



Legacy Metering Transition – Towards 2030

2025-30 Revised Proposal

Supporting document 19.4

December 2024



Empowering South Australia

Contents

Glossary	4
1 About this document	5
1.1 Purpose.....	5
1.2 Expenditure categories.....	5
1.3 Related documents.....	5
2 Executive summary.....	6
2.1 Overview.....	6
2.2 Changes since our Original Proposal	7
3 AEMC metering review	9
3.1 SA Power Networks’ involvement in the meter exchange program	10
4 The scope of this document	11
4.1 Drivers for change	11
5 Legacy meter replacements	12
5.1 Residual meters into the future	14
6 The plan	15
6.1 The meter exchange process.....	15
6.2 Development of the LMRP	16
6.3 Stakeholder engagement	17
6.4 Rollout Strategy	19
7 Legacy metering transition costs	21
7.1 Functional Area Analysis.....	21
7.2 Legacy metering transitional cost assessment.....	22
7.3 Smart Meter Implementation Management.....	22
7.4 Customer Management and Contact Resolutions	23
7.5 Billing and Credit.....	24
7.6 NEM Operations	24
7.7 Meter disposal and storage.....	25
7.8 Total legacy metering transition costs	25
8 Information Technology.....	27
8.1 Non-Recurrent Compliance and Remediation	28
8.1.1 AEMO LMRP System Compliance	28
8.1.2 Market & Billing System Stabilisation and Remediation	29
8.2 Recurrent Data Storage and Compute	30
8.2.1 Billing	30
8.2.2 Analytics.....	30
9 Comparison of options.....	31
9.1 The options considered	31
9.2 Options investigated but deemed non-credible	31

9.2.1	Do nothing	31
9.2.2	Resource uplift – for recurrent activities.....	32
9.2.3	Systems (ICT) solutions – for transitional (non-recurrent) activities.....	32
9.3	Analysis summary and recommended option.....	32
Appendix A: Attachments (available on request).....		33

Glossary

Acronym / term	Definition
ACS	Alternative Control Services
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
B2M	Business to Market
B2B	Business to Business
B&C	Billing and Credit
BAU	Business as Usual
CER	Customer Energy Resources (Rooftop solar, Batteries and Electric Vehicles)
CID	Customer Information Discovery
CR	Change Request
DNISP	Distribution network service provider
ERP	Enterprise Resource Planning
FTE	Full-time equivalent
GIS	Geographic Information System
ICT	Information and Communication Technology
IT	Information Technology
LMRP	Legacy Meter Retirement Plan
LV	Low Voltage
MC	Metering Coordinator
MFN	Meter Fault Notification
MP	Metering Provider
MSR-WG	Metering Services Review Working Group
NEM	National Electricity Market
NER	National Electricity Rules
NMI	National Metering Identifier
NOMW	Notice of Metering Works
OPCL	Off-peak controlled load
Opex	Operating expenditure
PV	Photovoltaic (solar)
RCP	Regulatory Control Period
RFC	Requests for Change
RIN	Regulatory Information Notice
RPU	Revenue Protection Unit
RTI	Retailer Temporary Isolation
SA	South Australia
SACOSS	South Australian Council of Social Services
SAPOL	South Australia Police
SCS	Standard Control Services
SM	Smart meter
Smart Meter	An electricity meter that records interval data and is remotely read
ToU	Time-of-Use
UAT	User Acceptance Testing

1 About this document

1.1 Purpose

This document sets out our latest assessment of the transitional and ongoing costs required to support the accelerated deployment of smart meters in South Australia in accordance with the AEMC’s Accelerating Smart Meter Deployment rule change.

This document will support SA Power Networks’ submission to the Australian Energy Regulator (**AER**) as part of our 2025-30 Revised Regulatory Proposal.

1.2 Expenditure categories

- Legacy metering services (**SCS**): Metering Transition – Step Change – Regulatory Obligation
- Main Standard Control Services: Non-recurrent ICT capital expenditure (**capex**) – Regulatory Obligation
- Main Standard Control Services: Recurrent Information and Communication Technology (**ICT**) Operating expenditure (**opex**) – Step Change – Regulatory Obligation

1.3 Related documents

The documents listed in the table below provide information relevant to this justification document and should be considered by the reader.

Related documents

Ref	Title	Author	Version / date
5.7.6	Network Visibility - Business Case	SA Power Networks	January 2024
	Rule Change Request: Accelerating the deployment of smart meters and unlocking their benefits	Intellihub Australia, SA Power Networks, Alinta Energy	September 2023
	AEMC final recommendations report – Review of the Regulatory Framework for Metering Services 30 August 2023.	AEMC	August 2023
5.12.27	Program Overview - ICT Non-Recurrent Customer Technology Program - Explanation	SA Power Networks	January 2024

2 Executive summary

2.1 Overview

Metering assets are used to measure electrical energy flows at a connection point on our network for a particular customer’s premises and record electricity consumption (and export) by customers for billing purposes.

Since December 2017 retailers have been responsible for installing new and replacement meters for customers. These meters must be remotely read interval meters, often referred to as ‘smart’ meters. In South Australia, SA Power Networks retains responsibility for providing legacy metering services, including manual reading, testing and maintenance of legacy meters until they are replaced with a smart meter.

The number of legacy meters on our network has been reducing gradually. However, the rollout of smart meters has been slower than anticipated, delaying realisation of benefits to individual customers and the wider power system.

In August 2023, the Australian Energy Market Commission (**AEMC**) issued its final report on the review of the regulatory framework for metering services. Amongst other things, the AEMC report recommended accelerating the rollout of smart meters to all customers by 2030, with distribution network service providers (**DNSPs**) to develop a ‘legacy metering retirement plan’ (**LMRP**) and retailers to be responsible for installing smart meters at legacy sites in accordance with this plan over the 2025-30 period.

This is a significant change for the industry that will require new business processes and system enhancements (including business to business (**B2B**) and business to market (**B2M**) transactions) to enable the efficient delivery of the accelerated rollout program. A new Metering Services Review Working Group (**MSR-WG**), coordinated by the Australian Energy Market Operator (**AEMO**), commenced in late 2023 to enable effective consultation between the AEMO and market participants on the development of, and changes to, B2B and B2M systems and relevant market procedures associated with the AEMC’s review of the regulatory framework for metering services. The outcome of the work completed by this group was used by the AEMO (responsible for B2M Procedures), and the IEC (Information Exchange Committee responsible for B2B Procedures) and allowed formal market procedure consultation to commence on 29 May 2024.

