

Pricing proposal models handbook

Electricity distribution network
service providers

December 2022

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Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001
Tel: 1300 585 165

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1 Introduction

This handbook provides guidance on how to use the Australian Energy Regulator's (**AER**) standardised pricing model and price-capped alternative control services (**ACS**) model (**the models**).

The models are intended for use by electricity distribution network service providers (**distributors**) to submit data to the AER to support their pricing proposals, as required under section 6.18.2 of the National Electricity Rules (**NER**). We have developed the models in consultation with the distributors.

1.1 Role of the models

The models house data, undertake analysis, and produce outputs to demonstrate compliance with the NER, the applicable regulatory determination and tariff structure statements (**TSS**).

The models have been developed to replace the differing suites of models currently used by distributors. This is to provide efficiencies in preparation and analysis, as well as making the models more consistent and transparent for stakeholders to engage with.

1.2 Confidentiality

Our obligations regarding confidentiality and the disclosure of information provided to us by a distributor are governed by the *Competition and Consumer Act 2010 (Cth)*, the National Electricity Law, and the NER.

1.3 Process for revision

We intend to amend or replace the models from time to time to reflect further stages of our Annual Pricing Process Review. Beyond this review, we intend to amend or replace the model with each round of distribution determinations to reflect any changes required resulting from the determination. We will publish a revised version of this handbook to accompany each new version of the pricing models we amend or replace in the future. Through these revisions, we do not expect to replace/update screenshots that have not changed materially.

1.4 Regulatory instruments

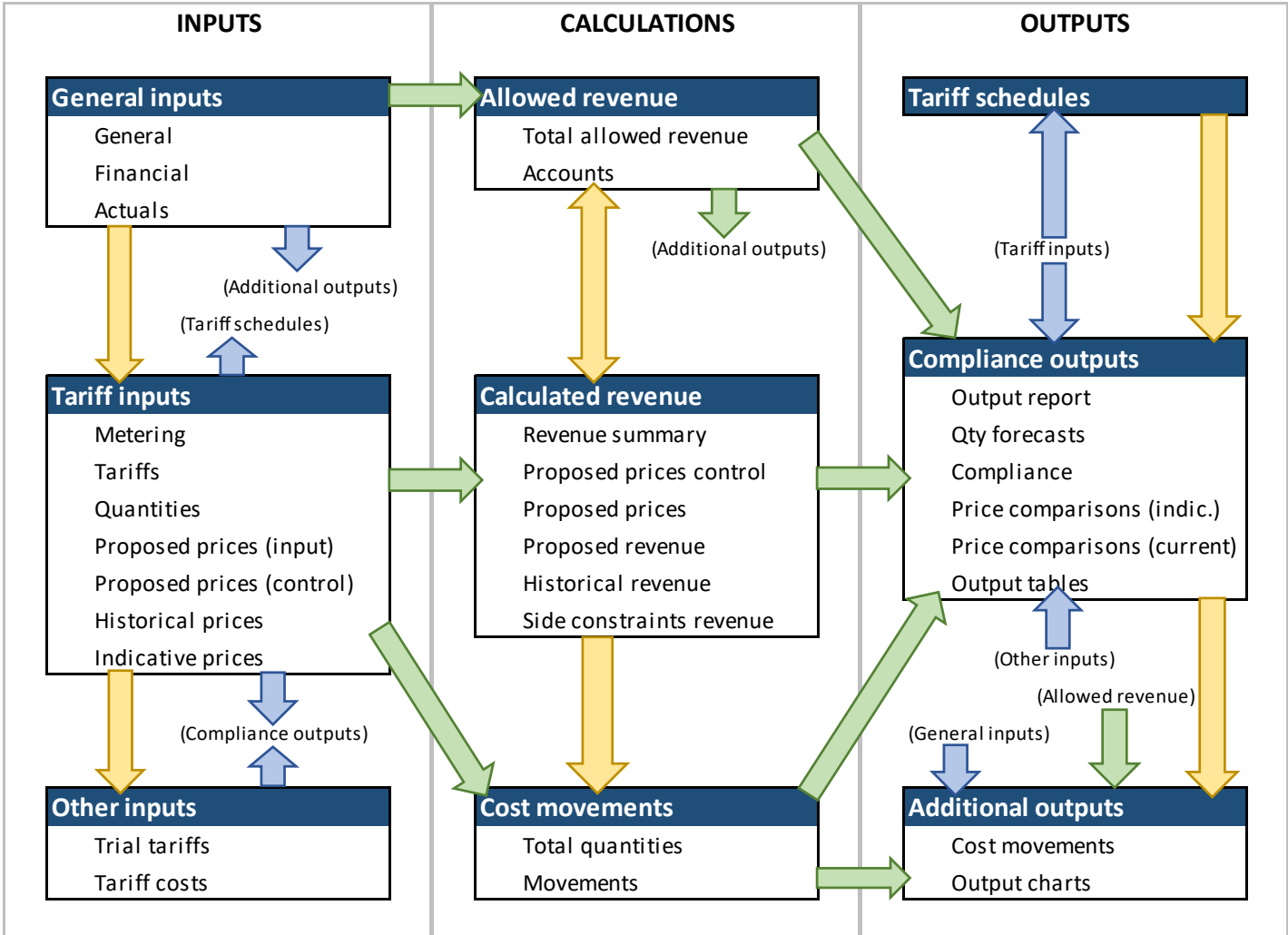
The NER and applicable regulatory determinations are the regulatory instruments that prescribe the mechanisms and requirements that underlie the annual pricing process. The models have been prepared in line with the requirements of these regulatory instruments. For further information on the pricing rules and principles, the requirements of a pricing proposal, and the requirements of the AER in approving a pricing proposal, see NER s6.18.6. For further information on the revenue cap and price cap mechanisms, the side constraints mechanism, the unders/overs account mechanism, and rounding guidance applicable to each distributor, see the 'Control Mechanisms' attachment of the applicable regulatory determination.

2 Pricing model

The pricing model is the main supporting document for distributors’ pricing proposals. The pricing model includes inputs, calculations, and outputs that assist the distributor in demonstrating compliance, as well as assisting the AER in its analysis of a pricing proposal. The pricing model also provides additional output charts and cost movements analysis to assist with stakeholder engagement and communication of the proposal.

Figure 1 provides an overview of the model, categorised into three modules – inputs, calculations, and outputs.

Figure 1 Overview of pricing model



Note: Yellow arrows represent data flows within each module, green and blue arrows represent data flows between modules. Blue arrows used where a direct arrow is impractical in the visual representation.

At the beginning of each distributor's regulatory control period, the AER will build a bespoke model for the distributor, including general inputs, descriptors, and tariff information, as well as relevant historical information.¹ In doing so, we will adjust the model to add any jurisdictional-specific elements. At this time, and prior to each annual pricing process, we will input relevant inputs for the upcoming pricing proposal.

Prior to submitting their pricing proposal each year, the distributor will verify the AER's inputs, add inputs relating to proposed prices, forecast quantities, and other inputs that are known only to the distributor or finalised after the AER provides the model. This will include forecast and estimated designated pricing proposal costs (**DPPC**) and jurisdictional scheme amounts (**JSA**). The distributor will also engage with the AER regarding certain components of the model, including any issues with the AER's provided inputs.

In the sections below, we have provided a summary of each worksheet. Any examples provided in the sections below reflect example data only, and do not reflect data of any particular business.

The model includes a macro that hardcodes and redacts those parts of the model that include confidential tariffs. These confidential tariffs are generally tariffs that are related to individual customers and may contain customer information, or prices and consumption/demand quantities that are able to be identified as applicable to a certain customer.

The model also contains a macro to create a summarised model for stakeholder use, producing a redacted version that houses proposed tariffs, output reports, and cost movement outputs.

We prefer the structure of the model is not altered without prior discussion with us. This will ensure that any errors that arise are appropriately considered and actioned across all distributors' models, consistency is maintained, and the function of the model is maintained.

2.1 General

This model includes both a title page, a lookups page, and a model update log page.

2.1.1 Title page ('Pricing model')

The title page includes an inputs key, version log, contents list, and change log. The change log is for distributors and the AER to detail changes between models provided in pre-lodgement engagement and models provided in pricing proposal submissions.

The title page includes a button to create a public version. This button should be used once the model is completed for final submission to create a public version of the model for publication. It hard-codes summaries of data related to confidential tariffs, and redacts data related to confidential tariffs. This macro creates a new workbook before completing hardcoding and redaction. A confidential version of the model should be maintained for submission to the AER, and this redaction should only be done once all components of the

¹ This will be completed prior to the 2022–23 pre-lodgement engagement process for each distributor for the first version of the model.

model are completed. File names for each version of the model should clearly identify public and confidential versions.


Figure 2 provides the inputs key, while Figure 3 provides an example of the title page worksheet.

Figure 2 Inputs key

Key:

	Final determination AER input
	Annual AER input
	Updated AER input (e.g. placeholder updated for final submission)
	Annual DNSP input
	Updated DNSP input (e.g. placeholder updated for final submission)
	Calculation
	N/A
	Overrides for cost movement calculations

Figure 3 Title page worksheet



AER pricing model

AER 2023–24

Electricity Distribution Network Service Provider

Create PUBLIC version (redact individual tariffs)

Create PUBLIC tariff tables

Key:

	Final determination AER input
	Annual AER input
	Updated AER input (e.g. placeholder updated for final submission)
	Annual DNSP input
	Updated DNSP input (e.g. placeholder updated for final submission)
	Calculation
	N/A
	Overrides for cost movement calculations

Version Record	Date	Description
0.1	Aug-21	Draft version of new model - including inputs and calculations worksheets, as well as lookup worksheet
0.2	Oct-21	Draft version of full model for feedback
0.3	Nov-21	Final model for DNSP QA
1.0	Dec-21	Final model for use in 2022/23 process
1.1	Mar-22	Updated for issues arising in 2022/23 pre-lodgement engagement process
1.2	Nov-22	Final updated model (from broader stakeholder consultation and revisions) for DNSP QA
2.0	Dec-22	Final model for use in 2023/24 process
2.1	Oct-23	Updated for 2024–29 determinations for NSW/ACT/NT/Tas businesses to reflect changes in determination (e.g. side constraints application)
3.0	Apr-24	Final model updated for 2024–29 determinations for use in 2024/25 initial pricing where applicable

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- Provides Distribution Pricing Rules*
- Provides applicable mechanisms*
- Provides schedules of network prices*
- Provides output report including compliance, validations, trend analysis, and quantity forecast analysis*
- Provides quantity forecast analysis and charts*
- Compliance checks against total allowable revenues, under/overs closing balances, side constraint thresholds, trial tariff thresholds, and standalone and avoidable costs.*
- Compliance checks of proposed prices against relevant indicative prices from previous indicative schedule*
- Analysis of proposed prices against current prices*
- Provides output tables for use in pricing proposal documents*
- Provides cost movements summaries*
- Provides output charts for revenue and cost movements (some editing of charts may be necessary for presentational issues)*
- Provides links and guide to inputs required at each stage in process*
- Inputs NSP name, regulatory years for the t, t-1, and t-2 years, inflation, day counts, etc.*
- Inputs the WACC, x-factors, allowed revenues, and annual adjustments*
- Inputs actual revenues, demand, and customer numbers*
- Inputs relating to metering (prices for cost movements for non-Vic, prices and quantities for revenue caps for Vic)*
- Inputs tariff information including charging components and tariff classes*
- Inputs forecast, estimated, and actual quantities*
- Inputs proposed prices for SCS*
- Inputs controls for proposed prices for SCS as a function of current prices*
- Inputs historical prices for SCS for calculating estimated and actual revenues*
- Inputs indicative tariffs to update the schedule for the remainder of the regulatory control period (updates previous schedule for only remaining years)*
- Inputs trial tariffs and relevant revenues (both forecast and historical)*
- Inputs cost information related to standalone and avoidable costs*
- Calculates total allowable revenues*
- Calculates under/over-recovery and related data*
- Totals revenues for each tariff, charging component, and tariff class*
- Identifies applicable controls for each price*
- Proposed prices for forecast year, sourced from inputs or calculated using current prices and controls, as relevant*
- Calculates revenues for the 1 year for each tariff component*
- Calculates revenues for the t-1 and t-2 years for each tariff component*
- Calculates permissible percentage and revenue for side constraint mechanism*
- Calculates demand for each charging component, tariff, and tariff class*
- Calculates network costs and consumption profiles for each residential and small business tariff*
- Provides lookups for use throughout the model*
- Provides log of updates made to the model template (rather than changes between preliminary and final model submissions)*

Changelog (to detail completion of inputs, and any changes to inputs)

Date	Description
------	-------------

2.1.2 Lookups

The lookups worksheet contains lookups for use throughout the model, including unit denominations, month and year references, and metering tariffs (for cost movements). The lookups page is also used to differentiate between Victorian and non-Victorian distributors, particularly for historical years and inflation (Victorian distributors operated on calendar years historically).

