to our proposed standard control services these are covered in Table 1.1
- Second, into those related to alternative control services, which are covered in Table 1.2.

Some of these changes are described in our Revised Regulatory Proposal or other attachments to it. We have also updated the model change logs that the AER had updated in its draft decision.



1.1 Standard control services

Table 1.1: Standard control services models

Input	Detail of change
SCS PTRM (Attachment 2.1)	
Opening RAB asset values	Updated opening RAB values in cells L7:L56 of the 'PTRM input' sheet to align with RFM outputs.
Opening TAB asset values	Updated opening TAB values in cells N7:N56 of the 'PTRM input' sheet to align with RFM outputs.
Asset life – Property Leases	Updated M21 of the 'PTRM input' sheet to revert to the Initial Proposal asset life for Property Leases after the reintroduction of the Single Site Consolidation project as part of our Revised Regulatory Proposal.
Gross capex	Updated cells G61:K76 of the 'PTRM input' sheet to incorporate updates to the SCS Capex Forecast Model.
Immediate expensing of capital expenditure	Updated cells G115:K130 of the 'PTRM input' sheet to incorporate updates to the SCS Capex Forecast Model.
Capital contributions	Updated cells G223:K226 of the 'PTRM input' sheet to incorporate updates to the SCS Capex Forecast Model.
Operating expenditure	Updated cells G331:K331 of the 'PTRM input' sheet to incorporate updates to the SCS Opex Forecast Model.
CESS	Updated cells G346:K346 of the 'PTRM input' sheet to incorporate the impact of updates made within the SCS CESS Model.
DMIA	Updated cells G349:K349 of the 'PTRM input' sheet to incorporate updates to the annual revenue requirements calculated within the 'DMIA' sheet.



Input	Detail of change	
RAB tracking	Updated cells G413:BI462 of the 'PTRM input' sheet to incorporate updates made to the SCS Depreciation Model.	
TAB tracking	Updated cells G472:BI521 of the 'PTRM input' sheet to incorporate updates made to the SCS Depreciation Model.	
X-factors	Resolved P0 in cell G63 of the 'X factors' sheet to calculate the new smoothed revenue profile for the Revised Regulatory Proposal. We retained the approach used in both our Initial Regulatory Proposal and the AER's Draft Decision, whereby the X factors for the first four years were the same and the X factor for the fifth year was calculated automatically so that the difference between smoothed and building block (unsmoothed) revenue in that year was 3% or less.	
SCS RFM (Attachment 2.2)		
Gross capex	Replaced FY23 inputs with actual gross capex and FY24 inputs with revised estimates in cells K61:L110 of the 'RFM input' sheet. The revised estimates were sourced from the SCS Capex Forecast Model.	
Asset disposals	Replaced FY23 inputs with actual asset disposals and FY24 inputs with revised estimates in cells K115:L164 of the 'RFM input' sheet. The revised estimates were sourced from the SCS Capex Forecast Model.	
Capital contributions	Replaced FY23 inputs with actual capital contributions and FY24 inputs with revised estimates in cells K169:L218 of the 'RFM input' sheet. The revised estimates were sourced from the SCS Capex Forecast Model.	
Tax depreciation	Updated tax depreciation for FY23 and FY24 to reflect updated net capex inputs in cells K358:L407 of the 'RFM input' sheet.	



Input	Detail of change
SCS Depreciation Model (Attachment 2.3)	
Gross capex	Updated FY23 inputs with actuals and FY24 inputs with revised estimates in cells P25:Q74 of the 'RAB input' sheet. The updated inputs were sourced directly from the SCS RFM Model.
Asset disposals	Updated FY23 inputs with actuals and FY24 inputs with revised estimates in cells P79:Q128 of the 'RAB input' sheet. The updated inputs were sourced directly from the SCS RFM Model.
Capital contributions	Updated FY23 inputs with actuals and FY24 inputs with revised estimates in cells P133:Q182 of the 'RAB input' sheet. The updated inputs were sourced directly from the SCS RFM Model.
RAB closing balance as at 30 June 2024	Updated inputs to align with the RFM in cells Q456:Q505 of the 'RAB input' sheet.
Gross capex	Updated FY23 inputs with actuals and FY24 inputs with revised estimates in cells K18:L67 of the 'TAB input' sheet. The updated inputs were sourced directly from the SCS RFM Model.
Immediately expensed capex	Updated FY23 inputs with actuals and FY24 inputs with revised estimates in cells K72:L121 of the 'TAB input' sheet. The updated inputs were sourced directly from the SCS RFM Model.
Asset disposals	Updated FY23 inputs with actuals and FY24 inputs with revised estimates in cells K126:L175 of the 'TAB input' sheet. The updated inputs were sourced directly from the SCS RFM Model.
SCS CESS Model (Attachment 2.4)	
Labelling	Updated cell D7 of the 'Input General' sheet to 'Revised Proposal'. Also updated cell G15 of the same sheet to 'Actual'.