This document sets out our assessment of the expenditure in the 2025-30 Regulatory Control Period (**RCP**) associated with supporting and managing the program to accelerate the smart meter rollout in South Australia. We have developed this assessment based on information available at the time.

On 28 November 2024 the AEMC released its final rule requiring the universal deployment of smart meters across the National Electricity Market by 2030¹. Under the final rules, new regulatory arrangements will require retailers and Metering Coordinators to replace all existing ‘legacy’ meters with a ‘smart’ meter by 1 December 2030, commencing on 1 December 2025.

The AEMC delayed this final rule change to consult further on consumer protections, with additional protections now included. Noting the delay in the rule change, delayed the commencement of the rollout by 5 months. SA Power Networks has updated the inputs for the legacy metering step change contained within this document, to align with the outcomes of the AEMC’s final decision.

Engagement and development of the LMRP will continue until mid-2025, providing us with better clarity of stakeholder views prior to submission of the LMRP to the AER for approval (expected by 31 August 2025).

¹ AEMC – Rule determination accelerated smart meter deployment – 28 November 2024

Our total expenditure forecast to support the accelerated rollout of smart meters over the 2025-30 RCP is **\$16.5** million (\$ June 2022). This includes \$9.0 million in metering transition costs included as an opex step change within the metering component of Standard Control Services (SCS) and \$1.1 million in information technology (IT) upgrades included as an opex step change and \$6.4 non-recurrent capex in Main SCS.

Table 1 - Total additional expenditure required to support smart meter deployment (\$ June 2022)

Activity	2026 (\$'000)	2027 (\$'000)	2028 (\$'000)	2029 (\$'000)	2030 (\$'000)	Total (\$'000)
Legacy Metering Services (SCS) – Transition Costs						
Smart Meter Implementation Management	691	774	774	608	608	3,455
Customer Management Contact Resolution	499	499	499	499	333	2,329
Billing and Credit	-	532	566	299	-	1,397
NEM Operations	-	183	183	-	-	366
Meter Disposal and Storage	289	289	289	289	289	1,445
Total Legacy Metering Services (SCS) – Transition Costs	1,479	2,277	2,311	1,695	1,230	8,992
Main SCS (Recurrent Opex)	20	73	152	358	539	1,142
Main SCS (Non-Recurrent Capex)	2,128	-	1,836	2,240	-	6,204
Main SCS Total	2,148	73	1,988	2,598	539	7,346
Total forecast expenditure	3,628	2,350	4,299	4,293	1,769	16,338

2.2 Changes since our Original Proposal

Our Original Proposal included ‘a rough order of magnitude’ forecast opex of **\$34.7** million (\$ June 2022 – Table 2) to support the accelerated rollout of smart meters over the 2025-30 RCP. We expected this to reflect the upper bound of expenditure required over the 2025–30 RCP.

Following submission of our regulatory proposal in January 2024, SA Power Networks continued to work through the implications of the accelerated rollout program and the development of our LMRP in consultation with retailers and other stakeholders. This has included conducting a further detailed review of the legacy metering transition costs required to support the accelerated rollout.

We undertook a critical assessment of capability across the affected teams, considering the current legacy meter replacement volumes and those expected during the rollout period. While there will be increases in workload in some teams, in some cases these can be offset by savings in other teams as the volume of legacy meters decline. We have also assessed the nature of the costs to confirm if they are transitional (i.e. directly related to the legacy meter replacement activity) or ongoing. Only non-recurrent transitional costs are included within the proposed ‘metering transition costs’ step change² in the metering component of SCS.

We provided an updated forecast of the legacy metering transition step changes to the AER as part of an information request (IR027) in July 2024, materially reducing the opex components of the opex step changes. We also identified additional IT capex will be required to implement the system upgrades to enable the rollout program and cater for the increased volumes of meter data, which has now been included in our Revised Proposal.

² All recurrent opex has been included within Main SCS.

We note the AEMC had delayed the publication of its final rule change until 28 November 2024, with the accelerated rollout to commence on 1 December 2025 and continue through to 30 November 2030.

Noting this, the AER did not accept our legacy metering step changes and applied a placeholder of Zero in its Draft Decision³. The AER requested SA Power Networks further update the legacy metering step changes to reflect the outcomes of the AEMC’s final rule change.

As requested, this document has been updated based on the outcomes of the AEMC’s final rule published on 28 November 2024. We have updated our forecast meter volumes to reflect a delayed start of 1 December 2025. This delay has further changed the resource uplift requirements to support the accelerated rollout as contained within the legacy metering transition costs step change in the metering component of SCS. Transaction volumes will largely be driven by the LMRP, increasing in alignment with the updated LMRP profile. We also note the delay will impact on our resource profile to support customer enquiries. We forecast there will be an increase in customer enquiries prior to the commencement of the rollout as broader customer engagement activities commence. Additional call volumes are expected in response to the scheduled or physical replacement of the legacy meters.

The Main SCS IT costs have also changed marginally from the IR027 revision, reflecting the delays in the program. The Recurrent Opex has reduced by \$0.3 million, commensurate with the slower rollout as uplifts for data storage and consumption is not as large as previously planned at the end of RCP. Non-Recurrent Capex has increased by a similar amount (\$0.3 million) as the delay means more of the initial implementation changes are now undertaken in the 2025-30 RCP (instead of the 2020-25 RCP).

A comparison of the financial outcomes of these changes is provided in

Table 2 below.

Table 2: Legacy metering step change comparison to Original Proposal (\$ June 2022)

Activity	Original Proposal	Revised IR027	Draft Decision	Revised Proposal
Total Legacy Metering Services (SCS) – Transition Costs	30,482	8,476	-	8,992
Main SCS (Recurrent Opex)	4,245	1,455	-	1,142
Main SCS (Non-Recurrent Capex)	-	5,918	-	6,204
Main SCS Total	4,245	7,373	-	7,346
Total forecast expenditure	34,727	15,849	-	16,338

³ AER Draft Decision Attachment 20 – Metering Services – SA Power Networks – 2025-30. Distribution revenue proposal – September 2024, section A.7 Step changes, page 12.

