



31 January 2023

Attachment 9.2: Metering services

Ausgrid's 2024-29 Regulatory Proposal

Empowering communities for a resilient,
affordable and net-zero future.



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1. Introduction

1.1 This document's purpose

The purpose of this document is to provide Ausgrid's proposal for the provision of metering services for the 2024-29 period. It supports our Regulatory Proposal to the Australian Energy Regulator (**AER**) and references other supporting documents which will provide supplementary information for our metering forecasts.

This document should be read in conjunction with **Chapter 9** of our **2024-29 Regulatory Proposal**.

1.2 Overview of our proposal

With the commencement of the Power of Choice metering reforms, our customers now have the option to leave our type 5 and 6 metering service ('**basic metering service**'). This is by taking up a retailer offering inclusive of an advanced interval meter or 'smart meter'. Our proposal reflects the efficient costs of continuing to provide our basic metering service to customers who have yet to switch.

We have applied the 'building block' approach to develop our proposed metering prices, in line with AER guidance and our 2019-24 determination. This involves forecasting the revenue required to fund our basic metering service and then translating this amount to prices based on our forecast of customer numbers. **Figure 1.1** sets out our proposed revenue requirement for basic metering services. **Figure 1.2** contains our proposed prices.

Figure 1.1 Our building block proposal (real \$million, FY24)

	2024-29 period
Direct capital expenditure (capex)	-
Indirect capex	16.8
Opening metering Regulatory Asset Base (RAB) as at 1 July 2024	106.4
Operating expenditure (opex) *	105.1

* Includes debt raising costs

Figure 1.2 Proposed metering prices (\$ nominal)

Tariff	Component	FY25	FY26	FY27	FY28	FY29
EA010 - Residential flat	Non-capital	14.43	15.98	17.70	19.61	21.72
	Capital	13.29	13.64	14.00	14.37	14.75
EA025 - Residential TOU	Non-capital	37.30	41.32	45.77	50.70	56.16
	Capital	14.79	15.18	15.58	15.99	16.41
EA111 - Residential demand (introductory)	Non-capital	-	-	-	-	-
	Capital	14.79	15.18	15.58	15.99	16.41
EA116 - Residential demand	Non-capital	-	-	-	-	-
	Capital	14.79	15.18	15.58	15.99	16.41

Tariff	Component	FY25	FY26	FY27	FY28	FY29
EA030 - Controlled load 1	Non-capital	1.22	1.35	1.50	1.66	1.84
	Capital	7.37	7.56	7.76	7.96	8.17
EA040 - Controlled load 2	Non-capital	1.22	1.35	1.50	1.66	1.84
	Capital	7.37	7.56	7.76	7.96	8.17
EA050 - Small business flat	Non-capital	14.89	16.49	18.27	20.24	22.42
	Capital	20.31	20.85	21.40	21.96	22.54
EA225 - Small business TOU	Non-capital	36.96	40.94	45.35	50.23	55.64
	Capital	14.11	14.48	14.86	15.25	15.65
EA251 - Small business demand (introductory)	Non-capital	-	-	-	-	-
	Capital	14.11	14.48	14.86	15.25	15.65
EA256 - Small business demand	Non-capital	-	-	-	-	-
	Capital	14.11	14.48	14.86	15.25	15.65
EA302 - LV up to 160 MWh	Non-capital	65.77	72.85	80.69	89.38	99.00
	Capital	18.38	18.87	19.37	19.88	20.40
EA305 - LV 160-750 MWh (system)	Non-capital	65.77	72.85	80.69	89.38	99.00
	Capital	18.38	18.87	19.37	19.88	20.40
Generator tariff	Non-capital	3.84	4.25	4.71	5.22	5.78
	Capital	7.61	7.81	8.02	8.23	8.45

We have proposed separate capital and non-capital charges for the provision of basic metering services. Our approach to pricing is set out in greater detail in section 6.

In terms of financial modelling, we have applied the following AER metering models:

- 1) Standardised Metering Capex and Opex Model;
- 2) Standardised Metering Pricing Model;
- 3) Metering Roll Forward Model (RFM); and
- 4) Metering Post-Tax Revenue Model (PTRM).