Input	Detail of change
Net capex	Updated FY23 inputs with actuals and FY24 inputs with revised estimates in cells K18:L20 of 'Input Reported Capex' to align with changes made with the RFM. The updated inputs were sourced directly from the SCS RFM Model.
SCS Capex Forecast Model (Attachment 3.	.10)
Inflation	Updated the actual inflation value for 2018-19 at cell D15 of the 'Input Escalations' sheet to reflect actual inflation from December 2017 to December 2018 (i.e., 1.78%). This matches the inflation value used for that year in the SCS RFM.
	Updated the forecast inflation value for 2024-25 at cell J15 of the 'Input Escalations' sheet to match that in the SCS PTRM (i.e., 2.80%).
Labour escalation	Updated the internal labour escalation forecast at cells H25:N25 of the 'Input Escalations' sheet to match that included in the SCS opex forecast model (cells N42:T42 of the 'Input Rate of change' sheet). This is to ensure that the same labour escalation is applied in both models, and indirectly picks up the update to the BIS Oxford labour escalation forecast input to the SCS opex forecast.
2022-23 capex, capital contributions and disposals	Removed capex and capital contribution inputs for 2022-23 from columns I and Q of the 'Input Projects' sheet as these are no longer needed.
	Removed disposal inputs for 2022-23 from column D of the 'Input Disposals' sheet and type 2 capital contributions from cells C15:C19 of the 'Input Type 2 capcons'.
	Removed the formulas from C27:C33 of the 'Output RIN' sheet to avoid a model check being triggered which is not applicable.
	These values for 2022-23 are not needed because actual capex, capital contributions, and asset disposals for 2022-23 are being input directly to the SCS RFM.



Input	Detail of change	
Forecast capex for 2023-24 to 2028-29	Updated the unescalated direct cost forecasts at cells J57:O57, J88:O88, J89:O89, and J113:O113 of the 'Input Projects' sheet to reflect the updated forecasts for future networks, single site consolidation, Mitchell Centre commercial lease, and OT uplift respectively included in the Revised Regulatory Proposal.	
2022-23 capitalised overheads	Added actual network and corporate overheads and capex that attracts overheads for 2022-23 at cells F24:F25 and F29:F30 of the 'Input Overheads' sheet, now that those amounts are available. Consequently, this required the placeholder forecasts for 2022-23 at cells C8:C9 of that sheet to be removed and the estimates for 2023-24 at cells D8:D9 of that sheet to be updated (i.e., to link to the actuals for 2022-23).	
Cost components of capitalised overheads	Updated the internal labour proportion applied in cells C36:C37 of the 'Input Overheads' sheet to 59% in line with the inputs applied to the SCS Opex Forecast Model. This was missed in both our Initial Regulatory Proposal and the AER's draft decision.	
Model checks	Updated model check formulas to either cater for cells containing no inputs or allow cells containing minor differences which are either positive or negative. Refer to cells AL8, AT8 and BB8 on the 'Calc Project Costs' sheet plus P6:Q6 and G116:H116 on the 'Output RFM (D)' sheet.	
SCS Opex Forecast Model (Attachment 5.3)		
2022-23 reported opex	Reported opex, movement in provisions, DMIA expenditure, and debt raising costs for 2022-23 were entered into cells M37, M41, M42, and M51 respectively of the 'Input Reported opex' sheet to reflect actual data for that year sourced from the 2022-23 RIN responses. The label at cell M33 of the same sheet was updated to 'Actual' to align.	
Labour escalation	Updated the BIS Oxford labour escalation forecast at cells N39:T39 of the 'Input Rate of change' sheet to reflect the latest forecasts provided by BIS Oxford.	