3 AEMC metering review

In 2015, the AEMC made a rule introducing metering contestability, as part of its broader Power of Choice reform package.⁴ From 1 December 2017, all electricity meters installed must be a remotely read interval (or 'smart') meter, where the provision of the new or replacement smart meter is the responsibility of the metering coordinator (**MC**) appointed for the connection point, by the customer's retailer. DNSPs, including SA Power Networks, were deemed to be the initial MC for all existing 'legacy' type 5 and type 6 meters.

As the initial MC, SA Power Networks continue to be responsible for reading and maintaining legacy meters in accordance with the National Electricity Rules (**NER**) until they are replaced with smart meters. We no longer install or replace electricity meters, with this work being the responsibility of the retailer-appointed MC.

On 3 December 2020 the AEMC initiated a review into the regulatory framework for metering services (**metering review**). The purpose of this review was to determine whether the reforms introduced under the metering contestability rule change have met expectations, whether changes are required to improve the efficiency and effectiveness of the regulatory framework for metering services, and whether the regulatory framework for metering services supports the implementation of other electricity sector reforms where metering services will play a role.

The AEMC published its final report⁵ on its review of the metering framework on 30 August 2023. The final report made recommendations to improve the regulatory framework for metering services, enabling consumers to access the benefits of smart meters sooner. The AEMC recommended an accelerated deployment of smart meters, with smart meters to be installed for all 'small customers' including residential and small commercial or business customers by 2030.

On 29 September 2023, the AEMC received a rule change request from Intellihub Australia, SA Power Networks, and Alinta Energy to amend the NER to reflect the outcomes of the AEMC's final report.

The proposed rules set out in the rule change request will:

- Accelerate the deployment of smart meters so that all consumers can benefit from them. The proposed rules will implement a framework that will allow for a universal deployment of smart meters to all customers by 2030⁶.
- Implement a range of measures to better support customers through the accelerated rollout. This includes improving the information provided to customers and applying new consumer protections when customers receive a smart meter.
- Improve the meter installation process by reducing barriers to installing smart meters, enabling more efficient and coordinated deployments and improving the installation experience for customers.
- Implement a new regulatory framework for metering businesses to provide power quality data from smart meters to DNSPs. This will enable DNSPs to improve the 'visibility' of their low voltage networks, better integrate CER and improve safety for customers.
- Clarify and improve the requirements for undertaking tests and inspections of meters to avoid unnecessary costs.

On 4 April 2024, the AEMC commenced formal consultation for the Accelerating smart meter deployment via the fast-track rule change process. The AEMC's decision to use this consultation method was based on

⁴ *National Electricity Amendment (Expanding competition in metering and related services) Rule 2015 No. 12.*

⁵ [AEMC Final Report Review of the Regulatory Framework for Metering Services, 30 August 2023.](#)

⁶ It is recognised that there may be some legacy meters remaining in service after 2030 due to access issues, customer matters and installation complexities. Whilst it is expected that the number of legacy meters remaining may be small, there will be a need to retire these meters at a later date.

the extensive consultation carried out during the review process. The consultation period closed on 28 May 2024 with the AEMC indicating that a final determination would be published on 11 July 2024.

On 4 July 2024, the AEMC announced an extension to the final determination date for the Accelerating smart meter deployment rule change to allow further consultation on enhancing consumer protections.

On 28 November 2024 the AEMC published its final rule requiring the universal deployment of smart meters across the National Electricity Market by 2030. Under the final rules, new regulatory arrangements will require retailers and MCs to replace all existing ‘legacy’ meters with a ‘smart’ meter by 1 December 2030, commencing on 1 December 2025. SA Power Networks has updated our associated resource and cost assessments contained in this document to reflect this updated timeline.

3.1 SA Power Networks’ involvement in the meter exchange program

The AEMC final report recommends retention of the current industry structure for the accelerated deployment, where retailers will be responsible for appointing a MC at each customer’s connection point⁷. The retailer-appointed MC will arrange the replacement of the legacy meters and will be responsible for the operation, reading, and maintenance of the installed smart meter.

Under the AEMC’s proposed accelerated rollout program, DNSPs will develop LMRPs that schedule clusters of legacy meters to be retired and replaced each year of the five-year acceleration period (such as by postcode). DNSPs will be required to develop these LMRP schedules in consultation with key stakeholders. DNSPs would be required to apply a regulatory objective and guiding principles, balancing retailer and other stakeholder views, to determine a deployment program pathway that broadly promotes the long-term interests of consumers. This is discussed further in section 6.

While retailer-nominated MCs will complete the physical meter replacements required for this accelerated rollout, DNSPs will experience increased costs associated with the accelerated replacement of legacy meters. SA Power Networks’ analysis indicates we will require a short-term increase in capability to support the accelerated rollout program.

This increased capability is expected across the following areas:

- Smart meter implementation management, with dedicated resources assigned within the business to develop the LMRP and manage the rollout program for SA Power Networks;
- Customer management and contact resolution, to deal with additional telephone calls and complaints associated with the rollout;
- Billing administration, to process tariff updates, interval meter reading data file uploads, and resolution of billing and customer disputes;
- Meter exchange management, to oversee the meter churn market interactions including Notice of Metering Works and Change Requests and manage any exceptions;
- Meter storage and disposal, as legacy meters are returned to SA Power Networks for disposal or recycling where possible.

These are discussed further in section 7 of this document.

The meter exchange program will also drive the need for additional system capacity to enable the increased volume of meter data as smart meters are installed. This is discussed further in section 8.

⁷ NER clause 7.2.1(a); AEMC, Expanding competition in metering and related services final determination, 2015.

4 The scope of this document

The scope of this document is to set out our current thinking in development of the LMRP, to establish SA Power Networks' response to the AEMC's requirements, and to assess forecast costs that may be required to implement the plan.

Initial meetings have been held with key retailers and metering providers to assist SA Power Networks make an informed view of the current plan. This plan has been informed through detailed consultation with stakeholders particularly retailers and MCs who will be responsible for installing the new meters.