2.1.3 Model update log

The model update log worksheet contains a log of revisions made to the model in each new version of the model.

2.2 Outputs

The outputs module provides tariff schedules, output reports, compliance checks, and demonstrations of compliance through output tables.

2.2.1 Tariff schedule

The tariff schedule worksheet provides the tariff schedules for network prices for the upcoming financial year (as well as distribution, DPPC, and JSA components where applicable), and metering prices for Victorian customers.

The tariff schedules submitted in this worksheet will be used for the formal approval process. Any additional versions of these tariff schedules provided will not be considered by the AER.

2.2.2 Output report

The output report worksheet provides a summary of all key outputs for consideration by the AER in its compliance review, and also for stakeholders ease of access.

Output report 1 summarises all compliance checks in the model and provides key outputs relating to those compliance checks. Overall compliance is summarised at the top of the worksheet.

Output report 2 summarises all validation checks in the model. These validations identify if any worksheet needs manual checking by the AER upon submission. Validations are to ensure validity of inputs, that all relevant inputs are entered, and the integrity of calculations are maintained. These validations do not indicate compliance, and a compliant model may have “CHECK” responses. Overall validation is summarised at the top of the worksheet.

Output report 3 provides trend analysis for designated pricing proposal charges and jurisdictional scheme amounts forecasts. It also provides other key data. “NO” responses in relation to trend analysis indicate that further explanation is required from distributors, and/or analysis by the AER. Forecasts that are not on trend do not indicate non-compliance.

Output report 4 provides trend analysis for quantity forecasts, as well as other key data related to quantity forecasts. “NO” responses in relation to trend analysis indicate that further explanation is required from distributors, and/or analysis by the AER. Forecasts that are not on trend do not indicate non-compliance.

Figure 4 provides an example of the output report worksheet.

Figure 4 Output report worksheet

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S					
1	AER pricing model - AER 2023-24																							
2	Output report																							
3	Provides output report including compliance, validations, trend analysis, and quantity forecast analysis																							
4	COMPLIANT CHECK VALIDATION OK																							
5	Output report 1 Compliance Notes																							
6	Total allowable revenues																							
7	Distribution			Compliant?			Total revenue			TAR			Variance											
8	Designated pricing proposal costs (DPPC)			COMPLIANT												OK								
9	Jurisdictional scheme amounts (JSA)			COMPLIANT												OK								
10	Metering (Vic only)			N/A												OK								
11																								
12	Unders/lowers accounts																							
13	Distribution			Compliant?			Closing balances			Materiality						OK								
14	DPPC			COMPLIANT												OK								
15	JSA			COMPLIANT												OK								
16	Metering (Vic only)			N/A												OK								
17																								
18	Other compliance																							
19	Side constraints			Compliant?			Side constraint threshold			10.16%						OK								
20	Metering side constraints (Vic only)			N/A			Side constraint threshold			N/A						OK								
21	Total tariff thresholds (individual)			COMPLIANT												OK								
22	Total tariff thresholds (aggregate)			COMPLIANT												OK								
23	Standalone and available costs			COMPLIANT			2023-24 aggregate %									OK								
24	Movements from indicative prices			COMPLIANT												OK								
25																								
26	Output report 2 Validations																							
27	Validations																							
28	General			Valid?			Total Allowed Revenue			Valid?			Tariff schedule			Valid?								
29	Financial			CHECK			Accounts			OK			Output report			OK								
30	Actuals			CHECK			Revenue summary			OK			Quantity forecast analysis			OK								
31	Metering			CHECK			Proposed prices (control)			OK			Compliance			OK								
32	Tariffs			CHECK			Proposed prices			OK			Price comparison (indicative)			OK								
33	Quantities			CHECK			Proposed revenue			OK			Price comparison (current)			OK								
34	Proposed prices (input)			CHECK			Historical revenue			OK			Tables			OK								
35	Proposed prices (control input)			OK			Side constraint revenue			OK			Cost movements			OK								
36	Historical prices			CHECK			Total quantities			OK			Charts			OK								
37	Indicative prices			CHECK			Movements			OK						OK								
38	Total tariffs			OK																				
39	Tariff costs			OK																				
40																								
41	Output report 3 Analysis																							
42	Trend forecasts																							
43	DPPC forecast			On trend?			Actuals trend			2022-23 est. adj.			2023-24 movement											
44	JSA forecast			YES												OK								
45																								
46	Other data for consideration																							
47	Forecast deliberate under-recoveries						Distribution			DPPC			JSA			Metering			Total					
48	Actual deliberate under-recoveries																		OK					
49	b-factor balancing adjustments																		OK					
50	Total allowable revenue movements																		OK					
51	License fees																		OK					
52	Output report 4 Quantity forecasts																							
53	Response																							
54	Are forecast consumption volumes for 2023-24 on trend?			YES			Forecast/estimate			Trend %			Movement from PY											
55	Are forecast customer numbers for 2023-24 on trend?			YES												OK								
56	Are estimated consumption volumes for 2022-23 on trend?			YES												OK								
57	Are estimated customer numbers for 2022-23 on trend?			YES												OK								
58																								
59	Consumption volume variances from forecasts in prior years						2017-18			2018-19			2019-20			2020-21			2021-22			2022-23		
60	Customer number variances from forecasts in prior years																							
61																								
62																								
63																								
64																								
65																								
66																								
67																								

2.2.3 Quantity forecasts (Qty forecasts)

The quantity forecasts worksheet provides analysis and charts based on the quantity forecasts provided in the pricing proposal. This analysis underpins the AER’s requirement to determine that all forecasts are reasonable. The analysis is considered by the AER in conjunction with other documentation provided by distributors, and meetings held through the pre-lodgement engagement process.

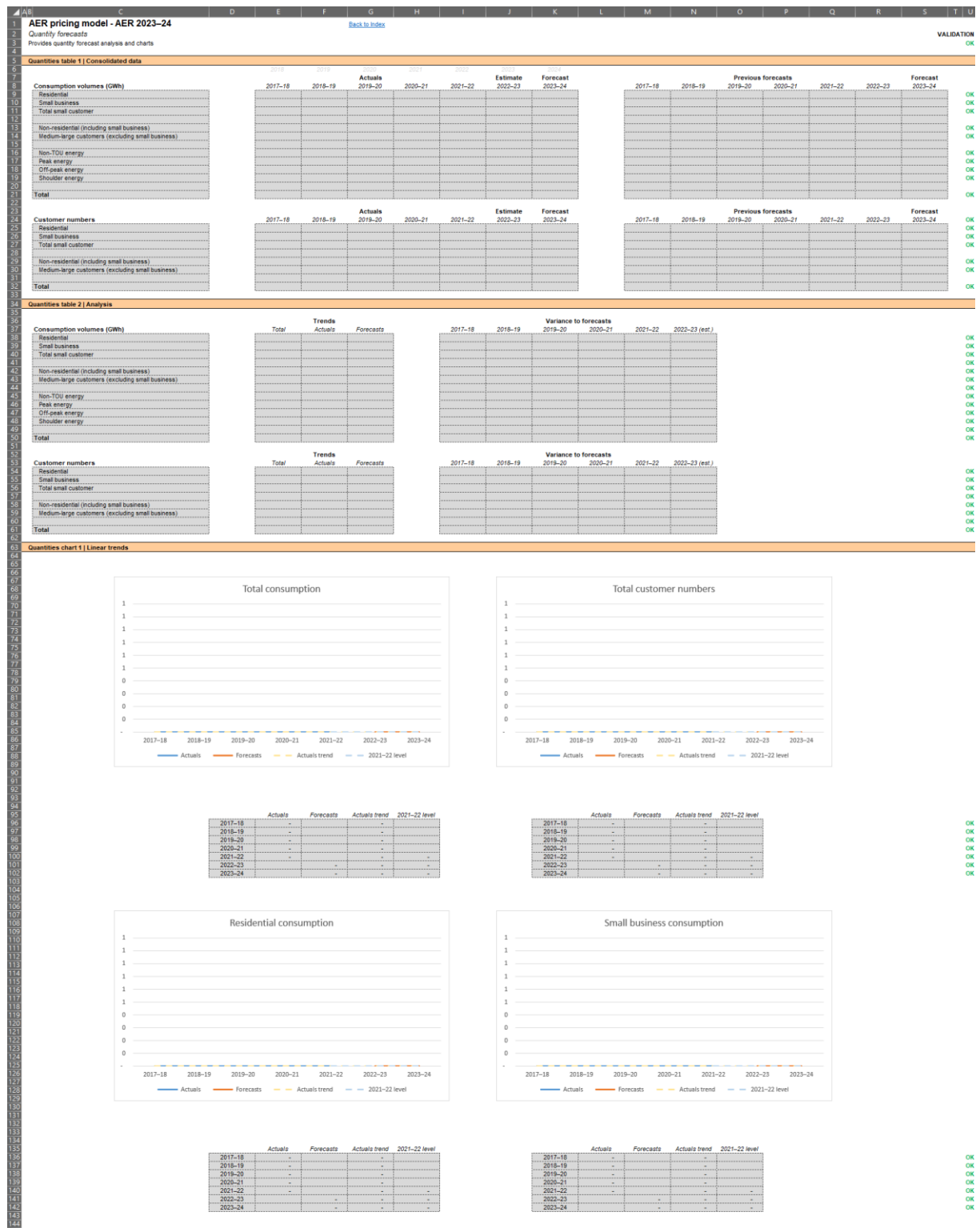
Quantities table 1 compiles and categorises data from across the model. This is related to actuals reported in regulatory information notices and estimates and forecasts provided by distributors. Historical data for small business will be built up as the model is used, and new reporting requirements are introduced.

Quantities table 2 provides trend and variance analysis. Trend analysis is of a straight-line form. The inclusion of this trend analysis does not preclude the AER from considering or undertaking other analysis to form a view on the reasonableness of quantity forecasts.

Quantities chart 1 provides charts of trend analysis relating to total consumption and customer numbers, as well as residential and small business consumption.

Aggregated customer number data will automatically remove any customer numbers related to controlled load secondary tariffs.

Figure 5 Quantity forecasts worksheet



2.2.4 Compliance

The compliance worksheet checks compliance against allowed revenue caps, thresholds for side constraints and tariff trials, and cost-reflectivity bounds of tariff class revenue.

Compliance table 1 measures the sum of all relevant forecast revenues against the allowable revenue set either by the relevant formula in our determination (for distribution revenue, and metering revenue for Victorian distributors), or by the method to pass-through costs set in the NER (DPPC and JSA).²

Compliance table 2 checks that the closing balances of unders/overs accounts do not exceed 0.³ Our determination requires the closing balance of unders/overs accounts to be as close to 0 as possible. Where a closing balance is greater than 0, this indicates that the revenue being recovered from customers for the upcoming year exceeds that allowed.⁴ Therefore this check will flag non-compliance where the balance exceeds 0.⁵ Proximity to 0 for compliance with the determinations will be considered manually.

Compliance table 3 measures the movement in tariff class revenues against the permissible percentage threshold in line with the side constraint mechanism.⁶

Compliance table 4 measures the forecast, estimated, and actual revenues from trial tariffs (also known as sub-threshold tariffs) for each year against the allowable thresholds set in the NER.⁷ Trial tariff revenues are considered in relation to the relevant Total Allowable Revenue for each year for measurement against allowable thresholds.

Compliance table 5 measures the forecast tariff class revenues against the lower and upper bounds set by the avoidable and standalone costs, respectively.⁸

Figure 6 provides an example of the compliance worksheet.

² NER cl. 6.18.7(b) and 6.18.7A(b).

³ NER cl. 6.18.7(b), (c) and 6.18.7A(b), (c).

⁴ The allowable revenues are calculated to incorporate a balancing adjustment – this reflects an amount required to balance the opening balance of the account for that year. A positive closing balance will lead to revenue recovered that reflects the balancing adjustment plus the positive closing balance – exceeding the allowed revenue.