These models are provided at **Attachments 9.2.a – Metering RFM 2024-29, 9.2.b – Standardised metering capex and opex model 2024-29, 9.2.c – Standardised metering pricing model 2024-29 and 9.2.d – Metering PTRM 2024-29.**

2. Background

2.1 Our role in metering

Our 2024-29 regulatory period is set to be a time of pivotal change in the delivery of metering services. Ausgrid was once the sole provider of small customer meters in our network area. This changed in 2017 when policy reforms (**'Power of Choice reforms'**) introduced a market-led rollout for all new installations, including the replacement of our existing fleet of basic meters.

We own and operate 'basic' meters while retailers are responsible for rolling out 'advanced' meters. Our meters are 'basic' because they require a person to visit them to take a recording of a customer's energy usage. Advanced meters, which retailers are responsible for, offer greater functionality and do not require a person to visit them to be read.

Ausgrid provides basic metering services to customers in our network area. While customers can switch to an advanced meter through their retailer, many customers still retain their basic Ausgrid meter.

There are around 1.3 million basic meters in our network area as of 1 July 2022. Our prices for these services recover the capital costs we have invested in these meters and supporting systems, and the non-capital costs we incur in reading the meters and managing metering data.

2.2 Our role has evolved

While our metering base is rapidly changing, 76% of our customers have a basic Ausgrid meter, and 22% have an advanced meter. We provide two types of basic meters: Type 5 and Type 6.

We have been transitioning away from the direct provision of meters, as market reforms to metering have seen our role change. As customers transition to advanced meter offerings, they cease to receive an Ausgrid-provided regulated metering service. Accordingly, our role in providing metering services is declining as the transition to advanced meters occurs.

Our legacy metering role will continue to diminish over the 2024-29 period. We expect the uptake of advanced meters will accelerate over the period – as basic meters reach the end of their useful lifespan and are replaced, and customers switch to advanced meter offerings through their retailer. While the transition to advanced meters is ongoing, we will continue to play an important, but diminishing, role in providing metering services to customers with traditional meters and supporting the rollout of advanced meters and replacement of legacy metering.

This transition to advanced meters will not diminish the importance of our service to those customers who continue to have a basic meter. However, it may raise issues for how we recover the costs of metering services in the 2029-34 period. Our aim is to continue to provide a safe, reliable and affordable metering service in line with our customers' expectations, while supporting an orderly and efficient transition to advanced metering.

2.3 AEMC ongoing review

While the Power of Choice reforms provided the basis for contestable small customer metering, further reforms are being considered by the Australian Energy Market Commission (**AEMC**) to accelerate the further rollout of advanced meters.

The AEMC is looking to optimise incentives for retailers to accelerate the replacement of basic meters with advanced installations across the National Electricity Market (**NEM**). The issues the AEMC is considering as a part of this review include:

- How to ensure a faster rollout of smart meters to enable faster access to customer benefits;

- Standardisation of advanced meter data sets that networks use to manage connections, forecasting and demand management;
- Meter replacement issues driven by the customers' current electrical installation, (e.g. space, wiring and defects); and
- Reviewing roles and responsibilities of participants to support the accelerated installation of advanced meters.

Subject to this review, it is likely that our basic meter population will decline faster than our current forecast over the 2024-29 period, leaving an even smaller group of customers receiving our metering services after 2029. However, regardless of whether this decline is faster or slower than we expect, it will eventually raise issues for the way we recover our residual costs from legacy metering customers.

