

Standardised models for metering services

Final decision

For electricity distribution network service providers

March 2022

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AER reference: AER213040

Amendment record

Version	Date	Pages
1	31 March 2022	14

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About us

We, the Australian Energy Regulator (AER), work to make all Australian energy consumers better off, now and in the future. We are the independent regulator of energy network service providers (NSPs) in all jurisdictions in Australia except for Western Australia. We set the revenue requirements these NSPs can recover from customers using their networks.

The National Electricity Law and Rules (NEL and NER) and the National Gas Law and Rules (NGL and NGR) provide the regulatory framework which govern the NSPs. Our role is guided by the National Electricity and Gas Objectives (NEO and NGO).

NEO:

...to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.¹

NGO:

...to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.²

The decisions we make and the actions we take affect a wide range of individuals, businesses and organisations. Effective and meaningful engagement with stakeholders across all our functions is essential to fulfilling our role, and it provides stakeholders with an opportunity to inform and influence what we do. Engaging with those affected by our work helps us make better decisions, provides greater transparency and predictability, and builds trust and confidence in the regulatory regime. This is reflected in our *Stakeholder engagement framework* and in the consultation process we are following.³

¹ NEL, s. 7.

² NGL, s. 23.

³ AER, *Revised stakeholder engagement framework*, September 2017.

1 Introduction

In October 2021, we initiated a consultation process to develop standardised metering services models for use in future electricity distribution determinations. The standardised models would replace the distribution network service provider (distributor)–specific metering models they submit as part of their regulatory proposals.

Historically, the electricity distributors submitted their own models to support their metering expenditure proposals for our assessment as part of their regulatory proposals every five years. Through our assessment we determine a ceiling on the revenue or prices that a distributor can charge having regard to the regulatory framework set out in the NEL and NER.

The intention of developing standardised metering models is to simplify and standardise the presentation of the distributors' metering expenditure proposals for our assessment and provide greater transparency to stakeholders.

The standardised metering models are based on the building block approach. We consider the building block approach delivers efficient outcomes. Where applicable, the metering models apply the same principles as the standard control services (SCS) models. The consistent treatment of expenditure between metering and SCS provides greater regulatory certainty.

Following consultation with stakeholders, we developed two models as part of the final standardised metering model package.

The first is a combined capital expenditure (capex) and operating expenditure (opex) model, which will produce inputs into our post-tax revenue model (PTRM). Through the PTRM, the distributors' overall allowed revenue requirement for metering services is determined.

The second is a pricing model that converts the overall revenue requirement into individual prices or metering exit fees that customers will pay.

The development and implementation of standardised metering models follow our commitment in the [AER Strategic Plan 2020–2025](#) to design our systems to work in ways that deliver efficient regulation of monopoly infrastructure.⁴

1.1 What are regulated metering services?

Regulated metering services include the maintenance, reading, data services and recovery of capital costs related to installing meters. The types of regulated metering services vary across jurisdictions.

In Victoria, all the types of regulated metering services apply. The Victorian distributors are the monopoly providers of regulated type 5 (interval) and type 6 (accumulation) metering services, including meters installed as part of the Advanced Metering Infrastructure (AMI) program, which are classified as type 5-6 meters.

⁴ AER, *AER strategic plan 2020–2025*, December 2020, p.9.

In other NEM jurisdictions, the provision of meters has become contestable and can be provided by a third party since the implementation of the Power of Choice reforms on 1 December 2017.

Distributors in these jurisdictions are still responsible for setting charges for meter reading, maintenance and data services. These charges exclude the provision of type 5 and 6 meters, so do not include up front capital charges for new meters. As such, most distributors outside of Victoria no longer incur any new metering capex and only recover their asset base for meters installed prior to 1 December 2017.

1.2 Why develop standardised metering models?

The development of standardised metering models will streamline the resources and consultation required to assess metering service expenditure and set metering prices as well as increase consistency across proposals.

We expect the standardised models will assist stakeholders' understanding and engagement with metering services and improve the distribution determination process. It also provides greater assurance that we are setting metering service prices at efficient levels.

As part of their regulatory proposals, distributors historically submitted their own specific metering capex, opex, revenue and pricing models for our assessment. These models differ in layout, presentation and formula specification and vary from business to business. Some distributors submit a single model while others submit multiple models. The distributors also use various approaches to determine their metering revenue requirements.

The distributors' different approaches have caused significant process, time and assessment inefficiencies. We spend a significant amount of time in initial phases of assessing regulatory proposals trying to understand how the metering models work, reducing the time to undertake our assessment. In turn, we may issue information requests to better understand the models and proposals resulting in an additional burden for the distributors as well. The complexity of the various models also impedes stakeholders' understanding and engagement with metering proposals.