Input	Detail of change	
Output growth	Updated the customer numbers and circuit length inputs at cells N66:T67 of the 'Input Rate of change' sheet to incorporate actual values for 2022-23 and to reflect the revised forecasts for 2023-24 to 2028-29.	
Step changes	Updated the step change inputs at cells O12:S17 of the 'Input Step changes' sheet to reflect the revised forecasts included with the Revised Regulatory Proposal.	
Debt raising costs	Updated the debt raising costs values at cells O40:S40 of the 'Input Step changes' sheet to match the values in the SCS PTRM for the Revised Regulatory Proposal.	
SCS Pricing Model (Attachment 7.4)		
Indicative prices	Updated indicative prices at cells O20:S27, O34:S47, and O54:S57 of the 'Input_Prices' sheet so that they are consistent with updates made to other inputs, such as allowed revenue, return on capital, and inflation. These were also updated to remove indicative prices for Tariff 7, which is not being included in the Revised Regulatory Proposal.	
Forecast chargeable quantities	Updated forecast chargeable quantities at cells O20:S27, O34:S47, and O54:S57 of the 'Input_Volumes' sheet to reflect updated customer number, energy consumption and demand quantity forecasts generated for the Revised Regulatory Proposal. The updates resulted from incorporating actual quantities for the 2022-23 year, which were not available when preparing the Initial Regulatory Proposal. The quantity forecasts were also updated to remove indicative prices for Tariff 7, which is not being included in the Revised Regulatory Proposal.	
2022-23 expenditure	Updated augmentation and replacement expenditure at cells M49:M57 and M80:M221 of the 'Inputs_LRMC' sheet to reflect actual expenditure included in the 2022-23 RIN responses.	
2023-24 prices	Updated 2023-24 prices at cells N27:N33, N46:N52, and N66:N69 of the 'Inputs_FY23_FY24' sheet to match those approved by the AER for that year.	



Input	Detail of change
2022–23 and 2023-24 chargeable quantities	Updated the 2022-23 and 2023-24 chargeable quantities at cells P27:Q33, P46:Q52, and P66:Q69 of the 'Inputs_FY23_FY24' sheet to reflect actual quantities for 2022-23 and revised estimated quantities for 2023-24.
Inflation	Updated the actual and forecast inflation at cells M27:S27 of the 'Inputs_Other' sheet to align with the values adopted elsewhere in the Revised Regulatory Proposal.
Smoothed revenue	Updated the annual smoothed revenue requirement at cells O44:S44 of the 'Inputs_Other' sheet to match that included in the SCS PTRM for the Revised Regulatory Proposal.
X factors	Updated the X-factors at cells O47:S47 of the 'Inputs_Other' sheet to match those determined in the SCS PTRM for the Revised Regulatory Proposal.
Real vanilla WACC	Updated the real vanilla WACC inputs at cells O56:S56 of the 'Inputs_Other' sheet to match those determined in the SCS PTRM for the Revised Regulatory Proposal.
Coincident demand	Updated the coincident demand forecast by tariff at cells O115:S122 of the 'Inputs_Other' sheet to align with the updates to forecast system access charge quantities.
Avoidable cost inputs	Updated the revenue allocation assumption at cell M190 of the 'Inputs_Other' sheet to reflect the removal of Tariff 7.
Removed Tariff 7	Amended the 'Inputs_Other', 'Calc_Revenue', 'Calc_A_SA_Cost', 'Calc_LRMC_Tariff', 'Calc_Residual_Tariff', 'Output_Revenue', 'Output_Chart', and 'Output_Revenue' sheets to remove Tariff 7 from the calculations and outputs.
Side constraint check	Amended the overall side constraint check at cells O157:S157 of the 'Output_AER_Compliance' sheet to also look at the individual side constraint checks for future years as well as the nominated compliance year.



Input	Detail of change
Tables and charts	Updated the tables and charts included in the 'Output_Pricing_Proposal' sheet to align with the TSS documents for the Revised Regulatory Proposal.