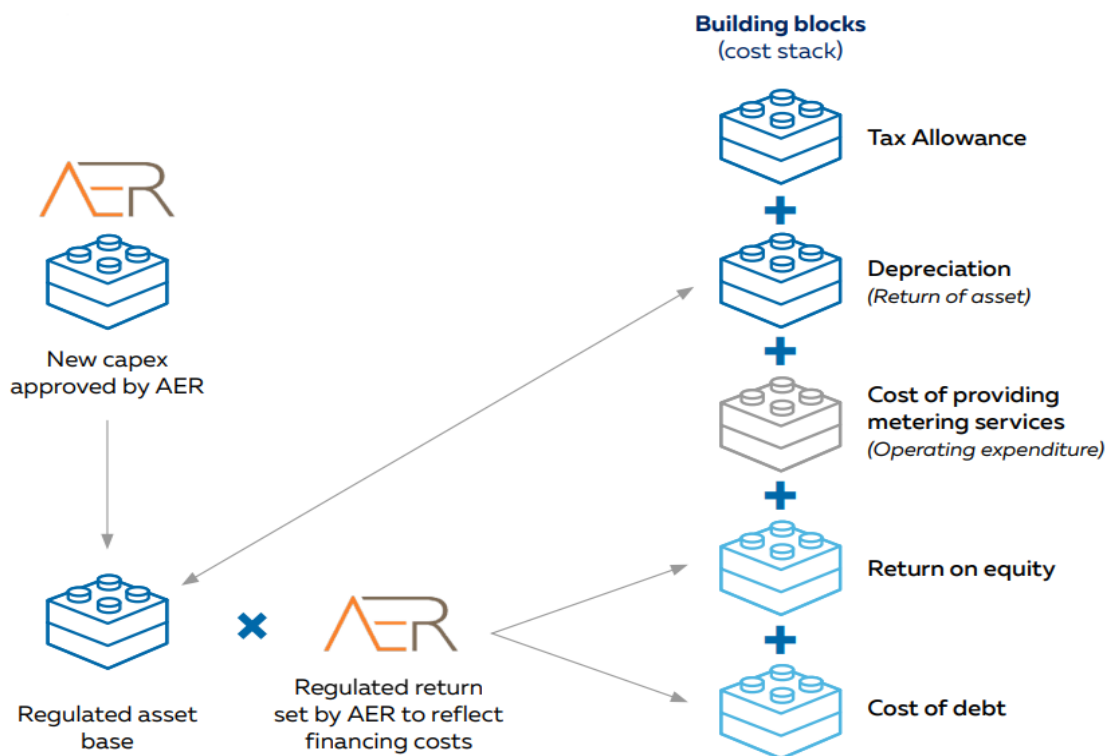
As the AEMC's review into the regulatory framework for metering services is still underway, the impact and mechanisms (e.g. accelerated meter retirement plans) of the reforms remain unclear. Our proposal has been developed based on the current regulatory framework. We have taken this approach noting that the timing of our revised proposal should allow us to incorporate any changes the AEMC recommends.

2.4 Building block approach

Our metering services are regulated via a price-cap. The AER sets the maximum prices we can charge to ensure we can earn just enough revenue to recover the costs of providing our basic metering services. This revenue amount is calculated using a 'building block' approach and the AER's standardised models for metering services.

The 'building block' approach involves calculating and adding the individual cost inputs or 'blocks' (see **Figure 2.1**). Once the building blocks have been developed, the revenue required to provide basic metering services is then forecast to reflect declines in meter numbers and any corresponding increase in unit costs due to rising 'dis-economies of scale' (see **section 3.3.2** below). In developing our prices, we receive a regulated return on our metering RAB, an allowance for tax and depreciation. The inputs into the key building blocks making up our proposal are explained in the following sections.

Figure 2.1 Metering price building blocks



Direct capex

Direct capex includes the costs of investing in new assets to provide metering services. As we are not installing new meters, there is no direct capex included in our proposal.

Indirect capex

We continue to incur indirect capex in the delivery of metering services. This indirect capex reflects the allocation of costs via our cost allocation methodology (**CAM**). Indirect capex relates to the costs of assets (such as depots and Information Communications Technology (**ICT**)) used in delivering our range of services. A portion of the costs associated with these assets will be allocated to our basic metering services in 2024-29.

Opex

This building block reflects the opex associated with providing metering services over the 2024-29 period. Most of these costs are associated with performing meter reading activities. However, some relate to testing and maintaining meters to ensure compliance with national energy rules, and the processing of metering data.