This document sets out the underlying supporting information for the following step changes:

- Legacy Metering Services (SCS) – Metering transition costs (refer to section 7); and
- Main SCS – smart meter rollout IT upgrades (refer to section 8).

The ICT Non-Recurrent Customer Technology Program is contained in a separate business case, refer to Supporting Document - 5.12.27 - Program Overview - ICT Non-Recurrent Customer Technology Program – January 2024. The Program Overview document details the strategic replacement of customer service technologies to deliver replacement and improved capabilities related to a broad range of customer services. The ICT Non-Recurrent Customer Technology Program business cases are separate from the requirements detailed in this document, with the ICT non-recurrent customer technology program expected to deliver benefits to systems and processes beyond the 2025-30 RCP.

4.1 Drivers for change

The AEMC has indicated that smart meters are a critical enabler of the transition of the energy landscape and has undertaken extensive consultation with the public on the recommendations associated with the metering review. All of the recommendations from the metering review final report contained within the Rule Change request lodged in September 2023, were extensively consulted on in the AEMC's draft report and through stakeholder reference groups.

The AEMC published its final rule on 28 November 2024, requiring the universal deployment of smart meters across the National Electricity Market by 2030. Under the final rules, new regulatory arrangements will require retailers and Metering Coordinators to replace all existing 'legacy' meters with a 'smart' meter by 1 December 2030, commencing on 1 December 2025.

It should be noted that whilst the industry must aim for this goal, in practice, the smart meter rollout in Victoria has shown the industry that it is difficult to achieve 100% of meter replacement by a specific date due to various factors, for example:

- Customer refusal.
- Installations requiring upgrading prior to the fit-out of a new smart meter.
- The incidence of asbestos materials used in switchboards and fuses.
- A lack of space on some meter boards requiring complete replacement.
- Meters situated inside residences (Compared to Victoria and NSW, South Australia has a larger percentage of meters situated inside residences).

Whilst the LMRP's goal will be to exchange all metering, it should be noted that MCs will encounter specific situations that may see residual sites exist post 2030 that will require further action to initiate their change to smart metering.

5 Legacy meter replacements

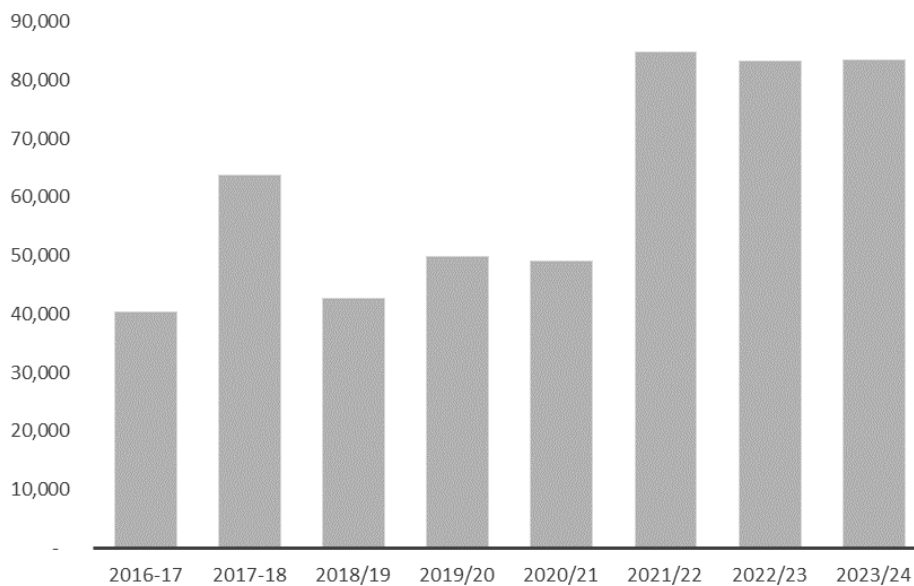
Since the introduction of metering contestability in 2017, SA Power Networks' legacy metering fleet has reduced from around 1 million meters to approximately 600,000 (on 30 June 2024).

The basis on which metering is installed / exchanged occurs under a number of different scenarios:

- New Connections and alterations
- Identified Meter Family Replacement
- Meter Fault Notifications
- Solar / Battery installation at existing sites
- Natural disasters
- Customer / retailer-initiated replacements

When the AEMC started its metering review in late 2020, approximately 18% of small business and small residential customers outside of Victoria had a smart meter. The pace of change has gathered momentum, with a noticeable increase in smart meter installations in South Australia since 2021/22, as show in Figure 1 below.

Figure 1 - Actual legacy meter replacements completed



While anecdotally we know the underlying drivers for legacy meter replacements, we have limited data as to the actual reason an individual legacy meter has been replaced as this replacement is facilitated by the customers' retailer. Noting this, we analysed the meter replacements between October 2022 and October 2023 to understand the underlying reason meters were replaced over this period. This data has been used to forecast the base expected legacy meter replacements excluding retailer-initiated replacements.

Between October 2022 and October 2023, approximately 81,000 meters were replaced across 65,000 National Metering Identifiers (NMI)⁸. We note, one premises may have more than one meter, with an average of 1.25 meters per NMI.

The reason for meter replacement has been assessed based on other information available to SA Power Networks, for example the existence of a Meter Fault Notification (MFN) for the same NMI or notification

⁸ One NMI may have more than one meter, with an average of 1.25 meters per NMI.

of solar installation. The outcomes are provided in Table 3 below. Notably, solar installations continue to be the biggest driver of customer-initiated meter churn, with approximately 30,000 meters (37%) replaced due to solar installations over the period. Where no reason is obvious, we have assessed these as a retailer-initiated meter churn. Retailer-initiated replacements currently make up 39% of meter replacements completed on an annual basis.

Table 3 - Legacy meter replacement analysis

Expected replacement reason	NMI Churn Volume	Estimated Meter Churn	% of total
Alteration	2,795	3,494	4%
MFN Family	9,094	11,368	14%
MFN Other	3,523	4,403	5%
Solar Installations	24,182	30,228	37%
Others (Retailer Initiated)	25,256	31,570	39%
Total	64,850	81,063	100%

Whilst the pace of meter exchange has increased over recent years, we are generally seeing the easier or more simple sites targeted by retailers for smart meter installation. These tend to include sites with existing solar installations, where the switchboard would have been updated where required at the time of the solar installation.