1.2 Alternative control services

Table 1.2: Alternative control services models

Model input	Detail of change
ACS Metering Expenditure Model (Attachment 8.1)	
Labour escalation	Updated the internal labour escalation forecast within rows 39 to 50 of the 'Input Prices' sheet to match the forecast included in the SCS opex forecast model (cells N42:T42 of the 'Input Rate of change' sheet). This is to ensure that the same labour escalation is applied to all relevant models, and indirectly picks up the update to the BIS Oxford labour escalation forecast input to the SCS opex forecast. The change log within the 'AER Notes' sheet details the six specific changes to give effect to this and includes things like labelling changes and removal of redundant content.
Network related step changes	Updated the reduction in manual and special meter read step changes in cells R23:V24 of the 'Input Meter-Opex BST' sheet to account for the revised smart meter population forecasts which also incorporate the impact of including 2022-23 actuals.
Non network related step changes	Updated the corporate step change forecasts in cells R25:V29 of the 'Input Meter-Opex BST' sheet to align with the updated step change forecasts included the SCS Opex Forecast Model.



Model input	Detail of change
Customer numbers	Updated the customer number inputs in cells P35:V35 of the 'Input Meter-Opex BST' sheet to incorporate actual values for 2022-23 and to reflect the revised forecasts for 2023-24 to 2028-29.
2022-23 net capex	The expenditure values for 2022-23 are no longer needed in the Expenditure Model because actual capex, capital contributions, and asset disposals for 2022-23 are being input directly to the ACS Metering RFM. The following inputs (or formulas) have been removed from the model: • Cells O46:O47 in the 'Input Meters Vols & Costs' sheet • Cells K110, K131:K132, K138 in the 'Input Comms, IT, Other' sheet • Cell O163 in the 'Calc Capex Meters' sheet.
2022-23 volumes	The Initial Proposal estimates for 2022-23 volumes by meter type have been replaced by actual values to represent the starting smart meter population more accurately. The following inputs have been updated in the model: • Cells O172:O186, O192:O206, O212:O226, O232:O246, O252:O266, O272:O286, O292:O306 and O332:O346 in the 'Input Meters Vols & Costs' sheet • Cells F36:F41, F60:F65. F84:F89 in the 'Input Workings' sheet.
Forecast network capex for 2023-24 to 2028-29	An updated meter replacement forecast has been included to accelerate the rollout of smart meters. Refer to: • Cells P46:U47, Q192:U197, P212:U215, P232:U237, P332:U346 in the 'Input Meters Vols & Costs' sheet • Cells G36:G41, G60:G65, G84:G89 in the 'Input Workings' sheet.
Forecast non-network capex for 2023-24 to 2028-29	Updated non-network capex forecasts and estimates for 2023 to 2028-28. As discussed above the SCS Capex Forecast Model was updated for revised capex forecasts relating to future networks, single site consolidation, Mitchell Centre commercial lease, and OT uplift projects. Only two of these projects impact ACS Metering, single site consolidation (cells O132:Q132 in the 'Input Comms, IT, Other' sheet) and OT uplift (cells M110:Q110 in the 'Input Comms, IT, Other' sheet).



Model input	Detail of change	
Error check formulas	Updated error checks to apply rounding to four decimal places in cells R49 and O90 of the 'Calc Capex Meters' sheet to avoid them flagging an immaterial error.	
ACS Metering Depreciation Model (Attachment 8.2)		
Gross capex	Updated FY23 inputs with actuals and FY24 inputs with revised estimates in cells P25:Q74 of the 'RAB input' sheet.	
Closing RAB as at 30 June 2024	Updated inputs to align with the RFM in cells Q456:Q505 of the 'RAB input' sheet.	
TAB tracking	Removed the inputs associated with the previous 2014–19 regulatory period on the 'TAB input' sheet to align with the method proposed by the AER within the SCS Depreciation Model as part of its draft decision. To implement this change many of the inputs were moved 5 years to the left leaving the inputs for the second regulatory control period blank.	
Immediately expensing of capex	Updated FY23 inputs with actuals and FY24 inputs with revised estimates in cells K72:L121 of the 'TAB input' sheet.	
ACS Metering RFM (Attachment 8.3)		
Gross capex	Updated cells K61:L110 of the 'RFM input' sheet to include actuals as the FY23 inputs and revised the FY24 estimates based on changes to the Expenditure Model.	
Tax depreciation	Updated the tax depreciation inputs in cells H358:L407 of the 'RFM input' sheet to incorporate updates to the ACS Metering depreciation model.	
ACS Metering PTRM (Attachment 8.4)		
Opening RAB value	Updated opening RAB values in cells J7:J56 of the 'PTRM input' sheet to align with ACS Metering RFM outputs.	
RAB remaining lives	Updated RAB remaining life values in cells L7:L56 of the 'PTRM input' sheet to align with ACS Metering RFM outputs.	