Prices

Once the building block costs are developed, prices are set by applying the AER's standardised models for basic metering services. These models include:

- Standardised metering capex and opex model;
- Standardised metering pricing model;
- RFM; and
- PTRM.

2.5 Legacy meter customers and residual capital recovery

Eventually there will be only a small group of customers with an Ausgrid basic meter. These customers may not switch to an advanced meter until their meter fails or may face other barriers to switching such as the cost involved or lack of knowledge about the offers available.

If we maintain our current pricing approach, this will make it difficult to set fair and affordable prices for these customers. While we are not expecting these affordability issues to become significant until after the 2024-29 period, we are considering options to address them now, to facilitate an orderly transition to smart meters.

2.5.1 Options for addressing equity issues

In developing potential options for addressing equity issues, we have considered the guidance on fairness articulated by the Voice of Community Panel. In our engagement on our Draft Plan for 2024-29, this panel stated that they understand fairness to mean:¹

“The cost of the service is spread throughout the network to share the financial load evenly regardless of the basic cost.”

There are two cost categories for which a smaller set of customers may be required to pay an increasingly larger share, as more customers leave our legacy metering service. These are, first, our fixed operating costs which do not vary regardless of how many metering customers we have and, second, indirect capital costs (property, ICT, fleet) which are allocated to our metering line of business in accordance with our AER-approved cost allocation methodology.

¹ Voice of Community Panel, Community Panel Report, June 2022, p. 3.

In line with the Voice of Community Panel's views, we have identified two options that would help spread the financial load of our declining metering business more evenly. We could:

1. Classify legacy metering as a standard control service at the start of the 2029-34 period. This would involve adding the recovery of metering opex and indirect capex to general network charges from FY30 onwards; or
2. Expense any capital expenditure incurred over the course of the 2024-29 period. This would involve the immediate recovery of indirect capex in the 2024-29 period when the number of metering customers is still large enough to not materially impact price.

If the first option is pursued the remaining metering RAB will be recovered from all Ausgrid customers, noting that impact on bills is likely to be small. While the financial impact of sharing the cost across many customers is likely to be limited, it may be unfair to expect customers to fund costs associated with basic metering assets they do not use.

The second option would involve Ausgrid expensing, and therefore recovering all, capex incurred over the 2024-29 period. This would bring forward the recovery of this expenditure and limit the potential for it to disproportionately fall on a small number of customers as our meter population declines. However, it would not solve the issue that a small number of customers would face significant opex costs from the 2029-34 period onwards.

3. Opex forecast

This section outlines the opex associated with providing metering services over the 2024-29 period. Most of these costs are associated with performing meter reading activities. However, some relate to testing and maintaining meters to ensure compliance with national energy rules, and the processing of metering data.

3.1 Total opex forecast

Our basic metering opex forecast for the 2024-29 period is \$104.9 million (real, FY24). We developed this forecast using the 'base step trend' approach which aligns to how we forecast opex for network services and how the AER determined our metering opex for our current 2019-24 period. The contribution of each component making up our forecast is set out in **Figure 3.1** below. Each element is stepped through in greater detail in **Sections 3.1.1** and **3.1.3** below.

Figure 3.1 Proposed basic metering opex (real \$million, FY24)

	FY25	FY26	FY27	FY28	FY29	Total
Base opex	22.7	22.7	22.7	22.7	22.7	113.3
Base year adjustment - CAM	4.0	4.0	4.0	4.0	4.0	20.1
Step	0.0	0.0	0.0	0.0	0.0	0.0
Trend	-1.7	-3.0	-5.2	-7.8	-10.6	-28.4
Proposed opex	24.9	23.6	21.5	18.8	16.0	104.9

3.1.1 Base level of opex

We propose an adjusted base level of opex of \$26.7 million per annum. This is made up of our estimated opex in FY23 (\$22.7 million) plus a CAM adjustment (\$4.0 million). These amounts are shown in the 'base opex' and 'base year adjustment – CAM' rows in **Figure 3.1** above.