Of the metering replaced in the last two years, all but 3% were single installation sites where the Retailer's meter provider was able to isolate supply to complete the meter exchange without SA Power Networks' involvement. We have noticed a slight increase in the number of requests for SA Power Networks to co-ordinate outages for multi occupancy or shared fuse sites. These sites include, but are not limited to:

- Blocks of flats;
- Groups of units;
- Duplexes;
- Homette's;
- Groups of shops; and
- Shared pits for residential properties with underground infrastructure.

Customer analysis conducted on the remaining 600,000 legacy meters (on 30 June 2024), suggests that there could be 20,351 sites with 126,254 meters that may be linked to a potential "multi-site" scenario. Considering SA Power Networks' baseline (600,000 meters), this data suggests that approximately 18.5% of the remaining meters for replacement may be linked to a multi-site scenario. Further analysis is required to validate the analysis and the potential impact on the resources required to facilitate these change overs.

The co-ordination of works at multi-site occupancy or shared fuse sites is complex and is quite often very time consuming. Our expectation is that the requirement to manage the co-ordination of several different parties, namely multiple MCs, and retailers, for the effective installation of metering with the minimal disruption to customers, will be challenging and take considerable effort. We note this service is classified as Alternative Control Services (**ACS**) and we have proposed new fees in our Ancillary Network Service price list to cover this work.

5.1 Residual meters into the future

SA Power Networks has limited data on customer installations and estimates approximately 20%⁹ of legacy meters will remain in service on 1 December 2030, where the retailer has been unable to replace the legacy meter during the replacement period.

The reasons for non-replacement include but are not limited to:

- Customer refusal (a customer refuses to allow access to change the meter);
- Disconnected sites (a disconnected site will not have a meter change, but the site may be reconnected in the future); or
- Out of specification meter board or internal wiring (a site may require significant internal upgrades to allow for the meter to be changed, which the customer is reluctant or unable to complete).

It is anticipated that over time, more of these connections will receive a smart meter as housing stock is renewed or redeveloped, or no longer require a connection as sites are permanently disconnected and abandoned.

⁹ SA Power Networks originally estimated 15% of legacy meters may remain in service after 30 November 2030, where the retailer has been unable to replace the legacy meter during the replacement period. Following retailer and metering business consultation, we have revised this estimate to be 20% which represents the consolidated position based on their feedback.

6 The plan

SA Power Networks has identified that a successful implementation of the LMRP involves the:

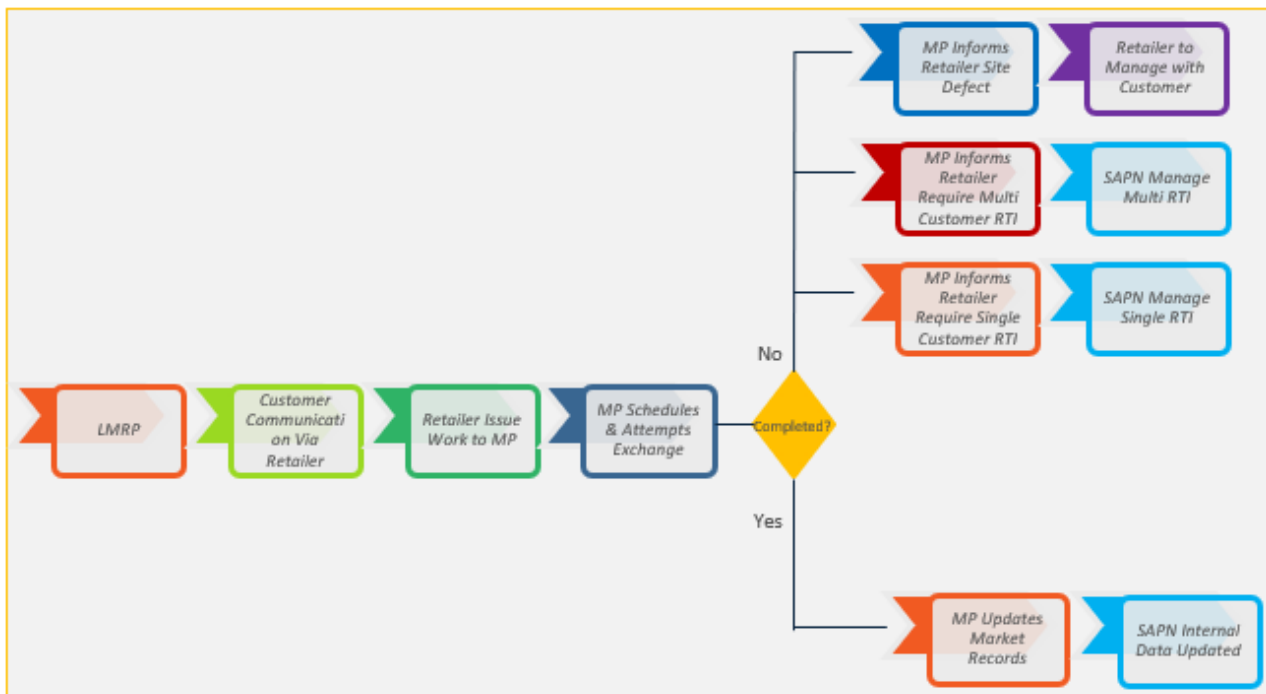
- acceleration of legacy meter replacements, requiring SA Power Networks to process an increased volume of metering data and records management; and
- management of more difficult and complex metering installations (such as shared fuse multiple meter sites).

SA Power Networks is developing plans to respond to these needs to ensure the success of the LMRP.

6.1 The meter exchange process

The development of the LMRP with Retailers and the MCs will broadly follow the model depicted below. This methodology will require further development as we move towards finalising the LMRP.