⁵ There may be instances where a jurisdictional scheme revenue is set through jurisdictional regulation. In these cases, compliance with the jurisdictional regulation and the regulated revenue recovery will mean that a positive closing balance may exist and will be considered as compliant.

⁶ NER s6.18.6.

⁷ NER cl. 6.18.1C(a).

⁸ NER cl. 6.18.5(e).

Figure 6 Compliance worksheet

AER pricing model - AER 2021-22

Compliance checks against total allowable revenues, unders/overs closing balances, side constraint thresholds, trial tariff thresholds, and standalone and avoidable costs.

Compliance table 1 | Allowable revenues

Unit	2021-22	Compliance
Distribution		
Revenue from tariffs (forecast for 2021-22)	\$millions	
Revenue from trial tariffs (forecast for 2021-22)	\$millions	
Total revenue from distribution charges	\$millions	
Total Allowable Revenue	\$millions	COMPLIANT
DPPC		
Revenue from tariffs (forecast for 2021-22)	\$millions	
Revenue from trial tariffs (forecast for 2021-22)	\$millions	
Cross-boundary revenue (forecast for 2021-22)	\$millions	
Total revenue from DPPC	\$millions	COMPLIANT

Compliance table 2 | Unders/overs accounts

Unit	Closing balances	Compliance (not exceeding 0)
Distribution	\$millions	COMPLIANT
DPPC	\$millions	COMPLIANT
JSA	\$millions	COMPLIANT
Metering (Vic only)	\$millions	COMPLIANT

Compliance table 3 | Side constraints

Unit	Movement	PP (Incremental)	PP (Alternate)	Compliance
Residential	Per cent	Incremental	Alternate	
Small business	Per cent			
I & C	Per cent			

Compliance table 4 | Trial tariffs distribution revenue

Unit	Threshold	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Compliance
Residential battery	Per cent 1.0%									COMPLIANT
Residential EV	Per cent 1.0%									COMPLIANT
Small business battery	Per cent 1.0%									COMPLIANT
Small business EV	Per cent 1.0%									COMPLIANT
Total trial tariffs	Per cent 5.0%									COMPLIANT

Compliance table 5 | Standalone and avoidable costs

Unit	Calculated revenue	Avoidable costs	Standalone costs	Compliance
Residential	\$millions			
Small business	\$millions			
I & C	\$millions			

2.2.5 Price comparisons – indicative

The price comparisons – indicative (price comp. ind.) worksheet checks proposed prices against indicative prices previously provided for that year. For year 1 of a regulatory control period, these indicative prices are as provided in the TSS. For other years, these indicative prices are as provided in the most recent pricing proposal. These comparisons occur at the total network price only. Material differences will be highlighted and will require explanation through the notes section on the worksheet.⁹

2.2.6 Price comparisons – current

The price comparisons – current (price comp. current) worksheet compares proposed prices against current prices previously approved. These comparisons occur at the total network price as well as prices for each component. Material differences will be highlighted, measured against the side constraint threshold that applies to weighted average revenue movements at the tariff class level. Dollar movements are also calculated, and material differences will be highlighted based on the % movement and comparison against the applicable side constraint threshold.

2.2.7 Tables

The tables worksheet provides output tables to demonstrate compliance. These output tables contain information that is required as a part of the pricing proposal by the NER or is frequently provided by distributors as additional information.

⁹ NER cl. 6.18.2(b)(7A).

Output table 1 provides the expected weighted average revenue for each tariff class for the current and upcoming years, and the relevant movements.¹⁰ The table also provides the expected weighted average revenue used for the current year in the side constraint mechanism (i.e., current year prices and forecast year quantities), and the relevant movements.

Output table 2 provides the revenue breakdowns for, including annual adjustments made to, each component of revenue.¹¹ Output table 2 also provides the revenue breakdowns in the unders/overs accounts for each component of revenue.

Output table 3 provides the expected weighted average revenues for each tariff class, as used for the purpose of side constraints compliance. Output table 3 also provides the breakdown of the permissible percentage.¹²

Output table 4 provides the forecast tariff class revenues alongside the lower and upper bounds set by the avoidable and standalone costs, respectively.¹³

Output table 5 provides a breakdown of energy consumption by tariff class, and by small customer type. These output tables are provided for information and are frequently provided by distributors as additional information.

2.2.8 Cost movements

The cost movements worksheet provides analysis on the expected movements in the network costs for each tariff applicable to residential and small business customers. These cost movements are provided both as a total network cost movement, as well as movements in each of the components (distribution, DPPC, and JSA). For the purpose of cost movement analysis and providing a representation of the movements expected for the typical customer, metering charges are included in this analysis.

The cost movement analysis includes controlled load tariffs, or controlled load components of combined tariffs, in the final three rows of data for each residential and small business section. Where controlled load exists as a component of a main tariff, cost movement analysis for the main component tariff is provided separately, excluding the controlled load component.

Controls and overrides for cost movement analysis are available on the general worksheet, rows 36-43. This includes the ability to input alternate consumption profiles or time-of-use weightings. These can be used by stakeholders or distributors for their own analysis. The AER currently uses the default consumption profiles, calculated as averages of actual consumption per tariff, in communicating outcomes. Distributors are encouraged to submit the models with this default for consistent messaging.

2.2.9 Charts

The charts worksheet provides output charts to support the pricing proposals and stakeholder engagement. These output charts include annual revenue movements, waterfall charts reflecting annual revenue adjustments, and waterfall charts reflecting cost movements. The output charts are used by the AER to communicate the outcome of the approved pricing proposals. Distributors are encouraged to use the same charts for consistent messaging.

Output chart 1 provides a breakdown of revenue components (distribution, DPPC, JSA, and metering for Victorian distributors), and the movement between the current year and forecast year. Output chart 1 also provides the base distribution revenue (and metering for Victorian distributors) as set in the applicable determination, and updated for annual cost of debt, for reference.¹⁴

Output chart 2 provides a waterfall representation of the movements in overall revenues between the current year and the upcoming year. These movements reflect the movements in each of the components of revenue and relevant adjustments (such as incentive schemes, or under/over-recoveries). The 'revenue and tariff paths, volume updates' and 'transmission, jurisdictional schemes' components reflect forecast movements in demand/consumption, the discretion a distributor has in setting prices within thresholds, and any other impacting factors not reflected in other components.

Output charts 3 and 4 provide waterfall representations of cost movements for particular tariffs by components of network prices (including metering for the purpose of reflective cost movements). Waterfall representations of cost movements for particular tariffs by annual adjustments (as per Output chart 2) are also provided. These charts are provided for residential (output chart 3) and small business (output chart 4) customers and allow the user to select multiple tariffs for side-by-side comparison. Tariffs for analysis are selected from drop-down menus above the charts.

Some editing of these charts may be required prior to use to ensure labels are positioned correctly. Figure 7 provides an example of the charts worksheet.

¹⁴ Base revenues may also include components of cost pass-throughs, if applied through the PTRM.

Figure 7 Charts worksheet



2.3 Inputs

The inputs module houses all the inputs required for the pricing model.

As noted above in section 2.1, Figure 2 provides a key to demonstrate the colour-coding of the inputs. Colour-coding has also been applied to the worksheet tabs, reflecting the last touchpoint for each worksheet. For example, the Financial worksheet requires inputs at all stages, but is coloured blue to reflect the last inputs are required by the distributor for submission of the model.

Orange cells indicate data to be input by the AER at the commencement of the regulatory control period, and green cells indicate data to be input by the AER prior to each pricing process. Blue cells indicate data to be input by the distributor prior to submission.

Where placeholders are used for data in the pre-lodgement engagement process and then updated for the final submission before 1 April, these cells should be shaded a darker green or blue for easy identification. Additionally, where data is changed by the distributor for more updated data, a disputed input, or other reason, that data should be shaded in the same dark blue used for updating placeholders.

The inputs summary worksheet provides an inputs guide with links to the relevant cell ranges for inputs. Figure 8 provides an example of the inputs summary worksheet.

Figure 8 Inputs summary worksheet

Sheet Name	Sheet Description
General	Inputs NSP name, regulatory years for the t, t-1, and t-2 years, inflation, day counts, etc.
Financial	Inputs the WACC, x-factors, allowed revenues, and annual adjustments
Actuals	Inputs actual revenues, demand, and customer numbers
Metering	Inputs relating to metering (prices for cost movements for non-Vic, prices and quantities for revenue caps for Vic)
Tariffs	Inputs tariff information including charging components and tariff classes
Quantities	Inputs forecast, estimated, and actual quantities
Proposed prices	Inputs proposed prices for SCS
Historical prices	Inputs historical prices for SCS for calculating estimated and actual revenues
Indicative prices	Inputs indicative tariffs to update the schedule for the remainder of the regulatory control period (updates previous schedule for only remaining years)
Trial tariffs	Inputs trial tariffs and relevant revenues (both forecast and historical)
Tariff costs	Inputs cost information related to standalone and avoidable costs

To be input by AER at beginning of regulatory control period:		To be input by AER prior to annual pricing process each year:	
General!F8	DNSP name	General!F10	Forecast regulatory year
General!F9	Month that year ends in (i.e. June for financial year)	General!F52-F93	December CPI value
General!F14	First year of regulatory control period	General!J24-K27	Days for seasonal charging components for current and previous years
General!F7-F18	CPI measurement information	Financial!M7-O7	Real vanilla WACC (from debt update)

To be input by DNSP prior to submission each year:	
Financial!M32-Q32	License fees
Financial!M40-Q41	Cross-boundary revenue forecasts/estimates

2.3.1 General

The general inputs worksheet requires general data to be input that relates to the distributor and that underlies certain components of the model. Where the forecast regulatory year is updated, certain parts of the model will provide error results until the relevant CPI measurement is input.

Table 1 provides guidance on the data inputs on the general inputs worksheet. Figure 9 provides an example of the general inputs worksheet.

Table 1 **General inputs**

Input	Table	Cell	Who?	Notes
Distributor name	1	F8	AER	Select from drop-down menu.
Year ending	1	F9	AER	Select from drop-down menu. Should all be June to reflect financial year.
Forecast regulatory year	1	F10	AER	Select from drop-down menu. Reflects upcoming regulatory year (year t).
Current regulatory control period, 1 st year	1	F14	AER	Select from drop-down menu.
Current measurement quarter for CPI	1	F17	AER	Select from drop-down menu. Should all be December.
Previous measurement quarter for CPI	1	F18	AER	Select from drop-down menu. Should be June for Victoria, Dec. for others.
Forecast inflation	1	F19	AER	From SCS PTRM from determination.
Materiality threshold	1	F20	AER	For movements from indicative prices.
Seasonal information	1	F24:K27	AER	To give effect to any seasonal charging components in the TSS.
Method for proposed prices	1	F29	Distributor	Select from drop-down menu. Toggles between input prices and calculated prices using input movements from current year prices.
Method for side constraints	1	F30	AER	Select from drop-down menu. In line with historical pricing proposals.
Inputs/outputs units	1	F31:F37	AER	Select from drop-down menu. Consistency intended – distributor should discuss with AER if desire different units.
Consumption profiles	1	F38:F39	Any	Enter consumption profile to override calculated profile. Should be blank in submission – distributors/stakeholders can input profiles for own analysis.
Consumption used for profiles	1	F40	AER	Select from drop-down menu. AER set for consistent approach – distribution/stakeholders can change for own analysis.
Time-of-use weightings	1	F41:F43	Any	Enter time-of-use weightings to override calculated weightings. Should be blank in submission – distributors/stakeholders can input profiles for own analysis.
Tariff identifiers	1	F45:F47	AER	To include any additional tariff identifiers such as tariff codes, or locational identifiers.
CPI	2	F54:F95	AER	Latest actual consumer price index.