The CAM adjustment of \$4.0 million corresponds to the methodology used for adjustments we have made to other lines of business (standard control services, ancillary network services, and public lighting) to give effect to the new CAM the AER approved for Ausgrid in October 2022.² We selected FY23 as the base year since it will be the last year of actual opex at the time the AER makes its final decision.

3.1.2 Step changes

Ausgrid does not propose any step changes to our base level of metering opex.

3.1.3 Trend

We have applied the following adjustments when trending forward our base opex over the 2024-29 period:

- 1) Declining customer numbers;
- 2) Real price changes in labour costs; and

² Ausgrid, [Cost Allocation Method, October 2022](#)

3) A productivity adjustment associated with growing 'diseconomies of scale'.

Each of these trend adjustments is discussed in the following sections.

Declining customer numbers

We expect an acceleration in the smart meter rollout from FY25. **Figure 3.2** sets out the corresponding impact that this will have on our forecast number of customers with an Ausgrid basic meter. For completeness, we have listed both the 'end of year customer' numbers and the 12-month 'average customer numbers'.

The reduction in our customers numbers are driving negative trend growth (lower opex) in **Figure 3.1** above (see the 'trend' row). As customers leave our service, they also stop paying the non-capital component of our metering service charges (see **Section 6** below).

Figure 3.2 Customer numbers at the National Metering Identifier (NMI) level (Millions)

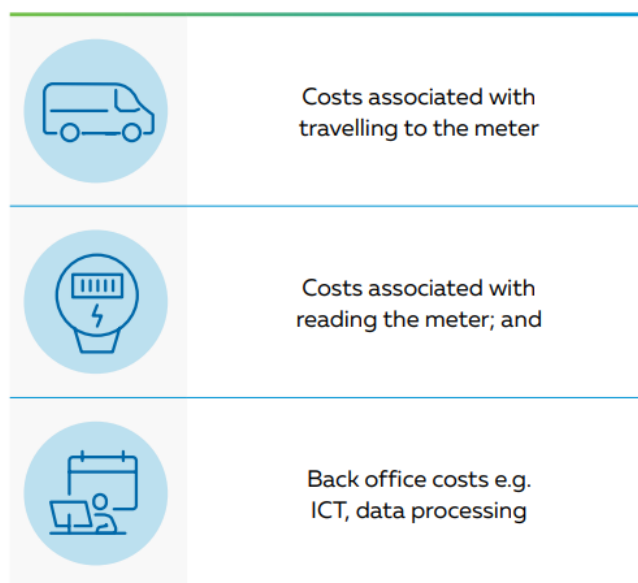
	Actual		Forecast						
	FY21 (actual)	FY22 (actual)	FY23	FY24	FY25	FY26	FY27	FY28	FY29
End of year customer numbers	1,429,886	1,349,858	1,292,029	1,234,200	1,145,898	1,027,122	877,873	728,624	579,374
Average customer numbers		1,389,872	1,320,943	1,263,114	1,190,048	1,086,509	952,497	803,248	654,000

Productivity adjustment – diseconomies of scale

By the end of the 2024-29 period, we forecast that more than 69% of Ausgrid metering customers will have switched from a basic meter, to a retail offering inclusive of an advanced meter. As our meter population declines, the unit costs for providing our service rises (known as diseconomies of scale).

For example, as meter numbers fall, the distance between them rises, increasing the travel time and hence cost of reading a single meter. The cost of our metering ICT systems is also highly fixed, whether we have 1 million or 100,000 meters. This drives up the unit cost of our service since a similar amount of fixed costs are recovered from a progressively smaller number of customers. The key factors giving rise to diseconomies of scale in our metering are noted in **Figure 3.3**.

Figure 3.3 How our unit costs increase with meter population decline



We engaged HoustonKemp to calculate the impact of declining customer numbers on our forecast opex. We expected that there would be avoided costs each time a customer leaves our service. This is mainly because, when a customer leaves, we no longer have to fund the cost of travelling to their premises to read their meter. However, this is not what was observed. Based on the number of customers which have left our basic metering service to date, Houston Kemp's economic analysis concluded:³

there is no evidence of a statistically significant relationship between the stock of legacy meters (Ausgrid basic meters) and the cost of scheduled meter reading.