The standardised models will address these issues. We expect standardised models will deliver benefits to all stakeholders.

Benefits to distributors

The standardised metering models will significantly reduce the need for distributors to "second guess" our information requirements for assessing metering proposals. Distributors can prepare their metering proposals in a more targeted manner, saving time and resources. The standardised metering models signal to distributors the pertinent information we require to assess metering proposals.

Benefits to retailers and consumers

The standardised metering models provide stakeholders such as retailers and end consumers (who request and ultimately pay for these services) greater scope to engage with distributors in developing their proposals and our distribution determinations.

Different models with varying levels of complexity and information content are a significant barrier for retailers and consumers to engage with distributors' proposals. The standardised

metering models contain only the most relevant information in a simple and consistent format. We consider this provides stakeholders a greater opportunity to understand and, therefore engage with, metering proposals.

As set out in the Better Reset Handbook, our expectations are that distributors will engage with their consumers and the outcomes of that engagement will be reflected in their proposals. Where distributors meet these expectations, they will benefit from a more efficient review. We consider standardised metering models will assist distributors and consumers in their engagement for this purpose.

Benefits to the AER

The standardised metering models will streamline our assessment processes and improve the efficiency, accuracy and transparency of our determinations.

The standardised models will enable us to focus time and resources on assessing the substance of the distributors' metering proposals, rather than the metering models themselves. This provides greater assurance to all stakeholders that we are setting metering prices at efficient levels. This is a more efficient regulatory outcome.

More generally, standardised metering models provide greater scope for all stakeholders to identify any errors in metering services proposal. Similarly, the standardised metering models provide greater scope for all stakeholders to identify parts of the model we can improve or amend for future distribution determinations.

1.3 How were the standardised models developed?

It was important that all stakeholders had the opportunity to contribute to the development of the standardised metering models. This was pertinent as the intention of developing the standardised models is to simplify and standardise the presentation of the distributors' metering service proposals for greater engagement by all stakeholders. To do this, we sought and received stakeholder input into the development of the standardised models.

As a first step, we commenced the stakeholder consultation process by releasing:⁵

- Preliminary standardised metering models
- Model handbook
- A consultation paper requesting stakeholder feedback on the development of the standardised models.⁶

We received eight written submissions from stakeholders including distributors and retailers.⁷ We also held an online forum to allow stakeholders the opportunity to ask questions and provide further feedback on the preliminary models. The online forum was attended by distributors and retailers as well as the Public Interest Advocacy Centre.

⁵ Available at <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/standardised-models-for-regulated-metering-services>.

⁶ AER, *Consultation Paper: AER standardised models for metering services*, October 2021.

⁷ Submissions available at: <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/standardised-models-for-regulated-metering-services/initiation>.

We also engaged with individual stakeholders on the specific aspects of the metering models applicable to them.

We received encouraging stakeholder feedback on this development work program. All submissions supported the AER's initiative to develop standardised metering services models, noting the efficiencies it would provide to the distribution determination process.

Stakeholder submissions also provided valuable feedback to improve specific aspects of the preliminary model. In many instances, we took on this feedback to produce the final standardised metering models. However, not all stakeholder feedback was incorporated into the final standardised metering model.

The amendments and the stakeholder feedback are summarised in section 2.

All submissions received are available on our website.

1.4 Future directions

To ensure that the standardised metering models remain fit for purpose, we may review and amend it from time to time when necessary.

The first opportunity to utilise the standardised metering models will be the upcoming distribution determinations for ACT, NSW, Northern Territory and Tasmania. Distributors in those jurisdictions are required to submit their regulatory proposals by 31 January 2023. We will use learnings from those distribution determinations to amend the standardised metering models, where necessary.

2 Final standardised metering services models

The standardised metering services models are based on the building block approach consistent with the approach set out in the NER (Chapter 6, part C) for SCS. We consider the building block approach delivers efficient outcomes as well as provides regulatory certainty and transparency to stakeholders.

Figure 1 shows the standardised metering models' layout.