Figure 2 - Meter exchange process



Communication is a key element to ensuring the success of the smart meter deployment and whilst the onus for communicating directly with customers will rest with Retailers, we see the requirement for a broader communication strategy with key stakeholders to assist in the success of the LMRP. Some stakeholders have suggested that the DNSP undertakes the role of “broader communication” given the requirement for the DNSP to create the LMRP. Our expectation is that customers will express some concerns and reach out to advocacy and support service agencies and accordingly it is important to mitigate any risk to the LMRP schedule by building the foundations of communication and awareness through these agencies for their support in the management of customers and their expectations, and the metering exchange process.

The communication plan should involve broad communications when metering exchanges are taking place in a concentrated area, to alert consumers to the program and provide a level of surety about the upcoming exchange. The plan also needs to include several agencies to support the program of work, provide visibility of activities and build general awareness. Those agencies should include, but not be limited to:

- State Government
- Energy and Water Ombudsman of SA
- Office of the Technical Regulator
- Local Councils
- South Australian Police (**SAPOL**)
- Local Members of Parliament
- Public Interest Advocacy Groups
- South Australian Council of Social Services (**SACOSS**).

6.2 Development of the LMRP

Developing an efficient LMRP will not be possible without the cooperation of the retailers and the MCs. Indeed, this is recognised in the AEMC’s Final Report which states that customers will receive ‘benefits derived from: ... reduced installation costs due to the economies of undertaking the deployment geographically’.¹⁰

Therefore, SA Power Networks will develop and refine the process for the LMRP in consultation with retailers and MCs in order to provide an efficient rollout of the installation process. A level of coordination is assumed in the development of the forecast costs for the next regulatory period. This allows for our field crews to be ‘location biased’ in the areas where the MCs are installing new meters and requesting assistance in temporary isolation, for example.

SA Power Networks has continued to engage with retailers and MCs on the development of the LMRP during 2024, this is discussed further below.

A key component of the plan relies on assumed efficiencies with the development and implementation of the LMRP, including:

- Coordination geographically – undertake legacy meter replacement work in a geographic areas that makes efficient use of the SA Power Networks field crews (to allow for the movement of staff into these areas) that will:
 - › attend to investigating faults on customers’ supply.
 - › assist with Retailer Temporary Isolations for shared fuse installations.
- Consideration of legacy meter reading requirements, including timing of scheduled meter reading and efficiency opportunities as legacy meters are removed from service.
- Communication of plans between retailers and SA Power Networks to ensure the MCs and their field technicians are aware of the process of disposal of a large number of accumulation meters through SA Power Networks collection depots.
- Adherence to the proposed plan:
 - › Coordinated Efficiency: Assumes the establishment of a comprehensive coordination framework among stakeholders for efficient execution.
 - › Contingency Planning: Assumes the development and regular updating of a robust contingency plan to address unforeseen challenges and minimise disruption.

SA Power Networks’ goal is to ensure that we can support the success of the LMRP to enable this next phase in South Australia’s energy transition and to customers to obtain greater value from the rollout of smart metering.

To this end, our 2025-30 Regulatory Proposal builds on the AEMC rule change and assists in the effective transition of legacy metering to smart metering. Our focus is on prudent and efficient management, with the appropriate support mechanisms in place to ensure the success of this body of work.

6.3 Stakeholder engagement

To develop our LMRP, SA Power Networks has applied a development framework that aligns with the AEMC’s proposed rules (refer to Figure 3 below). This framework has formed the basis of our consultation to date with retailers and meter providers, considering rollout profiles, metropolitan and regional segmentation, and any tactical requirements.

Figure 3 - Key development framework for LMRP

LMRP – Key Development Framework

Step	What	Why	Link to AEMC Rules	Current Direction
1	What rollout profile (Even, Middle peak or Back-end peak) should be used over the 5 year period (required to be between 15% and 25%) ?	This will determine the highlevel yearly volume targets within the LMRP.	LMRP Principle 1	Y1 – 15% Y2 & Y3 – 25% Y4 – 20% Y5 – 15%
2.1	What % split between Metro and Regional areas should be applied to each yearly LMRP volume?	This will determine the target breakdown of Metro Vs Regional areas within theyearly LMRP volume.	LMRP Principle 2, 3 & 4	70% in Metro areas 30% in Regional areas
2.2	What segmentation of Metro areas should be considered (Adelaide North, South, West, Central & Hills)?	This will determine the target breakdown of Metro suburbs within theyearly LMRP volume.	LMRP Principle 2, 3 & 4	Even split across Metro area
2.3	What segmentation of Regional areas should be considered and how should Regional work be approached– balance target yearly volumes to ensure work in each Regional area most years of the LMRP?	This will determine the target breakdown of Regional suburbs within theyearly LMRP volume.	LMRP Principle 2, 3 & 4	Work balance and allocated across all Regional areas
3	Identify any tactical meter exchanges within the early (Year 1 & 2) deployment?	May provide for early benefits (these will need to be prioritised and justified- shouldn't be included if they comprise overall efficiency).	LMRP Principle 2	No tactical items currently identified
4	Target complete Metering Reading routes within the agreed Metro/Regional breakdowns to identify and allocate at the NMI level?	This will promote an efficient meter rollout and aim to reduce inefficient manual meter reading processes.	LMRP Principle 2, 3 & 4	Meter Reading routes used
Application of Key Development Framework <ul style="list-style-type: none"> • Should be viewed from an overall state perspective and the best approach to develop an efficient LMRP • The criteria will be used to guide the development of the LMRP Schedule (some variation may occur to balance volumes and factin actual basic metering fleet location) • Retailer variation expected to ensure overall meter change efficiency for Metering Businesses (individual Retailer LMRP Schab not expected to fully line up to percentages listed- variations driven by customer base location) 				

SA Power Networks commenced engagement in March 2024 with key Retailers and Metering Businesses that will be responsible for the delivery of the majority share of the meter rollout (approx 94% of the remaining basic metering fleet) in South Australia. The engagement to date has included over 30 hours of dedicated meeting time (face to face and online), exploring stakeholder views to assist in developing the framework for SA Power Networks’ LMRP.