In effect, the HoustonKemp analysis found that the diseconomies of scale that result when a customer leaves our basic metering service, produce inefficiencies that offset, in full, the avoided costs from having to read that customers' meter. We have not applied this observation from HoustonKemp in the development of our opex forecast. Had we applied it, the 'trend' component of our forecast would likely be a positive amount rather than the \$28.4 million reduction we have applied over the 2024-29 period (see **Table 3.1** above).

We have instead taken a more cautious approach when adjusting for diseconomies of scale. This is by applying a factor of 69.72% to our forecast opex requirement. This is the same percentage the AER applied in its determination for our 2019-24 period. We may revisit this aspect of our forecast when we submit our revised proposal following the finalisation of the AEMC's metering review.

Real price growth

Our proposal adjusts for forecast real price changes in labour costs. To do this, we used independently sourced labour rates from BIS Oxford (see **RIN.04** and **RIN.05**) and applied a weighted average of labour (59%) and non-labour (41%) to our total opex. This approach aligns to how we have forecast real price changes in labour costs for our standard control services.

³ HoustonKemp, Independent Assessment of Diseconomies of Scale, January 2023 (Attachment 9.2.E)

4. Asset base roll forward

Our metering assets once formed part of our total RAB for standard control services. This was until our 2014-19 determination where the AER reclassified type 5 and 6 metering services as an alternative control service and established a standalone metering RAB. Our proposal is to maintain this separation.

4.1 Metering RAB roll forward

We have calculated an opening metering RAB as of 1 July 2024 of \$106.4 million (\$ nominal). Our proposed opening metering RAB value is broken down by asset category in **Figure 4.1** below. The negative asset values in some asset categories are due to the use of forecast depreciation in the RAB roll forward, rather than actual depreciation. This is trued-up in the calculations in the 2024-29 period.

Figure 4.1 Opening metering RAB as at 1 July 2024 (\$million, nominal)

Component	Value
Type 6 meter population	\$53.6
Type 5 meter population	\$58.8
Furniture, fittings, plant and equipment	\$0.1
Land (non-system)	-\$0.2
Other non-system assets	\$0.1
IT systems	-\$7.4
Motor vehicles	-\$0.3
Buildings	\$0.5
In-house software	\$1.0
Equity raising costs	\$0.3
Total	\$106.4

4.2 2024-29 capex

As noted in section 2.4, we do not incur direct metering capex. However, some indirect capex is allocated to basic metering services through the CAM. Continuing to add capex to the RAB during the 2024-29 period means we will carry a RAB balance into the following period, even though all our meters will be fully depreciated. To minimise this, we have set the useful life of new capex to 1 year so it is recovered within this regulatory period. This means only a small RAB balance remains at the end of FY29.

We do not expect to continue charging for the capital element of metering beyond FY29, therefore at that time we may propose to move the small remaining balance to SCS to finalise recovery of those costs.

5. Forecast customers

We are forecasting a decline in the number of our basic metering customers over the 2024-29 period. The AEMC's draft report on the review of the regulatory framework for metering services recommends a target of 100% uptake of smart meters by 2030 in the NEM jurisdictions. Our smart meter forecast assumes that 90% of our customers will have a smart meter installed by 2032. We believe that this timeframe is a prudent projection given the AEMC metering review is still underway and the details of the legacy retirement plan are still to be finalised.

Our forecast assumes that until AEMC's final decision, the smart meter uptake will be in line with recent trends at approximately 58,000 per year. The legacy meter retirements are expected to accelerate in FY25 upon AEMC's final decision on smart meter roll-out and reach a plateau in FY27 at around 102,000 per year. The customer-initiated meter upgrades are expected to be at the same level throughout the forecast period at around 47,000 per year. As a result, the share of basic meters drops from 80% in FY21 to 31% in FY29 and to 10% in FY32. Our forecast for meter upgrades and total meters to FY29 are set out in Figures 5.1 and 5.2 respectively.