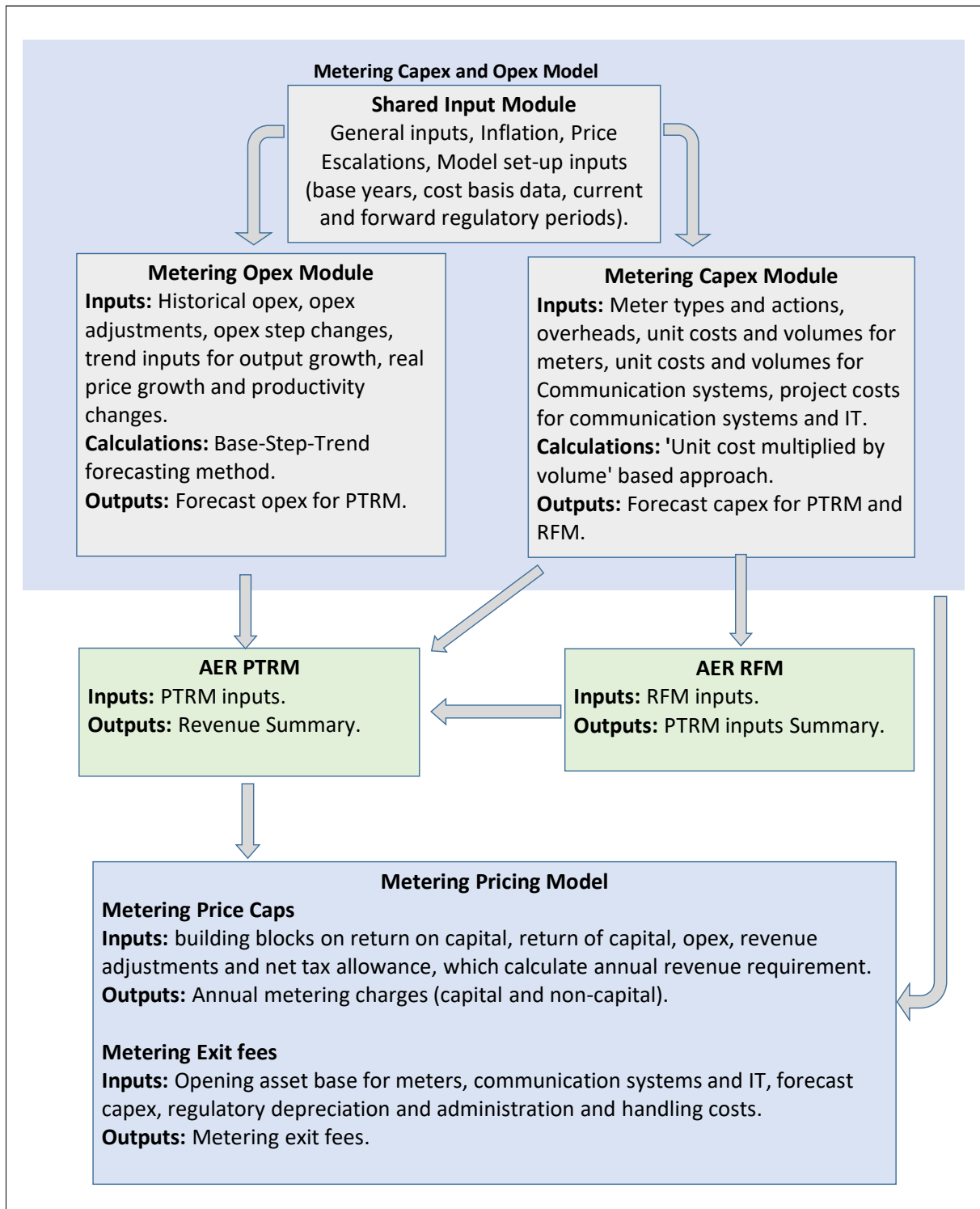
The standardised capex and opex model develops forecast inputs to be applied through our PTRM. The PTRM uses these forecasts to derive distributors' cost build-up (i.e., building block costs) and calculate the allowed revenue requirement to be recovered in the forecast regulatory control period. These building block costs include an indexation of the regulatory asset base (RAB), a return on capital, a return of capital (depreciation), forecast opex, revenue adjustments and the estimated cost of corporate income tax.

The standardised pricing model uses the PTRM outputs to determine metering prices and exit fees. For distributors outside Victoria where the metering services are regulated by a price cap, the pricing model sets price caps for metering capital and non-capital charges. For distributors in Victoria the pricing model is used to determine metering exit fees, which are regulated under a price cap. All other Victorian distribution metering services are regulated by a revenue cap, which is determined by the PTRM.

For simplicity and consistency, we developed one model to be applied in all jurisdictions even though the types of metering services may differ. The standardised models provide a universal layout, presentation and formula specification while still allowing flexibility for distributors to reflect their own particular inputs. Distributors would only use the associated model functions and parameters relevant to their specific metering services.