Figure 9 General inputs worksheet

	A	B	C	D	E	F	G	H	I	J	K	L
1	AER pricing model - AER 2021–22						Back to Index					
2	<i>General</i>											
3	Inputs NSP name, regulatory years for the t, t-1, and t-2 years, inflation, day counts, etc.											
4												
5	Input table 1 General inputs											
6												
7	Inputs		Source			Value						
8	DNSP name		AER			AER						
9	Year ending		AER			June						
10	Forecast regulatory year (t)		AER			2021–22						
11	Current regulatory year (t-1)		Calculated			2020–21						
12	Previous regulatory year (t-2)		Calculated			2019–20						
13	Previous regulatory year (t-3)		Calculated			2018–19						
14	Current regulatory control period, first year		AER			2021–22						
15	Current regulatory control period, last year		Calculated			2025–26						
16												
17	Current measurement quarter for CPI		AER			December						
18	Previous measurement quarter for CPI		AER			June						
19	Forecast inflation for current regulatory control period		Determination			2.00%						
20	Materiality threshold for indicative price movements		AER			5.00%						
21	Threshold for individual trial tariff revenue		NER			1.00%						
22	Threshold for aggregate trial tariff revenue		NER			5.00%						
23	Days per year		Calculated			365						
24	Days for high season		TSS			120						
25	Days for low season		TSS			90						
26	Other seasonal period		TSS			Season						
27	Days for other seasonal period		TSS			121						
28												
29	Method for side constraints		AER			Incremental						
30	Unit for inputs and revenues		AER			Smillions		0.000001				
31	Unit for output tables (from revenues)		AER			Smillions			1			
32	Unit for standalone/avoidable costs (from revenues)		AER			Smillions				1		
33	Unit for consumption totals and outputs		AER			GWh		0.000001				
34												
35	Units for average consumption calculations		AER			Customers						
36	Units for consumption profiles		AER			kWh		1000000				
37	Residential consumption profile (calculated if blank)		AER									
38	Small business consumption profile (calculated if blank)		AER									
39	Forecast vs Actual consumption used for profiles		AER			Actual						
40	Peak weighting override (calculated if blank)		AER									
41	Off-peak weighting override (calculated if blank)		AER									
42	Shoulder weighting override (calculated if blank)		AER									
43												
44	Tariff identifier 1		AER			Code						
45	Tariff identifier 2		AER			Other identifier						
46												
47	Input table 2 Inflation											
48												
49						Index value		Inflation			Applicable regulatory year	
50	Source					ABS		Calculated				
51	Unit					index		Percent				
52	Dec-2014					106.6						
53	Mar-2015					106.8						
54	Jun-2015					107.5					2015–16	
55	Sep-2015					108.0						

	2020–21	2019–20
365	365	366
120	120	121
90	90	90
Season		
121	121	121

NOTE - assumption that consumpt

2.3.2 Financial

The financial inputs worksheet requires data to be input that relates to the calculation of allowed revenues and the unders/overs accounts. A number of these inputs may be placeholders for the purpose of the pre-lodgement engagement process.

We expect cross-boundary revenue and expenditure to be reported separately, in line with the income worksheet (8.1) of the annual reporting RINs. We also expect that total DPPC and JSA amounts should reconcile with the income and expenditure tables of the annual reporting RINs, as this meets the auditing requirement for the true-up of these values.

JSA breakdowns should reflect individual jurisdictional schemes and should reflect the schemes listed on worksheet 7.10 of the annual reporting RINs.

Where a jurisdictional scheme sets an amount to be recovered by distributors, then this amount is fixed as the recovery amount and no expenditure true-up is required – it is assumed this expenditure true-up is performed in subsequent amounts set under the

jurisdictional scheme. Revenues recovered from customers will be reconciled against this allowed recovery amount, which will not change in estimates and actuals from the amount sued for the forecast year.

Where a jurisdictional scheme operates as a direct pass-through of expenditure with no jurisdictional intervention, then both expenditure and revenues will be trued-up through estimates and actuals. This is the case for premium feed-in tariff jurisdictional schemes where a distributor forecasts the expenditure to be paid to customers.

Where appropriate, historical inflation and WACC should be hard coded over calculated values to reflect appropriate historical approach.

Table 2 provides guidance on the data inputs on the financial inputs worksheet. Figure 10 provides an example of the financial inputs worksheet.

Table 2 Financial inputs

Input	Table	Cell	Who?	Notes
Adjustment labels	4	C16:C34	AER	Labels to reflect applicable annual adjustments as per the determination.
Cost breakdown labels	5,6	C44:C48, C63:C66	AER	Labels for JSA to reflect breakdown of jurisdictional schemes.
Under/over-recovery adjustments	5,6,8	J31:Q31, J50:Q50, J68:Q68, J119:Q119	AER	AER to input historical data.
Real vanilla WACC	3	J7:Q7	AER	From latest applicable PTRM.
X-factor	3	N10:Q10	AER	From latest applicable PTRM.
Allowed smoothed revenue	3	J11:Q11	AER	From latest applicable PTRM.
Incentive schemes	4	J16:Q23	AER	As determined by AER previously.
Cost pass-throughs	4	J26:Q28	AER	As approved by AER.
Other adjustments	4	J31:Q34	AER/ distributor	As applicable. Distributors' inputs to include supporting documentation (e.g., invoices for license fees) and include calculations in formula or supporting worksheet (e.g., to apply WACC).
Cross-boundary revenue	5	J40:Q41	AER/ distributor	As applicable. AER to input historical data.
Disaggregated DPPC forecasts and estimates	5	J44:Q48, J53:Q57	AER/ distributor	AER to input historical data. Distributors' inputs to include supporting documentation where available. If estimates blank, relevant forecasts used.
Disaggregated JSA forecasts and estimates	6	J63:Q66, J71:Q74	AER/ distributor	AER to input historical data. Distributors' inputs to include supporting documentation where available. If estimates blank, relevant forecasts used.

Unders/overs opening balance	7	J80:K82	AER	AER to input balance to be carried forward in relevant year (or zero balance in the case of applicable remittals).
Deliberate under-recoveries	7	J85:Q87	Distributor	Distributors' inputs to include supporting documentation where available.
Allowed revenues	7	J90:L92	AER	AER to input historical data.
Miscellaneous adjustments	7	J94:Q95	AER/ distributor	To apply any miscellaneous adjustments (e.g., COVID-19 adjustment for CitiPower, as per determination). For distribution, as approved by AER. For JSA, as required under any specific scheme.
Estimated revenues	7	J98:Q100	AER/ distributor	AER to input historical data. If blank, estimates will be calculated from relevant prices and estimated quantities (AER preferred).
Placeholder revenues	7	J103:Q105	AER	For AER to insert placeholders if necessary to test functionality or other. Should not be used in submission to the AER.
Unpaid network charges (ROLR)	7	J108:Q110	Distributor	Distributor to input any unpaid network charges relating to ROLR events. Should also reflect negative adjustments where previously accounted for unpaid network charges (or part thereof) are subsequently recovered through insolvency processes.
Metering inputs	8	J114:Q126	AER/ distributor	As per applicable inputs for tables 3,4, 7 above.

Figure 10 Financial inputs worksheet

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	
1	AER pricing model - AER 2021–22										Back to Index							
2	Financial																	
3	Inputs the WACC, x-factors, allowed revenues, and annual adjustments																	
4																		
5	Input table 3 Financial information			Source	Unit	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26					
6	Real vanilla WACC			PTRM	Per cent													
7	Inflation			Input/General	Per cent	2.08%	1.59%	1.84%	0.86%	2.00%	2.00%	2.00%	2.00%					
8	Adjusted nominal WACC			Calculation	Per cent	2.08%	1.59%	1.84%	0.86%	2.00%	2.00%	2.00%	2.00%					
9	X-factor			PTRM	Per cent													
10	Allowed smoothed revenue			PTRM	\$millions													
11																		
12																		
13																		
14	Input table 4 Annual adjustments			Source	Unit	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26					
15	S factor (STPS 1,2)			AER	Per cent													
16																		
17																		
18	S factor (STPS 2,0)			AER	\$millions													
19	H factor (CSIS)			AER	\$millions													
20	DMIS			AER	\$millions													
21	DMIA			AER	\$millions													
22	f-factor			AER	\$millions													
23																		
24	Total Incentive Schemes			Calculation	\$millions													
25																		
26	Cost pass-through 1			AER	\$millions													
27	Cost pass-through 2			AER	\$millions													
28	WACC true-up (Vic)			AER	\$millions													
29	Total Cost Pass-Throughs			Calculation	\$millions													
30																		
31	Under/over-recovery adjustment (distribution)			AER	\$millions													
32	License fees			DNSP	\$millions													
33	COVID-19 adjustment			AER	\$millions													
34	RV factor																	
35	Total B factor adjustments			Calculation	\$millions													
36																		
37	Input table 5 Designated Pricing Proposal Costs (DPPC)			Source	Unit	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26					
38																		
39	Cross-boundary revenue																	
40	Year t forecasts			DNSP	\$millions													
41	Year t-1 estimates			DNSP	\$millions													
42																		
43	Year t forecasts																	
44	AEMO			DNSP	\$millions													
45	Transmission connection			DNSP	\$millions													
46	Embedded generators			DNSP	\$millions													
47	Cross-boundary expenditure			DNSP	\$millions													
48																		
49	Total Forecast DPPC			Calculation	\$millions													
50	Under/over-recovery adjustment (DPPC)			AER	\$millions													
51																		
52	Year t-1 estimates																	
53	AEMO			DNSP	\$millions													
54	Transmission connection			DNSP	\$millions													
55	Embedded generators			DNSP	\$millions													
56	Cross-boundary expenditure			DNSP	\$millions													
57																		
58	Total Estimate DPPC			Calculation	\$millions													
59																		
60	Input table 6 Jurisdictional Scheme Amounts (JSA)			Source	Unit	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26					
61																		
62	Year t forecasts																	
63	PFIT			DNSP	\$millions													
64	TFIT			DNSP	\$millions													
65	ESV levy			DNSP	\$millions													
66																		
67	Total Forecast JSA			Calculation	\$millions													
68	Under/over-recovery adjustment (JSA)			AER	\$millions													
69																		
70	Year t-1 estimates																	
71	PFIT			DNSP	\$millions													
72	TFIT			DNSP	\$millions													
73	ESV levy			DNSP	\$millions													
74																		
75	Total Estimate JSA			Calculation	\$millions													
76																		
77	Input table 7 Unders and overs accounts			Source	Unit	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26					
78																		
79	Unders/overs opening balances																	
80	Distribution			AER	\$millions													
81	DPPC			AER	\$millions													
82	JSA			AER	\$millions													
83																		
84	Deliberate under-recoveries																	
85	Distribution			DNSP	\$millions													
86	DPPC			DNSP	\$millions													
87	JSA			DNSP	\$millions													
88																		
89	Allowed revenues																	
90	Distribution			AER	\$millions													
91	DPPC			AER	\$millions													
92	JSA			AER	\$millions													
93																		
94	Miscellaneous adjustment (e.g. COVID-19) - Distribution			AER	\$millions													
95																		
96	Estimated revenues																	
97	Distribution			DNSP	\$millions													
98	DPPC			DNSP	\$millions													
99	JSA			DNSP	\$millions													
100																		
101	Input table 8 Metering (Vic only)			Source	Unit	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26					
102																		
103	Metering x-factor			PTRM	Per cent													
104	Metering allowed smoothed revenue			PTRM	\$millions													
105																		
106	Pass through amounts																	
107	WACC true-up			AER	\$millions													
108	Total cost pass-throughs			Calculation	\$millions													
109	Under/over-recovery adjustment (metering)			AER	\$millions													
110	Unders/overs opening balance			AER	\$millions													
111	Deliberate under-recoveries			DNSP	\$millions													
112	Allowed revenues			AER	\$millions													
113	Estimated revenues			DNSP	\$millions													

2.3.3 Actuals

The actuals inputs worksheet requires data to be input that relates to the actual revenues and expenditures reported by the distributors, as well as some operational data reported. Operational data inputs are used in relation to quantity forecast analysis. Until small business customers are reflected in RIN data, this data will be compiled from the actuals data provided in the pricing model.

Actual revenues and expenditures are required to be accompanied by independent assurance. This requirement is considered as being met when revenue and expenditure reconcile with the RINs, for which assurance is provided. As such, we expect that income and expenditure considered in pricing models should reflect the income and expenditure worksheets of the annual reporting RINs.

Where a distributor identifies that actual revenue and/or expenditure differs to what has been reported in the RINs, the distributor will be required to input the correct data in the relevant annual pricing process and resubmit the RINs with new independent assurance over the revised data at the next RIN submission process. The independent assurance should meet the requirements of the RIN under which the original data was submitted. The distributor should raise this issue with the AER through the pre-lodgement engagement process.

Table 3 provides guidance on the data inputs on the actuals inputs worksheet.