Figure 5.1 Forecast change in basic metering customers at the end of each financial year (NMIs)

	Actual		Forecast						
	FY21 (actual)	FY22 (actual)	FY23	FY24	FY25	FY26	FY27	FY28	FY29
Customer initiated	57,020	37,499	47,319	47,319	47,319	47,319	47,319	47,319	47,319
Legacy meter retirement	8,372	12,554	10,510	10,510	40,983	71,457	101,930	101,930	101,930
Total basic meter upgrades	65,392	50,053	57,829	57,829	88,302	118,776	149,249	149,249	149,249

Figure 5.2 Total metering customers at the end of each financial year (NMIs)

	Actual		Forecast						
	FY21 (actual)	FY22 (actual)	FY23	FY24	FY25	FY26	FY27	FY28	FY29
Remaining basic meters	1,429,886	1,349,858	1,292,029	1,234,200	1,145,898	1,027,122	877,873	728,624	579,374
Advanced meters	348,471	437,551	505,321	572,454	669,303	798,295	957,818	1,117,400	1,277,040
Total population	1,778,357	1,787,409	1,797,350	1,806,654	1,815,200	1,825,417	1,835,691	1,846,023	1,856,415
Share of basic meters	80%	76%	72%	68%	63%	56%	48%	39%	31%