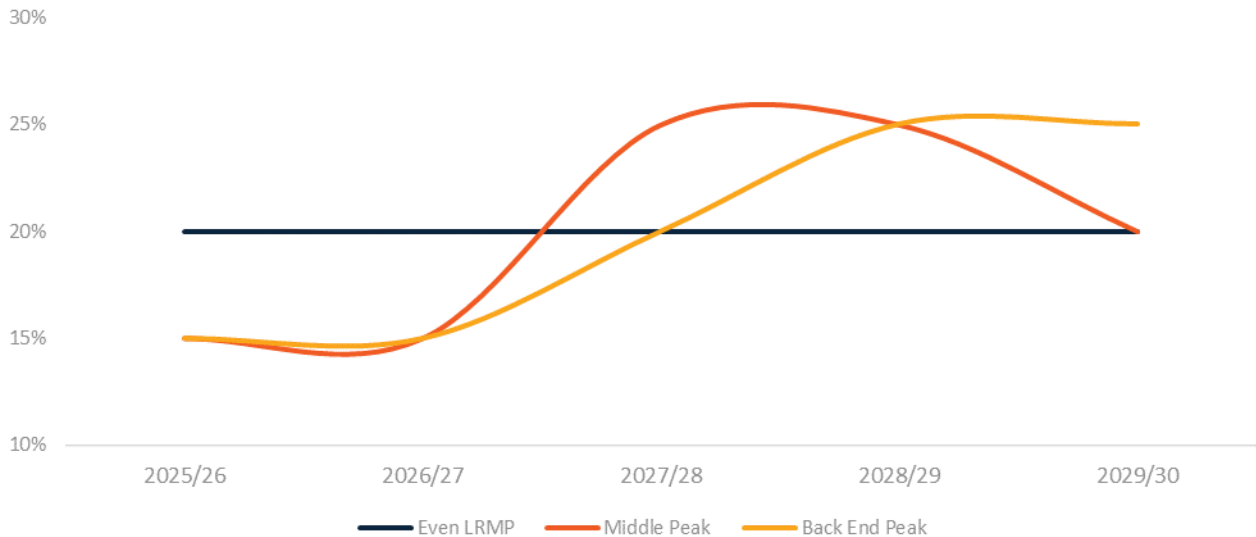
The AEMC’s final report detailed the principles to be considered by DNSPs in development of their LMRP, including the annual interim targets for each financial year (15-25% of the total number of meters to be replaced). We presented three different meter rollout profiles to key retailers for consultation:

- Even meter churn – where the legacy meters are scheduled to be replaced evenly over the accelerated rollout period;
- Middle Peak churn – where the retailers will ramp up replacement volumes, with maximum volumes replaced in the middle of the rollout period. Under this scenario we would expect lower volumes to be replaced at the end of the replacement period; and

- Back-end Peak churn – where retailers will progressively ramp up replacement volumes, with maximum replacement volumes completed at the end of the rollout period.

This is also depicted in Figure 4 below.

Figure 4: Meter rollout profile options



While retailers and meter providers were supportive of the middle peak, they proposed to alter the peak to be a year-2 / year-3 peak, with lower volumes planned in the last year of the rollout to provide catch up if required.

We have also consulted on the preferred metropolitan (metro) and regional allocations as well as how work is allocated within the metro and regional areas. Approximately 70% of the legacy meters to be replaced are within the metro area.

The following LMRP principles have been agreed through our initial engagement:

- Consistent application of the LMRP principles across all retailers. While retailer requirements will be incorporated into the LMRP where possible, specific retailer variations will not be applied.
- Meter Rollout Profile will represent a middle peak, with higher volumes forecast during the middle period of the rollout (for example Year 1 - 15%, Year 2 – 25%, Year 3 – 25%, Year 4 – 20% & Year 5 – 15%). This provides time for bedding in processes prior to undertaking large volumes of replacements.
- Proportionate geographical spread, made up of approximately 70% in metro and 30% Regional areas. Work will be allocated across the state each year and not focussed within a single geographic location.
- Meter Reading Routes will be used to identify the targeted meters within the geographical locations, providing for efficient replacement process given metering will be closely located.

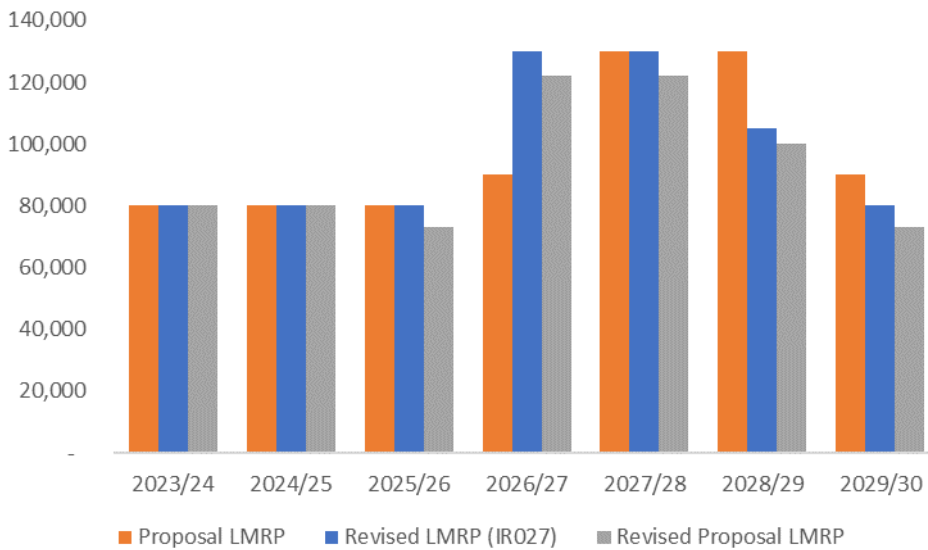
Our engagement with the extended Retailer group and various stakeholders is progressing smoothly, with broad support for our LMRP approach, and will be ongoing as we continue to refine the LMRP.

Engagement and development of the LMRP will continue until mid 2025, providing us with better clarity of stakeholder views prior to submission of the LMRP to the AER for approval (expected by 31 August 2025).

6.4 Rollout Strategy

SA Power Networks has commenced development of the LMRP using the above principles to guide which legacy meters will be targeted for replacement each year. Following initial LMRP consultation with stakeholders, we are now forecasting a middle peak meter rollout profile, with peak volumes in year 2 and 3 of the program. SA Power Networks had initially forecast a middle peak with maximum volumes in year 3 and 4. The updated forecast legacy meter replacement volume is provided in Figure 5 below, with greater volume of work expected in year 2 of the program. We have also updated this chart to now reflect the AEMC’s updated accelerated rollout timeframes.