Table 3 Actuals inputs

Input	Table	Cell	Who?	Notes
Actual revenues	9	J7:Q12	AER	Data sourced from Table 8.1.1.1 of AR RIN.
Actual expenditure	10	J16:Q26	AER	Data sourced from Table 8.1.1.2 of AR RIN. Worksheet 7.10 for JSA. Worksheet 9.5 for DPPC (Vic).
Operational data units	11	E31:E52	AER	Units as per Tables 3.4.1.4, 3.4.1.1, 3.4.2.1 of EB RIN.
Actual operational data	11	J31:Q51	AER	Data sourced from Tables 3.4.1.4, 3.4.1.1, 3.4.2.1 of EB RIN. Small business data sourced from historical pricing models until captured in RINs.

2.3.4 Metering

The metering inputs worksheet requires data to be input that relates to the metering prices to apply to small customers for the purpose of cost movement analysis. For Victorian distributors, whose metering services are revenue-capped, it requires data to be input related to prices and quantities of metering services.

Table 4 provides guidance on the metering inputs on the metering inputs worksheet.

Table 4 Actuals inputs

Input	Table	Cell	Who?	Notes
Metering tariffs and units	12	C7:F36	AER	As per ACS model and determination. Non-Victorian distributors only.
Metering tariffs and units	13	C42:F48	AER	As per determination. Victorian distributors only.
Metering prices	12	K7:R36	AER/ distributor	AER to input historical data. Proposed prices as per ACS model. Non-Victorian distributors only. Default as price caps.
Metering proposed prices	13	K42:R48	AER/ distributor	AER to input historical data. Victorian distributors only.
Metering quantities	13	K51:R57	AER/ distributor	AER to input historical data as available. Quantities forecasts to be replaced by estimates and actuals as known. Victorian distributors only.

2.3.5 Tariffs

The tariffs inputs worksheet requires data to be input that relates to the tariff classes, charging components, and tariffs for each distributor. Some of this data assists with converting to common units and identifying tariffs and charging components for treatment or inclusion in other components of the pricing model. This information will generally be sourced from the applicable TSS.

The tariffs throughout the pricing model are separated into two categories – tariffs and site-specific tariffs. Tariffs listed in the site-specific tariffs sections are generally those that apply to individual customers, or otherwise may allow data related to individual customers to be identifiable and where appropriate, should be redacted for public versions of the model. These have been segregated to allow for easy identification and redaction.

Controlled load and dedicated circuit tariffs, and any similar ‘secondary’ tariffs are expected to be treated as individual line items for the purpose of this model. This allows more reflective and transparent analysis, particularly that for cost movements. However, we have built functionality into the model to treat tariffs that combine the main and secondary components.

Block charging components (table 15) should be listed as ‘anytime’ consumption (column S). Block information for tariffs (table 16) should reflect the upper limit of consumption for each block, rather than the incremental consumption from the previous block (columns S and T). A block without an upper limit (i.e., the highest block) should be left blank (or as a 0 value).

For the avoidance of doubt, trial tariffs should not be included in the tariffs worksheet. Trial tariffs will be input only into the trial tariffs worksheet (see section 2.3.11).

Table 5 provides guidance on the data inputs on the tariffs inputs worksheet.

Table 5 Tariffs inputs

Input	Table	Cell	Who?	Notes
Tariff classes	14	C7:C17	AER	Tariff classes as identified in the TSS.
Charging component	15	C22:C41	AER	Name of charging component as per TSS.
Type of charge	15	D22:D41	AER	Select from drop-down menu. To identify charge type and applicable treatments in certain components of model.
Abbreviation	15	J22:J41	AER	Abbreviated name for use in tariff schedules and throughout model. As per TSS where available.
Charging units	15	K22:M41	AER	Select from drop-down menu.
Other identifying info.	15	T22:V41	AER	Select from drop-down menu.
Tariff names	16,17	C46:C224	AER	Tariff name as identified in the TSS.
Tariff class	16,17	D46:D224	AER	Select from drop-down menu.
Other identifiers	16,17	E46:G224	AER	As per TSS or previous tariff schedule.
Historical tariff	16,17	H46:H224	AER	Relevant tariff from previous regulatory control period (where applicable). Historical prices, quantities, etc., will source tariff names from here in relevant years.
Other identifying info.	16,17	J46:O224	AER	Select from drop-down menu. To identify tariff type and applicable treatments in certain components of model.
Block information	16	P46:U120	AER	Information for block tariffs for cost movement analysis.
Metering tariff	16	V46:V120	AER	Relevant (or typical) metering tariff for cost movement analysis.

2.3.6 Quantities (Qty)

The quantities inputs worksheet requires data to be input that relates to the forecast, estimated, and actual quantities for each charging component for each tariff. Estimated quantities will be used to calculate estimated revenues where total estimated revenues are not provided. Actual quantities and customer numbers are used for cost movement and other analysis.

Summaries of previous forecasts of quantities will be carried over from previous pricing proposals and input in table 18 by the AER. These previous forecasts are used in quantity forecasts trend analysis.

For the avoidance of doubt, estimated and actual quantities should be updated each year for the relevant years, and should not reflect the forecast quantities provided for that year in the relevant pricing proposal.

The forecast quantities are assessed for reasonableness, as required by the NER to approve a pricing proposal.¹⁵

Customer numbers are used for cost movement analysis (where selected) and for quantity forecast analysis. As such, we expect customer numbers here to reflect customers for each tariff (including secondary tariffs) to appropriately influence cost movement analysis. Totals used for quantity forecast analysis will automatically remove customers for secondary controlled load tariffs to best reflect individual customers in summaries.

Table 6 provides guidance on the data inputs on the quantities inputs worksheet.

Table 6 Quantities inputs

Input	Table	Cell	Who?	Notes
Previous forecasts	18	L8:U28	AER	Previous forecast quantity summaries from previous pricing proposals.
Forecast quantities	19,20	I36:AE110, I276:AE375	Distributor	Forecast quantities for the upcoming period. Supporting material (including methodology) to be provided.
Estimated quantities	19,20	I115:AE189, I380:AE479	Distributor	Estimated quantities for the current period. Supporting material (including methodology) to be provided.
Actual quantities	19,20	I194:AE268, I484:AE583	Distributor	Actual quantities for the previous period. Supporting material (including methodology) to be provided where applicable.

2.3.7 Proposed prices - inputs (Prop. prices input)

The proposed prices inputs worksheet requires data to be input that relates to the proposed prices for each charging component, revenue component, and tariff. Proposed prices are used to calculate revenues for the upcoming year.

Alternatively, the proposed prices control sheet can be used. Use of directly input prices and the control sheet is toggled by cell F29 on the general inputs worksheet.

Table 7 provides guidance on the data inputs on the proposed prices inputs worksheet.

Table 7 Proposed prices inputs

Input	Table	Cell	Who?	Notes
Proposed distribution prices	21,22	I8:AB82, I245:AB344	Distributor	Proposed distribution prices for the upcoming period.
Proposed DPPC prices	21,22	I86:AB160, I348:AB447	Distributor	Proposed DPPC prices for the upcoming period.
Proposed JSA prices	21,22	I164:AB238, I451:AB550	Distributor	Proposed JSA prices for the upcoming period.

¹⁵ NER cl. 6.18.8(a)(3).

2.3.8 Proposed prices – control inputs (Prop. prices control input)

The proposed prices control inputs worksheet can be used to calculate proposed prices as a calculation from current prices. These calculations can be applied to all prices consistently, or each price individually, or by charging component, type of charging component (volume/demand), revenue component, tariff, or a combination of these.

The model will apply the input entered at the most disaggregated level. That is, if 105% is entered as a movement for the charging component, and 102% is entered at the individual price, then 102% will apply. The hierarchy of applications is as follows (from most disaggregated to most aggregated, consistent with the formula in the model):

- Individual price movement (if blank, then check...)
- Demand or volume movement for tariff
- Tariff movement
- Charging component for that revenue component (distribution/DPPC/JSA)
- Demand or volume movement for that revenue component
- Revenue component movement
- Charging component for all revenue components
- Demand or volume movement for all revenue components
- Movement applicable to all prices.

Use of directly input prices and the control sheet is toggled by cell F29 on the general inputs worksheet.

Table 8 provides guidance on the data inputs on the proposed prices control inputs worksheet.

Table 8 Proposed prices inputs

Input	Table	Cell	Who?	Notes
Network price controls	N/A	I3:AF3	Distributor	% calculation controls to apply to all prices or for charging components or types of charging components across all revenue components.
Distribution price controls	23,24	I8:AF84, I251:AF352	Distributor	% calculation controls to apply to distribution prices, or by tariffs, charging components, type of charging components, or individual prices.
DPPC price controls	23,24	I88:AF164, I356:AF457	Distributor	% calculation controls to apply to DPPC prices, or by tariffs, charging components, type of charging components, or individual prices.
JSA price controls	23,24	I168:AF244, I461:AF562	Distributor	% calculation controls to apply to JSA prices, or by tariffs, charging components, type of charging components, or individual prices.

2.3.9 Historical prices (Hist. prices)

The historical prices inputs worksheet requires data to be input that relates to the historical prices for each charging component, revenue component, and tariff for the current and previous years. These prices are as approved in previous pricing proposals. Historical prices are used to calculate revenues for the current year where total estimated revenues are not provided, and for performing cost movement and other analysis.

Table 9 provides guidance on the data inputs on the historical prices inputs worksheet.

Table 9 Historical prices inputs

Input	Table	Cell	Who?	Notes
Current distribution prices	25,27	I8:AB82, I482:AB581	AER	Distribution prices for the current year.
Current DPPC prices	25,27	I86:AB160, I585:AB684	AER	DPPC prices for the current year.
Current JSA prices	25,27	I164:AB238, I688:AB787	AER	JSA prices for the current year.
Previous distribution prices	26,28	I245:AB319, I794:AB893	AER	Distribution prices for the previous year.
Previous DPPC prices	26,28	I323:AB397, I897:AB996	AER	DPPC prices for the previous year.
Previous JSA prices	26,28	I401:AB475. I1000:AB1099	AER	JSA prices for the previous year.

2.3.10 Indicative prices

The indicative prices inputs worksheet requires data to be input that relates to the indicative total network prices for each charging component, and tariff for the remaining years of the regulatory control period. Initially these indicative prices will be input as provided with the TSS. These prices shall be updated for the remaining years of the regulatory period in each pricing process, with the upcoming year and any preceding years to remain as previously input.

For the avoidance of doubt, indicative prices should not be updated for proposed or approved prices.

Indicative prices are a requirement under the NER, as are explanations for proposed prices that depart materially from previously indicated in the indicative price schedules.¹⁶

Table 10 provides guidance on the data inputs on the indicative prices inputs worksheet.

¹⁶ NER cl. 6.18.2(b)(7A) and 6.18.2(d),(e).

Table 10 Indicative prices inputs

Input	Table	Cell	Who?	Notes
Indicative prices	29,30	I8:AB912	Distributor	Indicative prices for the remaining years of the regulatory period to be updated. Upcoming year and preceding years to remain as previously input.

2.3.11 Trial tariffs

The trial tariffs inputs worksheet requires data to be input that relates to any trial tariffs for the upcoming year, or historically. For the upcoming year, trial tariff revenues are to be input for compliance with the revenue cap mechanism and other requirements.

In the current and previous years, price and quantity data is to be input to demonstrate compliance with trial tariff thresholds as per NER requirements.¹⁷

Table 11 provides guidance on the data inputs on the trial tariffs inputs worksheet. Figure 11 provides an example of the trial tariffs inputs worksheet.

Table 11 Trial tariffs inputs

Input	Table	Cell	Who?	Notes
Trial tariff names	31	C7:C26	Distributor	Trial tariff names (including historical).
Trial tariff class	31	D7:D26	Distributor	Select from drop-down menu.
Forecast revenue	31	I7:K26	Distributor	Input forecast revenue for each distribution, DPPC, and JSA.
Description of tariffs	31	M7:T26	Distributor	Description of trial tariffs.
Other tariff identifiers	32	E33:F52	Distributor	Any other identifying information.
Indicative trial tariffs	32	I33:AB140	Distributor	Indicative prices for the remaining years of the regulatory year where available.
Quantities estimates and actuals	33	I145:AB186	Distributor	Estimated and actual quantities for current and previous period respectively.
Current and previous prices	34,35	I192:AB325	Distributor	Current and previous prices for each revenue and charging component.
Historical revenue	36	I330:P395	Distributor	Historical revenue for preceding years.

¹⁷ NER cl. 6.18.1C(a).

Figure 11 Trial tariffs inputs worksheet

2.3.12 Tariff costs

The tariff costs inputs worksheet requires data to be input that relates to the avoidable and standalone costs for each tariff class.