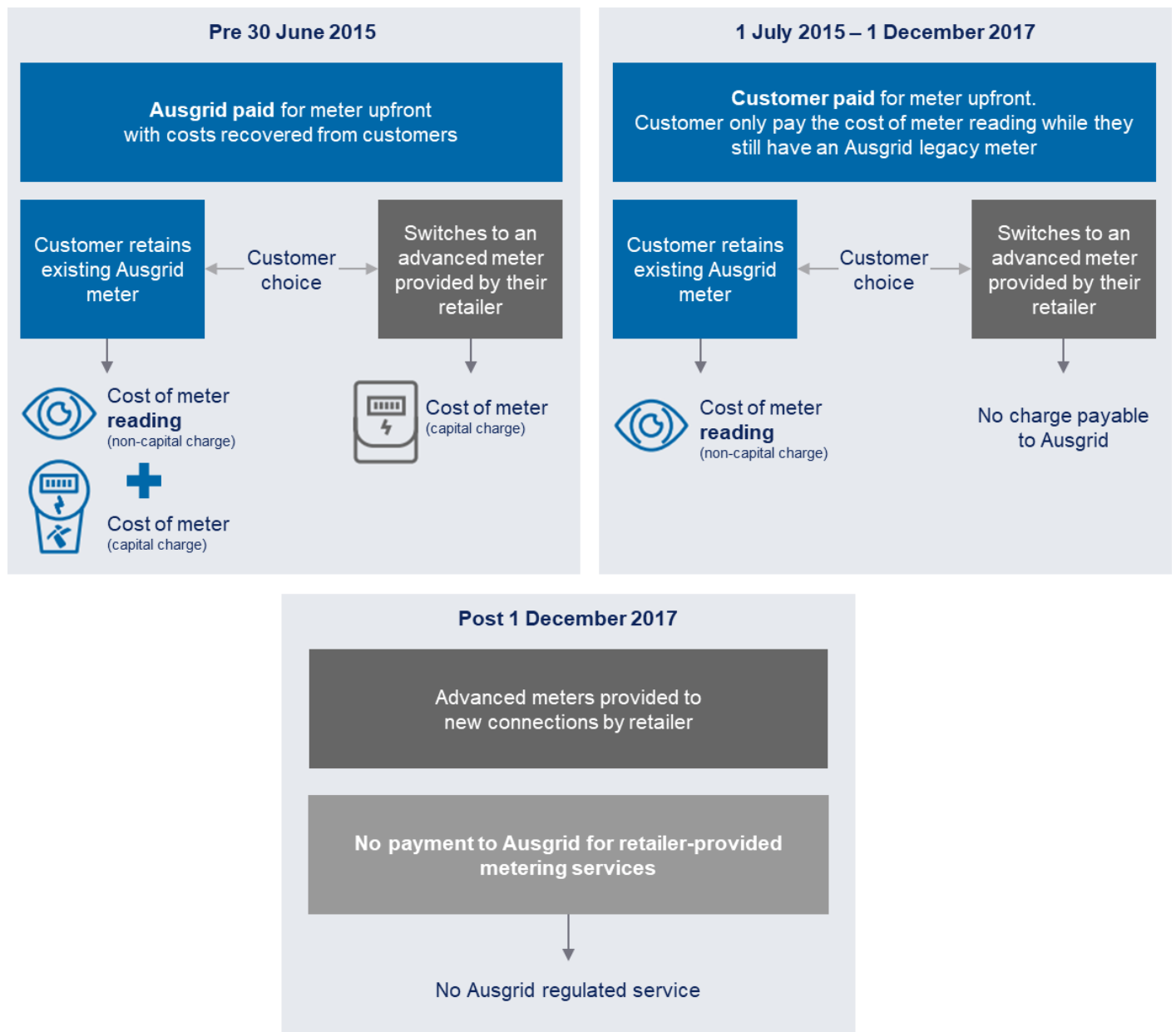
6. Pricing approach

Our Proposal utilises the structure of metering charges the AER approved for our 2019-24 period. In this section, we outline how this structure works.

6.1 Structure of metering charges

To give effect to the AER’s metering tariff structure, we have proposed metering charges comprising of two components: a capital component and a non-capital component. In **Figure 6.1** below, we show how these two components relate to different metering customers.

Figure 6.1 Applying metering charges



Under this charging structure, the capital and non-capital components of our type 5 and 6 metering fees recover different streams of our 'building block' revenue, as shown in **Figure 6.2**.

Figure 6.2 Components of 'building block' revenue recovered through metering charges

Charge	Building block revenue	
Capital component	Metering RAB recovery ⁴	Tax allowance
Non-capital component	Type 5 and 6 metering opex	

6.2 Before 30 June 2015 customers

The AER's structure of metering charges requires a customer who has had a type 5 or 6 meter provided by Ausgrid before 30 June 2015 to pay the following:

- Capital (metering RAB recovery and tax allowance) component; and
- Non-capital (opex) component

If these customers leave our type 5 and 6 metering service, they are no longer required to pay the non-capital component. They will nonetheless still be required to pay the capital component after they have switched.

The rationale behind the requirement to continue paying the capital component after a customer has left our type 5 and 6 metering services lies with how we have recovered our capital costs.

Prior to 30 June 2015, this involved Ausgrid funding the full capital cost of a meter on the behalf of our customers. These costs were then rolled in an asset base (our metering RAB) and gradually recovered over time through levying metering charges.

The AER's charging structure, which we have applied, ensures that this cost recovery process will not be disturbed by the AEMC's reforms expanding contestability in the provision of metering services. It does this by allocating our building block revenue from the depreciation of our metering RAB to the capital component of our annual metering charges.

We agree with the AER that this approach is 'the most appropriate way to recover metering capital costs incurred in providing regulated metering services that risk becoming stranded if a customer switches [to a retail offering that includes an advanced metering service]'.⁵ We have accordingly applied this charging structure in our 2024-29 Regulatory Proposal.

6.3 After 30 June 2015 customers

Where a customer received a type 5 or 6 meter from Ausgrid after 30 June 2015, they are only required to pay the non-capital (opex) component.

Customers who received a new meter after 30 June 2015 from Ausgrid do not pay the capital component of our type 5 and 6 metering charges. This is because these customers were required to pay for the capital cost of their meter upfront at time of installation. The capital cost associated with their meter is therefore isolated from our metering RAB, with the consequence that they pay no metering RAB recovery costs. If a customer who received a meter from Ausgrid after 30 June 2015 switches to a retailer offering inclusive of an advanced meter, then they no longer pay the non-capital component of our charges too.

⁴ The metering RAB is largely the undepreciated value of our population of type 5 and 6 meters.

⁵ AER, [Ausgrid final decision 2015-19, April 2015](#), p. 16-3