Model input	Detail of change
Standard life – Non-Network Other	Updated cell M11 of the 'PTRM input' sheet to adopt the standard life included with our Initial Regulatory Proposal. As noted above with regards to the SCS PTRM, this was needed to align with the reintroduction of the Single Site Consolidation project that we have included in our Revised Regulatory Proposal.
Opening TAB value	Updated opening TAB values in cells N7:N56 of the 'PTRM input' sheet to align with ACS Metering RFM outputs.
TAB remaining lives	Updated TAB remaining life values in cells O7:O56 of the 'PTRM input' sheet to align with ACS Metering RFM outputs.
Gross capex	Updated cells G62:K68 of the 'PTRM input' sheet to incorporate updates to the ACS Metering Expenditure Model.
Immediate expensing of capex	Updated cells G116:K122 of the 'PTRM input' sheet to incorporate updates to the ACS Metering Expenditure Model.
Operating expenditure	Updated cells G331:K331 of the 'PTRM input' sheet to incorporate updates to the ACS Metering Expenditure Model.
Opening RAB depreciation	Updated cells G413:BI462 of the 'PTRM input' sheet to incorporate updates made to the ACS Metering Depreciation Model.
Customer numbers	Updated cells F563:K566 of the 'PTRM input' sheet after updating the customer number forecast to incorporating the impact of 2022-23 actuals.
x-factors	Resolved P0 in cell G47 of the 'X factors' sheet to calculate the new smoothed revenue profile for the Revised Regulatory Proposal after retaining the AER's inputs where 0% X-factors were applied for years 2–5.



Model input	Detail of change	
ACS Metering Pricing Model (Attachment 8.5)		
Building block revenue requirements	Updated cells H20:L22 of the 'Inputs Price Cap' sheet to align with the building block revenue requirements of the ACS Metering PTRM.	
Volume forecast	Updated cells I45:N54 of the 'Inputs Price Cap' sheet to align with the volume forecast applied in the ACS Metering PTRM which was updated to incorporate the impact of FY23 actuals.	
x-factors	Updated cell F125 of the 'Inputs Price Cap' sheet to align with the P0 value calculated within the ACS Metering PTRM.	
ACS Fee Based and Quoted Services Model (Attachment 9.1)		
Inflation	Inflation inputs in cells H20:M20 of the 'Input Escalations' sheet were updated to align with inflation inputs used elsewhere in the AER's draft decision.	
Labour escalation	Updated the BIS Oxford and KPMG labour escalation forecasts (excluding adjustments for superannuation guarantee) in cells G42:M43 of the 'Input Escalations' sheet to reflect the latest forecasts provided by BIS Oxford and align the ACS inputs with those being applied in the SCS Opex Forecast Model. Also updated the G48:M49 to apply the average of the BIS Oxford and KPMG forecasts.	
Base labour rates	The Revised Proposal includes updated base labour rates shown in cells E10:E17 of the 'Input/Labour Rates' sheet. Consistent with the draft decision, these inputs were updated so that the inflated and escalated labour rates for 2024-25 matched the benchmark rates adopted by the AER. Updates were needed because we update the inflation and labour inputs that were used to convert the base rates to 2024–25 rates.	
Metering related Fee Based Services	The material costs, and where applicable tax recovery rates, have been removed from the cost build up for three fees including 'Exchange or replace meter – three phase ', 'Exchange or replace meter - single phase' and 'Install	



Model input	Detail of change
	modem on smart ready meter'. The updated inputs can be located in cells in AQ28:AQ29, AQ36, AY28:AY29 within the 'Input Fee Based' sheet.
WACC and gamma	The nominal vanilla WACC and gamma inputs at cells G8 and G13, respectively, of the 'Calc Tax_Recovery' sheet were updated to match the values adopted for SCS and ACS metering in both the AER draft decision and our Revised Regulatory Proposal. Although the tax recovery rate is no longer used to determine fees within the model, we considered it appropriate to ensure that the values included aligned with those adopted in other models.



Contact

Australia: 1800 245 092 Overseas: +61 8 8923 4681

powerwater.com.au