The avoidable and standalone costs form lower and upper bounds (respectively) for the expected revenues for each tariff class.¹⁸

Table 12 provides guidance on the data inputs on the tariff costs inputs worksheet.

Table 12 Tariff costs inputs

Input	Table	Cell	Who?	Notes
Avoidable costs	37	L7:Q17	Distributor	Avoidable costs, with supporting calculations and/or model.
Standalone costs	38	L21:Q31	Distributor	Standalone costs, with supporting calculations and/or model.

2.4 Calculations

The calculations module provides the calculations that underlie the outputs worksheets. These include calculations of allowable, forecast, and estimated revenues, the amounts for the unders/overs accounts, and the cost movements analysis.

2.4.1 Total allowable revenue (TAR)

The TAR worksheet calculates the total allowable revenue for distribution, DPPC, JSA, and metering (for Victorian distributors only).

¹⁸ NER cl. 6.18.5(e).

Total allowable revenue is calculated in line with the price control formulae as per our determinations for distribution and metering. This includes an unders/overs balancing adjustment that reflects the opening balance of the unders/overs account for the year, with a half-year WACC applied. This adjustment is calculated in the financials inputs worksheet.

For DPPC and JSA, total allowable revenue is calculated as the costs forecast to be incurred by the distributor, with a similar balancing adjustment as above for the relevant unders/overs account.¹⁹ For the purpose of transparency, and for use in supplementary analysis, the calculation of these total allowable revenues will not change to reflect estimated or actual DPPC and JSA costs.

Figure 12 provides an example of the total allowable revenue worksheet.

Figure 12 Total allowable revenue worksheet

	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	AER pricing model - AER 2021-22															
2	Total allowable revenue															
3	Calculates total allowable revenues															
4																
5	Calculation table 1 Allowable distribution revenue															
6		Source	Unit	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Notes				
7	Inflation	Financial	Per cent	2.08%	1.59%	1.84%	0.86%									
8	X-factor	Financial	Per cent													
9	S factor (STPS 1.2)	Financial	Per cent													
10																
11	I factor	Financial	\$millions													
12	C factor	Financial	\$millions													
13	B factor	Financial	\$millions													
14																
15	Annual smoothed revenue	Financial	\$millions													
16	Adjusted annual smoothed revenue	Calculation	\$millions													
17	Total allowable revenue	Calculation	\$millions													
18																
19	B factor, net of under/over-recovery adjustment	Calculation	\$millions													
20	Total allowable revenue for unders/overs accounts	Calculation	\$millions													
21																
22	Calculation table 2 Allowable DPPC revenue															
23		Source	Unit	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Notes				
24	Total Forecast DPPC	Financial	\$millions													
25	Under/over-recovery adjustment (DPPC)	Financial	\$millions													
26	Total allowable revenue	Calculation	\$millions													
27																
28	Calculation table 3 Allowable JSA revenue															
29		Source	Unit	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Notes				
30	Total Forecast JSA	Financial	\$millions													
31	Under/over-recovery adjustment (JSA)	Financial	\$millions													
32	Total allowable revenue	Calculation	\$millions													
33																
34	Calculation table 4 Allowable metering revenue (Vic only)															
35		Source	Unit	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Notes				
36	Metering x-factor	Financial	Per cent													
37	Total cost pass-throughs	Financial	\$millions													
38	Under/over-recovery adjustment (metering)	Financial	\$millions													
39																
40	Annual smoothed revenue	Financial	\$millions													
41	Adjusted annual smoothed revenue	Calculation	\$millions													
42	Total allowable revenue for unders/overs accounts	Calculation	\$millions													
43	Total allowable revenue	Calculation	\$millions													

2.4.2 Accounts

The accounts worksheet calculates the relevant data for use in the unders/overs accounts for each distribution, DPPC, JSA, and metering (for Victorian distributors only). For information only, a total unders/overs account is also provided.

An additional line item has been added to the unders/overs account (row 15 for distribution in calculation table 6) to reflect the unders/overs balancing adjustment made when the year was the forecast upcoming year (year=t). This line item has been added for transparency and supplementary analysis. It disaggregates the total under/over-recovery to provide both the intended balancing adjustment, as well as the further ‘net’ under/over-recoveries experienced. This effectively removes the under/over-recoveries from previous years applied

¹⁹ NER cl. 6.18.7(b) and 6.18.7A(b).

through the balancing adjustment and ensures the final net under/over-recovery line reflects the under/over-recovery specific to that year.

Total under/over-recoveries are applied to the unders/overs account (row 24 for distribution in calculation table 6) as the total of the balancing adjustment and the net under/over-recovery for a particular year. This maintains the same treatment as set in the applicable determinations.

Ordering of line items has been adjusted to group revenue and revenue adjustments together. Breakdown of JSA amounts has also been added for transparency.

Table 13 provides guidance on the calculations on the accounts worksheet. Figure 13 provides an example of the accounts worksheet.

Table 13 Accounts calculations

Calculation	Table	Cell	Notes
Revenue from charges	6,7,8,9	J13:Q13, J30:Q30, J47:Q47, J68:Q68	Revenue calculated as proposed prices x forecast quantities for the upcoming forecast year (year=t), plus forecast trial tariff revenues. Revenue sourced from input estimates where available, otherwise calculated from approved prices x estimated quantities for current year (year=t-1), including for trial tariffs. Revenue sourced from actuals worksheet for previous year (year=t-2).
Cross-boundary revenue	7	J31:Q31	Cross-boundary revenue as forecast, estimated, or reported as actual in the RINs.
Total allowable revenue	6,9	J17:Q17, J72:Q72	Total allowable revenue as calculated for use in the unders/overs account on the TAR worksheet. For the avoidance of doubt, this total allowable revenue is net of the unders/overs balancing adjustment.
Total DPPC/JSA expenditure	7,8	J35:Q35, J55:Q55	Total DPPC/JSA expenditure forecast, estimated (previous forecasts used where estimates not provided), or reported as actual in the RINs, that forms the total allowable revenue..
Balancing adjustment	6,7,8,9	J18:Q18, J36:Q36, J56:Q56, J73:Q73	Unders/overs balancing adjustment made in that year when it was the upcoming forecast year (when it was year=t).
Net under/over-recovery of revenue	6,7,8,9	J19:Q19, J37:Q37, J57:Q57, J74:Q74	Net under/over-recovery forecast/estimated/actually experienced in a particular year (should be 0, or close to 0, when year=t).
Total unders/overs account	10	J84:Q98	Sum of all unders/overs account. Provided for information only.

Figure 13 Accounts worksheet

	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	AER pricing model - AER 2023-24															
2	Accounts Back to Index															
3	Calculates under/over-recovery and related data															
4																
5	Calculation table 5 WACC															
6		Source	Unit		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Notes			
7	Real vanilla WACC	Financial!	Per cent													
8	Inflation	Financial!	Per cent		2.08%	1.59%	1.84%	0.86%	3.50%	8.00%						
9	Adjusted nominal WACC	Financial!	Per cent		2.08%	1.59%	1.84%	0.86%	3.50%	8.00%						
10																
11	Calculation table 6 Distribution unders/overs accounts															
12		Source	Unit		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Notes			
13	Revenue from charges	Calculation	\$millions													
14	Deliberate under-recoveries	Financial!	\$millions													
15	Unpaid network charges (ROLR)	Financial!	\$millions													
16	Total revenue	Calculation	\$millions													
17	Total allowable revenue	TAR!	\$millions													
18	Balancing adjustment made when year was 't'	Financial!	\$millions													
19	Net under/over-recovery of revenue	Calculation	\$millions													
20																
21	Opening balance	Financial!	\$millions													
22	Interest on opening balance	Calculation	\$millions													
23	Miscellaneous adjustment (e.g., COVID-19)	AER	\$millions													
24	Total under/over-recovery of revenue (inc. balancing adjustment)	Calculation	\$millions													
25	Interest on under/over-recovery for regulatory year	Calculation	\$millions													
26	Closing balance	Calculation	\$millions													
27																
28	Calculation table 7 DPPC unders/overs accounts															
29		Source	Unit		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Notes			
30	Revenue from charges	Calculation	\$millions													
31	Cross-boundary revenue	Calculation	\$millions													
32	Deliberate under-recoveries	Financial!	\$millions													
33	Unpaid network charges (ROLR)	Financial!	\$millions													
34	Total revenue	Calculation	\$millions													
35	Total DPPC expenditure	Calculation	\$millions													
36	Balancing adjustment made when year was 't'	Financial!	\$millions													
37	Net under/over-recovery of revenue	Calculation	\$millions													
38																
39	Opening balance	Financial!	\$millions													
40	Interest on opening balance	Calculation	\$millions													
41	Total under/over-recovery of revenue (inc. balancing adjustment)	Calculation	\$millions													
42	Interest on under/over-recovery for regulatory year	Calculation	\$millions													
43	Closing balance	Calculation	\$millions													
44																
45	Calculation table 8 JSA Unders/overs accounts															
46		Source	Unit		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Notes			
47	Revenue from charges	Calculation	\$millions													
48	Deliberate under-recoveries	Financial!	\$millions													
49	Unpaid network charges (ROLR)	Financial!	\$millions													
50	Total revenue	Calculation	\$millions													
51	PFIT	Financial!	\$millions													
52	TFIT	Financial!	\$millions													
53	ESV levy	Financial!	\$millions													

2.4.3 Revenue summary (Rev. summary)

The revenue summary worksheet provides summaries of all revenues for distribution, DPPC, and JSA components. This includes calculated revenue totals for the forecast upcoming year, the estimated current year, and the actual previous year, for tariff classes, charging components, and confidential tariffs. It also provides revenue summaries for Victorian metering services.

Figure 14 provides an example of the revenue summary worksheet.

Figure 14 Revenue summary worksheet

AER pricing model - AER 2021-22													
Revenue summary													
Totals revenues for each tariff, charging component, and tariff class													
Calculation table 11 Tariff classes													
Unit		2019-20			2020-21			2021-22					
Distribution	DPPC	JSA	Distribution	DPPC	JSA	Distribution	DPPC	JSA	Distribution	DPPC	JSA		
Residential	\$millions												
Small business & C	\$millions												
Unmetered	\$millions												
Total	\$millions												
Calculation table 12 Charging components (\$)													
Type of charge		2019-20			2020-21			2021-22					
Distribution	DPPC	JSA	Distribution	DPPC	JSA	Distribution	DPPC	JSA	Distribution	DPPC	JSA		
Fixed charge per kWh	Fixed												
Flat rate consumption charge	Consumption												
Inclining block 1 consumption charge	Consumption												
Inclining block 2 consumption charge	Consumption												
Peak time-of-use consumption charge	Consumption - TOU												
Shoulder time-of-use consumption charge	Consumption - TOU												
Off-peak time-of-use consumption charge	Consumption - TOU												
Calculation table 13 Tariffs (\$)													
Tariff class		Code	Other identifier	2019-20			2020-21			2021-22			
Distribution	DPPC	JSA	Distribution	DPPC	JSA	Distribution	DPPC	JSA	Distribution	DPPC	JSA		
Residential general	Residential												
Residential TOU	Residential												
Residential demand	Residential												
Small business general	Small business												
Small business TOU	Small business												
Small business demand	Small business												
Large business general	I & C												
Large business TOU	I & C												
Calculation table 14 Metering revenues (Vic)													
Unit		2019-20			2020-21			2021-22					
Metering a	\$millions												
Total	\$millions												
Calculation table 15 CONFIDENTIAL tariffs (\$)													
Tariff class		Code	Other identifier	2019-20			2020-21			2021-22			
Distribution	DPPC	JSA	Distribution	DPPC	JSA	Distribution	DPPC	JSA	Distribution	DPPC	JSA		
Residential	\$millions												
Small business	\$millions												
I & C	\$millions												
Unmetered	\$millions												
Total	\$millions												
ACCC Office	I & C												

2.4.4 Proposed prices control sheet (Prop. prices control)

The proposed prices control worksheet carries forward the percentage movements to apply in calculating proposed prices based on current prices. This worksheet will determine the applicable percentage movement based on the most disaggregated level. The hierarchy of applications is as follows (from most disaggregated to most aggregated, consistent with the formula in the model):

- Individual price movement (if blank, then check...)
- Demand or volume movement for tariff
- Tariff movement
- Charging component for that revenue component (distribution/DPPC/JSA)
- Demand or volume movement for that revenue component
- Revenue component movement
- Charging component for all revenue components
- Demand or volume movement for all revenue components
- Movement applicable to all prices.