The details of the model parameters and functions are available in the model handbook released with the final model. The next section provides a summary of amendments to the preliminary models.

Figure 1 AER's standardised metering models framework



2.1 Amendments to preliminary models

For this final decision, we have amended the preliminary models to incorporate stakeholder feedback. The main changes to the preliminary models include the following:

- **Inflation:** The final models apply one inflation series (lagged inflation series) in both capex and opex modules to avoid valuing expenditure differently between opex and capex. We consider a lagged inflation series provides more certainty in escalation.
- **Non-labour price growth:** The final models include non-labour price growth in addition to labour price growth as requested by stakeholders. However, it does not imply that these escalators will be automatically applied and approved. Whether to apply and approve these escalators will be decided during the regulatory determination process.
- **Cashflow timing:** The final models allow flexibility for distributors to choose between mid-year or end-year cash flow timing for capex.

Table 1 provides a summary of all amendments to the final models.

Table 1 Summary of amendments to preliminary standardised models

Standardised model component	Amendments	Raised by
Capex and Opex model- Shared input module	Applying one inflation series (lagged inflation series) in both capex and opex modules to avoid valuing expenditure differently between opex and capex.	Jemena
	Allowing for non-labour (i.e., materials) price growth in addition to labour price growth.	CitiPower, Powercor and United Energy (CPU), AusNet Services, TasNetworks, Jemena
	Allowing flexibility for distributors to choose between mid-year or end-year cash flow timing for capex.	Jemena, AusNet Services
Capex and opex model	Allowing for more RAB asset classes in capex module.	Jemena
	Allowing for labour and non-labour splits associated with individual comms project costs in capex module.	AusNet Services
	Allowing DNSPs to define asset classes in inputs tab.	Ausgrid
	Allowing non-system capex as Comms and IT.	Essential Energy
	Allowing flexibility for DNSPs to provide specific forecasts for uncontrollable opex category.	Jemena
Pricing Model	Using average meter volumes to remove RAB/Meter volume timing mismatch.	AusNet Services
General – all models	Improving accuracy in formulae/definitions/units specification	SA Power Networks (SAPN), Jemena, CPU
	Allowing consistent formulae across existing distributor-specific models and the standardised models.	Jemena, AusNet Services
	Simplifying formulae where possible.	SAPN
	Introducing model validation checks.	Jemena, AusNet Services
	Including formulas consistent with Microsoft excel legacy versions.	TasNetworks
	Providing a more detailed handbook.	SAPN and Jemena
	Improving presentation to add default templates for inputs, external links and explanatory notes.	CPU

We did not make any amendments to the models in response to the following stakeholder feedback. This is because such functionalities already existed in the preliminary models. We have updated the model handbook to include details of these functionalities for clarity.

- Ausgrid:
 - Provide flexibility for distributors to incorporate diseconomies of scale
AER response: The standardised capex and opex model provides functionality to use 'Economies of Scale Factor' which can be greater than or less than 100 per cent and which can apply to positive or negative output changes.
- SAPN:
 - Insert a pricing comparison worksheet to the pricing model providing a comparison of proposed and current prices.
AER response: This presentation already exists in the model.
 - Include a meter volume forecasting worksheet within the opex module
AER response: This functionality already exists in the model.
- Jemena:
 - Provide flexibility for distributors to choose the efficient base year.
AER response: This functionality already exists in the model.

We did not incorporate the following stakeholder feedback in the final models.

- AusNet:
 - Add a global selection for setting dollar denomination in capex and opex.
AER response: We did not incorporate this as each section of the model can vary depending on businesses.

2.2 Amendments to be consulted as part of the upcoming distribution determinations

We intend to consult further on the following stakeholder feedback as part of upcoming determination process. They reflect specific aspects of the metering models only applicable to some or a small group of stakeholders or we consider that they need further consultation prior to be incorporated in the standardised models.

- AusNet: Allow the flexibility to include RAB indexation calculations in the metering pricing model to accommodate regulatory depreciation for Comms and IT.
- AusNet and Jemena: Allow tax allowance in the model.

Appendices

The appendices include the following:

Appendix A: Final standardised metering capex and opex model

Appendix B: Final standardised metering pricing model

Appendix C: Standardised metering models handbook

Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
AMI	Advanced Metering Infrastructure
CPU	CitiPower, Powercor and United Energy
distributor	Distribution network service provider
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
PTRM	Post Tax Revenue Model
RAB	Regulatory Asset Base
RFM	Roll Forward Model
SAPN	SA Power Networks
SCS	Standard control services