2.4.5 Proposed prices (Prop. prices)

The proposed prices worksheet provides the proposed prices depending on whether proposed prices are input or calculated (as determined by the toggle at cell F29 on the general inputs worksheet).

Where proposed prices are input, proposed price inputs are carried through from the Prop. prices (input) worksheet.

Where proposed prices are calculated, proposed prices are calculated by applying the percentages present in the Prop. prices control worksheet to the current prices.

2.4.6 Proposed revenue (Prop. revenue)

The proposed revenue worksheet calculates the proposed revenue for each charging component of each tariff for the forecast upcoming year.

2.4.7 Historical revenue (Hist. revenue)

The historical revenue worksheet calculates the estimated and actual revenue for each charging component of each tariff for the current and previous years.

2.4.8 Side constraint revenue (SC revenue)

The side constraint revenue worksheet calculates the expected weighted average revenue for the current year using forecast quantities for the upcoming year as required for the side constraint mechanism. This worksheet also calculates the permissible percentages under two different approaches, applicable to different distributors.

The side constraint revenue worksheet also calculates these elements for metering services for Victorian distributors.

The approach applied to calculating side constraint revenues excludes trial tariff revenue to prevent unintended restrictions to trial tariff revenues (requiring prices for trial tariffs). The approach, however, does not exclude new customers or new tariffs (as previously approved in the TSS). The AER does not consider any different treatment is required to consider new customers or new tariffs.

Figure 15 provides an example of the side constraint revenue worksheet.

Figure 15 Side constraint revenue worksheet

AB	C	D	E	F	G	H	I	J	K	L	M	N
1	AER pricing model - AER 2021-22					Back to Index						
2	Side constraints revenue											
3	Calculates permissible percentage and revenue for side constraint mechanism											
4	Calculation table 23 Permissible percentage											
5		Source	Units			2021-22	2022-23	2023-24	2024-25	2025-26		
7	Inflation	TAR1	Per cent									
8	X-factor (if X>0, X=0)	TAR1	Per cent									
9	S factor (STPIS 1.2)	TAR1	Per cent									
10	S factor (STPIS 1.2) transition	TAR1	Per cent									
12	Incremental revenues approach											
13	I factor	Calculation	Per cent									
14	C factor	Calculation	Per cent									
15	B factor	Calculation	Per cent									
16	Permissible percentage	Calculation	Per cent									
18	Alternate approach											
19	I factor	Calculation	Per cent									
20	C factor	Calculation	Per cent									
21	B factor	Calculation	Per cent									
22	Permissible percentage	Calculation	Per cent									
24	Calculation table 24 Tariff class revenue											
25		Units				2020-21 SC revenue					2021-22	
26	Residential	\$millions										
27	Small business	\$millions										
28	I & C	\$millions										
29	Unmetered	\$millions										
37	Total	\$millions										
39	Calculation table 25 PY SC Tariff revenue											
40		Tariff class	Total	Fixed	Anytime	Blocka 1	Blockb 2	Peak	Shoulder	Off-peak		
41			\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	\$dollars		
42	Residential general	Residential		1.00	0.01	0.01	0.01	0.01	0.01	0.01		
43	Residential TOU	Residential										
44	Residential demand	Residential										
45	Small business general	Small business										
46	Small business TOU	Small business										
133	Calculation table 26 Metering side constraints (Vic)											
134		Source	Units			2021-22	2022-23	2023-24	2024-25	2025-26		
135	Inflation	TAR1	Per cent									
136	x-factor	TAR1	Per cent									
138	C factor	Calculation	Per cent									
139	B factor	Calculation	Per cent									
140	Permissible percentage	Calculation	Per cent				2.00%	2.00%	2.00%	2.00%		
142	Revenues											
143	Metering a	\$millions				2020-21 SC revenue					2021-22	
150	Total	\$millions										
152	Calculation table 27 PY SC CONFIDENTIAL tariff revei											
153		Tariff class	Total	Fixed	Anytime	Blocka 1	Blockb 2	Peak	Shoulder	Off-peak		
154			\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	\$dollars		
156	Residential	\$millions										
157	Small business	\$millions										
158	I & C	\$millions										
159	Unmetered	\$millions										
167	Total	\$millions										
169	ACCC Office	I & C										

2.4.9 Total quantities (Total qty)

The total quantities worksheet calculates the total fixed units, consumption, and demand quantities of tariffs and tariff classes and categorises time-of-use and export consumption accordingly.

2.4.10 Movements

The movements worksheet calculates the average consumption profiles, current year network costs, and forecast upcoming year costs for residential and small business tariffs. These cost movement calculations include the cost of metering that is typically associated

with each tariff. These calculations separate controlled load tariff components from the main tariff component where they exist in a combined tariff. Controlled load components of a main tariff, or standalone controlled load tariffs, are provided at the bottom of each section (residential/small business).

Figure 16 provides an example of the movements worksheet.

Figure 16 Movements worksheet

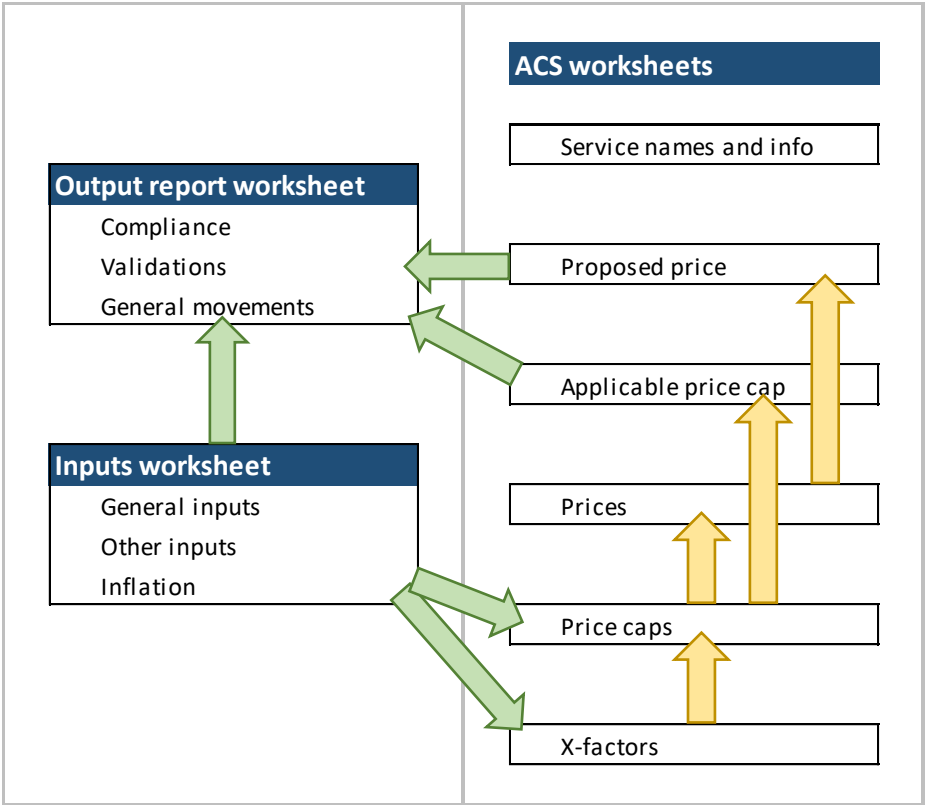
AER pricing model - AER 2021-22		Back to Index									
Calculates network costs and consumption profiles for each residential and small business tariff											
Calculation table 31 Tariff information and multiplier:		Block?	TOU?	Fixed	Anytime	Block 1	Block 2	Peak	Shoulder	Off-peak	
Type of charging component				\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	
Multiplier				Fixed	Anytime	Anytime	Anytime	Peak	Shoulder	Off-peak	
				1.00	0.01	0.01	0.01	0.01	0.01	0.01	
Tariffs		Block?	TOU?	Block 1	Block 2	Block 3	Meter tariff		2021-22	2020-21	
Residential general		yes	no	Block 1	Block 2		Metering a				
Residential TOU			yes								
Small business general			no								
Small business TOU			yes								
Calculation table 32 2021-22 Network costs - resider		Block?	TOU?	Total	Fixed	Anytime	Block 1	Block 2	Peak	Shoulder	Off-peak
Distribution				\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	\$dollars	\$dollars
Residential general		yes	no								
Residential TOU			yes								

3 Price-capped ACS model

The price-capped ACS model includes inputs, calculations, and outputs that assist the distributor in demonstrating compliance, as well as assisting the AER in its analysis of a pricing proposal.

Figure 17 provides an overview of the ACS model.

Figure 17 Overview of ACS model



Note: Yellow arrows represent data flows within each worksheet, green arrows represent data flows between worksheets.

At the beginning of each distributor’s regulatory control period, the AER will build a bespoke ACS model for the distributor, including general inputs, descriptors, and tariff information, as well as relevant historical information.²⁰ At this time, and prior to each annual pricing process, the AER will input relevant inputs for the upcoming pricing proposal.

Prior to submitting their pricing proposal each year, the distributor will verify the AER’s inputs, and add inputs relating to proposed prices. The distributor will also engage with the AER regarding certain components of the ACS model, including any issues with the AER’s provided inputs.

In the sections below, we have provided a summary of each worksheet. Any examples provided in the sections below reflect example data only, and do not reflect data of any particular business.

²⁰ This will be completed prior to the 2022/23 pre-lodgement engagement process for each distributor for the first version of the ACS model.

We do not consider that there is a general requirement to identify confidential services in the ACS model. We therefore have not included functionality to redact confidential information in the ACS model. For any business that is required to redact information within the ACS model, this can be done on a manual basis.

The distributor should not alter the structure of the ACS model without prior discussion with the AER. This will ensure that any errors that arise are appropriately considered and actioned across all distributors’ models, consistency is maintained, and the function of the ACS model is maintained²¹.

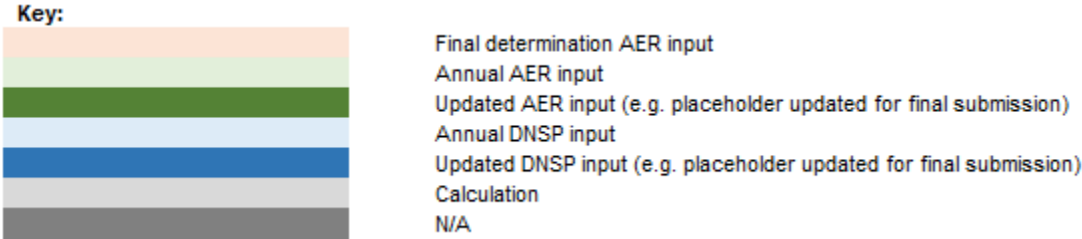
3.1 General

This model includes both a title page and a lookups page.

3.1.1 Title page (‘Pricing model’)

The title page includes an inputs key, version log, contents list, inputs guide, and change log. The change log is intended to be used to detail changes between models provided in pre-lodgement engagement and models provided in pricing proposal submissions. Figure 18 provides the inputs key, while Figure 19 provides an example of the title page worksheet.

Figure 18 Inputs key



²¹ It is also expected that the AER will operate internal models that will rely on sourcing data from across all distributors’ pricing models, which will rely on the consistency of the models.

Figure 19 Title page worksheet

	C	D	E	F	G	H	I	J	
1	AER pricing model - price capped ACS								
2	AER 2021–22								
3	Electricity Distribution Network Service Provider								
4									
5									
6									
7									
8									
9	Key:		Version Record	Date	Description				
10		Final determination AER input	0.1	Oct-21	Draft version of new model				
11		Annual AER input							
12		Updated AER input (e.g. placeholder updated for final submission)	0.2	Nov-21	Final model for DNSP QA				
13		Annual DNSP input	1.0	Dec-21	Final model for use in 2022/23 process				
14		Updated DNSP input (e.g. placeholder updated for final submission)	1.1	Sep-22	Updated for issues arising in 2022/23 pricing process, feedback from consultation with wider				
15		Calculation	1.2	Nov-22	Final updated model (from broader stakeholder consultation) for DNSP QA				
16		N/A	2.0	Dec-22	Final model for use in 2023/24 process				
17			2.1	Oct-23	Updated for 2024–29 determinations for NSW/ACT/NT/Tas businesses to reflect changes in determination (e.g. side constraints application)				
18			3.0	Apr-24	Final model updated for 2024–29 determinations for use in 2024/25 initial pricing where applicable				
19									
20	Contents								
21									
22	General Inputs	General inputs including business information, inflation, and x-factors							
23	Ancillary Network Services	Price caps, historical prices, proposed prices, and compliance checks for ancillary network services							
24	Labour Rates	Price caps, historical prices, proposed prices, and compliance checks for labour rates used for quoted services							
25	Public Lighting	Price caps, historical prices, proposed prices, and compliance checks for public lighting							
26	Metering	Price caps, historical prices, proposed prices, and compliance checks for metering (for Victoria this is related to metering exit fees)							
27	Lookup Tables	Tables for lookups							
28									
29	Inputs guide								
30									
31	To be input by AER at beginning of regulatory control period:				To be input by AER prior to annual pricing process each year:				
32	General Inputs F9	DNSP name		General Inputs F10	Forecast regulatory year for pricing proposal				
33	General Inputs F9	Month that year ends in (i.e. June for financial year)		General Inputs N27_N30	Any approved X-factors for ACS				
34	General Inputs F12	First year of regulatory control period		General Inputs F37_F77	December CPI value				
35	General Inputs F14_F15	CPI measurement information		To be input by DNSP prior to submission each year:					
36	General Inputs F16	Forecast inflation		Ancillary Network Services N7_R323	Proposed prices for forecast regulatory year - default to price cap				
37	General Inputs K22_N25	X-factors for ACS		Labour Rates M7_Q36	Proposed prices for forecast regulatory year - default to price cap				
38	Ancillary Network Services C7_F323	Approved ancillary network services information		Public Lighting N7_R305	Proposed prices for forecast regulatory year - default to price cap				
39	Ancillary Network Services T7_T323	Approved year 1 price caps		Metering O7_S36	Proposed prices for forecast regulatory year - default to price cap				
40	Ancillary Network Services Z7_AC323	Individual X-factors where applicable - default to general input		NOTE: All DNSP input cells have formulae as default to set prices to price caps					
41	Labour Rates C7_S36	Approved labour rates for quoted services							
42	Labour Rates S7_S36	Approved year 1 price caps							
43	Public Lighting C7_F305	Approved public lighting services							
44	Public Lighting T7_T305	Approved year 1 price caps							
45	Public Lighting Z7_AC305	Individual X-factors where applicable - default to general input							
46	Metering C7_S36	Approved metering services (exit fees for Vic)							
47	Metering U7_U36	Approved year 1 price caps							
48	Metering AA7_AD36	Individual X-factors where applicable - default to general input							
49									
50	Changelog (to detail completion of inputs, and any changes to inputs)								
51									
52	Date	Description							
53									

3.1.2 Lookups

The lookups worksheet contains lookups for use throughout the model, including unit denominations, and month and year references. The lookups page is also used to differentiate between Victorian and non-Victorian distributors, particularly for historical years and inflation (Victorian distributors operated on calendar years historically).

3.1.3 Model update log

The model update log worksheet contains a log of revisions made to the model in each new version of the model.

3.2 Output reports

3.2.1 Output report

The output report worksheet provides a summary of all key outputs for consideration by the AER in its compliance review, and also for stakeholders ease of access.

Output report 1 summarises all compliance checks in the model and provides key outputs relating to those compliance checks.

Output report 2 summarises all validation checks in the model. These validations identify if any worksheet needs manual checking by the AER upon submission. Validations are to ensure validity of inputs, that all relevant inputs are entered, and the integrity of calculations are maintained. These validations do not indicate compliance, and a compliant model may have “CHECK” responses.

Output report 3 provides other key data.

Figure 20 provides an example of the output report worksheet.

Figure 20 Output report worksheet

	A	B	C	D	E	F	G
1			AER pricing model - price capped ACS - AER 2023–24				
2			<i>Output report - Report of compliance and other analysis</i>				
4							
5			Output report 1 Compliance				
6							
7						Compliant?	
8			Alternative Control Services			COMPLIANT	
9							
10			Ancillary Network Services			N/A	
11			Labour Rates			N/A	
12			Public Lighting			N/A	
13			Metering			N/A	
14							
15			Output report 2 Validations				
16							
17			Validations			Valid?	
18			Output Report			OK	
19			General Inputs			OK	
20			Ancillary Network Services			OK	
21			Labour Rates			OK	
22			Public Lighting			OK	
23			Metering			OK	
24							
25			Output report 3 General movements				
26							
27				CPI	General X-factor	A-factor	Total movement
28			Ancillary Network Services				
29			Labour Rates				
30			Public Lighting				
31			Metering				
32							

3.3 General inputs

The general inputs worksheet requires general data to be input that relates to the distributor and that underly the individual service worksheets of the model.

Table 14 provides guidance on the data inputs on the general inputs worksheet. Figure 21 provides an example of the general inputs worksheet.

Table 14 General inputs

Input	Table	Cell	Who?	Notes
Distributor name	1	F8	AER	Select from drop-down menu.
Year ending	1	F9	AER	Select from drop-down menu. Should all be June to reflect financial year.
Forecast regulatory year	1	F10	AER	Select from drop-down menu. Reflects upcoming regulatory year (year t).
Current regulatory control period, 1 st year	1	F12	AER	Select from drop-down menu.
Current measurement quarter for CPI	1	F14	AER	Select from drop-down menu. Should all be December.
Previous measurement quarter for CPI	1	F15	AER	Select from drop-down menu. Should be June for Victoria, Dec. for others.
Forecast inflation	1	F16	AER	From SCS PTRM from determination.
X-factors	2	K22:N25	AER	X-factors for each ACS as set in the determination (where common X-factors exist for all tariffs for a particular type of service).
A-factors	2	K27:N30	AER	Any applicable A-factor as determined in advance by the AER.
CPI	2	F37:F77	AER	Latest actual consumer price index.

Figure 21 General inputs worksheet

Input table 1 General inputs		Source	Value					
DNISP name		AER	AER					
Year ending		AER	June					
Forecast regulatory year (t)		AER	2021-22					
Current regulatory year (t-1)		Calculated	2020-21					
Current regulatory control period, first year		Determination	2021-22					
Current regulatory control period, last year		Calculated	2025-26					
Current measurement quarter for CPI		Determination	December					
Previous measurement quarter for CPI		Determination	June					
Forecast inflation for current regulatory control period		Determination	2.00%					

Input table 2 Other inputs		Source	Unit	2021-22	2022-23	2023-24	2024-25	2025-26	Notes
Inflation		'General'	Per cent	0.86%	2.00%	2.00%	2.00%	2.00%	
Ancillary Network Services X-factor		PTRM	Per cent						
Public lighting X-factor		PTRM	Per cent						
Metering X-factor (exit fees for Vic)		PTRM	Per cent						
Secondary metering X-factor (capital charges)		PTRM	Per cent						
Ancillary Network Services A-factor		AER	\$dollars						
Public lighting A-factor		AER	\$dollars						
Metering A-factor (exit fees for Vic)		AER	\$dollars						
Secondary metering A-factor (capital charges)		AER	\$dollars						

Input table 3 Inflation		Index value	Inflation	Applicable regulatory year	Half-year inflation
Source	Unit	ABS index	Calculated Percent		
Mar-2015		106.8			
Jun-2015		107.5			
Sep-2015		108.0		2015-16	
Dec-2015		108.4			
Mar-2016		108.2	1.31%		
Jun-2016		108.6	1.02%	2016-17	
Sep-2016		109.4	1.30%		

3.4 Individual service worksheets

The individual service worksheets (ancillary network services, labour rates, public lighting, metering) provide all the applicable tariffs, the calculated price caps, applicable X-factors, and proposed prices.

Table 15 provides guidance on the data inputs and outputs on the individual services worksheets. Figure 22 provides an example of the individual services worksheets.

Table 15 Individual services

Input	Schedule	Cell	Who?	Notes
Tariff name	1,2,3,4	C7:C323, C7:C36, C7:C305, C7:C36	AER	Tariff name as per TSS or determination.
Tariff code	1,2,3,4	D7:D323, D7:D36, D7:D305, E7:E36	AER	Tariff code as per TSS, determination, or previous schedule.
Type of charge	1,3,4	F7:F323, F7:F305 D7:D36 & G7:G36	AER	Select from drop-down menu. Reflect way charge is to be applied, and for metering differentiate between capital and non-capital charges.
Proposed price and cap	1,2,3,4	H7:J323, G7:I36, H7:J305, I7:K36	N/A	Output of applicable proposed price and price cap for the upcoming year.
Compliance	1,2,3,4	L7:L323, K7:K36, L7:L305, M7:M36	N/A	Identification of compliance of proposed prices against applicable price cap. By default, should be compliant as proposed prices are equal to price caps.
Proposed prices	1,2,3,4	N7:R323, M7:Q36, N7:R305, O7:S36	Distributor	Proposed prices for the upcoming year. Proposed prices will default to the price cap – where a distributor wishes to propose a price that differs than the price cap, it should be hard-coded in these cells.
Year 1 price cap	1,2,3,4	T7:T323, S7:S36, T7:T305, U7:U36	AER	Price cap applicable to year 1 as set in determination. Subsequent year price caps are calculated from year 1.
X-factors	1,3,4	Z7:AC323, Z7:AC305, AA7:AD36	AER	X-factors default to common input on general inputs worksheet. Individual X-factors for tariffs can be hard-coded here.

Figure 22 Individual services worksheet

AER pricing		2021-22						2025-26		2021-22		2025-26		Notes	
Ancillary Network		Proposed prices, and compliance checks for ancillary network services													
Schedule 1 Ancillary		Aff code	Unit	Charge	Proposed price	Price cap	Compliance	2021-22	2025-26	2021-22	2025-26	2022-23	2025-26	Notes	
7			Dollars												
8			Dollars												
9			Dollars												
10			Dollars												
11			Dollars												
12			Dollars												
13			Dollars												
14			Dollars												
15			Dollars												
16			Dollars												
17			Dollars												
18			Dollars												
19			Dollars												
20			Dollars												
21			Dollars												
22			Dollars												
23			Dollars												
24			Dollars												
25			Dollars												
26			Dollars												

Glossary

Term	Definition
ACS	Alternative control services – services that are identifiable to a single customer
AER	Australian Energy Regulator
Distribution	Relates to prices or revenue recovered by a distributor to cover the costs of delivering electricity and maintaining the network
DPPC	Designated pricing proposal charges – charges that a distributor incurs in relation to the transmission of electricity and passes through to customers
Indicative prices	Prices for the remaining years of a regulatory control period to reflect the intended price path for each tariff
JSA	Jurisdictional scheme amounts – charges that a distributor incurs in relation to jurisdictional schemes (generally relating to renewable energy schemes or feed-in tariff payments) and passes through to customers
NER	National Electricity Rules
Network price	The total network price, including distribution, DPPC, and JSA components
Permissible percentage	The percentage threshold allowed for movements in tariff class revenue under the side constraint mechanism
Price cap	A cap set for which prices cannot exceed – the current control mechanism applicable for alternative control services (with the exception of metering in Victoria)
Pricing process review	A review into the pricing process to find efficiencies and deliver more timely and accurate pricing proposals and approvals
Quantities	Relates to forecast, estimated, or actual consumption, demand, and customer/meter numbers that are used to bill customers
Regulatory control period	The period that a regulatory determination applies to (generally five years)
Regulatory determination	The AER's decision on how much revenue a distributor can recover, and other applicable requirements for a distributor across the regulatory control period
Revenue cap	A cap set for which revenues cannot exceed – the current control mechanism applicable for standard control services (and metering services in Victoria)
RIN	Regulatory information notices – used by distributors to report financial, operational, and other data to the AER
Side constraint	A mechanism that restricts the revenue movements for each tariff class to protect particular tariff classes from inequitable revenue recovery
Tariff class	The grouping of tariffs by a common identifier (generally type of customer)
Trial tariffs	Tariffs that allow trial of new ways of charging that are not prescribed in the applicable TSS – these are exempt from certain pricing rules (also known as sub-threshold tariffs)
TSS	Tariff structure statement – sets the tariffs, charging components, and other relevant tariff information to apply for the regulatory control period (is a part of the AER's regulatory determination)
Under/over-recovery	The variance between revenue actually recovered and that allowed for a particular year
Unders/overs account	A rolling account that 'trues-up' under/over-recoveries on a (usually) two-year lag
WACC	Weighted average cost of capital
Worksheet	A tab in an Excel workbook that houses data