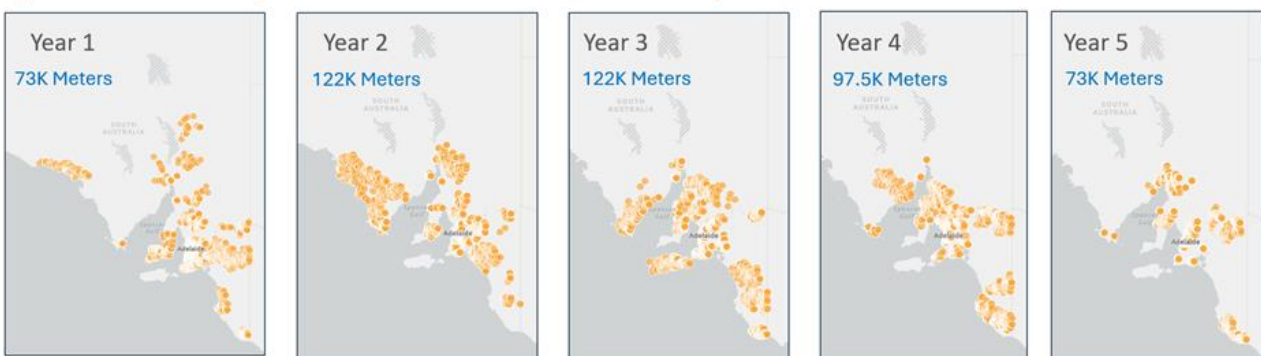
Figure 5: Forecast legacy meter replacement volumes



The following figure provides a visual representation of our current view of the draft LMRP schedule, demonstrating how we propose to schedule work across both metro and regional areas in all 5 years of the rollout consistent with stakeholder preferences.

Figure 6: Initial legacy meter retirement plan - meter locations¹¹

Approximate Meter Volumes per LMRP Year with forecasted meter fleet volumes @ 1 December 2025



To forecast metering volumes up to 2030, the following assumptions have been applied to the current volume of meters in service as of 30 June 2024, and they have been integrated into our planning processes:

¹¹ Figure 6 provides the expected LMRP meter distribution based on LMRP geographic allocations as at 1 December 2025.

1. We've used a meter churn rate of 80,000 per year to predict the number of meters at the start of the LMRP (1 December 2025). This figure is backed by the actual meter churn of 160,288 meters from 1 July 2022 to 30 June 2024.
2. This churn rate leads to an estimated 490,000 meters in service at the start of the rollout.
3. We've then used the Middle Peak Yearly Rollout Profile (15%, 25%, 25%, 20%, 15%) which based on current stakeholder engagement has full support, to determine and allocate the high-level meter replacement volumes for each year.

Allowing for ongoing meter churn ahead of the commencement of the LMRP, we are anticipating an initial meter volume of approximately 490,000 legacy meters at the start of the rollout (1 December 2025) and a residual 20% of legacy meters at 30 November 2030 of 100,000 meters (due to access challenges, customer refusals, etc.), the following table summarises the meter churn volumes for each year of the program based on the respective rollout strategy. While we assume 20% of legacy meters may remain in service at the end of the rollout period, all 490,000 legacy meters will be included within our LMRP and would be visited by the meter provider to attempt a legacy meter replacement.

Table 4 - Rollout Strategy Middle Peak Scenario

	<i>% of Meters</i>	<i>Volume</i>
2025/26	15%	73,000
2026/27	25%	122,000
2027/28	25%	122,000
2028/29	20%	100,000
2029/30	15%	73,000

The LMRP schedule is a key input in SA Power Networks' legacy metering proposal, determining the volume of meter exchanges forecast to be completed each year and the forecast volume of legacy meters remaining in service. The forecast average meter numbers remaining in service each year has been used to trend legacy metering costs over the 2025-30 period, with expenditure expected to decline as legacy meter volumes decline over the period. We note the decline in expenditure is not expected to be in line with the meter volumes, with increased unit costs expected as the volume and density of meters declines.

7 Legacy metering transition costs

The accelerated rollout of smart meters will occur between 1 December 2025 and 30 November 2030. While retailer nominated meter providers will complete the physical meter replacements required for this accelerated rollout, DNSPs will experience increased costs associated with the accelerated replacement of legacy meters. An increase in volumes of legacy meter exchanges will require a short-term increase in SA Power Networks' capability to support the accelerated rollout. SA Power Networks' methodologies for estimating the incremental costs¹² required over the 2025-30 period to support the accelerated rollout of smart meters are described below.

7.1 Functional Area Analysis

Table 5 - Functional area and expected impact

Functional area	Expected impact
Billing / Credit	It is expected that SA Power Networks will experience an increase in meter profile misalignment, coupled with an increase in Tariff changes. We expect some customers will explore a move to 'demand tariffs' or other allowable tariffs in their customer class. We anticipate there will be an element of this that will be transitional in nature due to the increased meter churns which will trigger changes in the market which will drive up our data and billing related exceptions that our team need to resolve during the transition. We will also be required to monitor and ensure customers move to time of use tariffs, and action any other tariff change requests particularly as retailers will look to take advantage of our prosumer and/or demand tariff options in the small business and residential spaces. We have been able to reduce our expenditure in this by focusing only on the increasing activities in which the exceptions or manual work will be transitional in nature (as per the tasks mentioned above). Any ongoing tasks, such as exceptions related to high volumes of interval data will be absorbed in our existing operating expenditure via continuous improvement activities.
NEM Operations	Whilst the meter exchange process is largely automated, it still requires staff to manage and deal with the exceptions that fall out of the automated exchange process. SA Power Networks is expecting an increase in exceptions and the consequent follow up and co-ordination with MCs. We have been able to reduce our required FTE in this space due to a more detailed review of the impact of change on our expected exception volume, and determining resource levels for tasks that are transitional only (i.e. the meter exchanges triggered by the LMRP).
Customer Escalations & Management	Whilst SA Power Networks is hopeful that appropriate broader communication will assist in preparing customers for this program of meter replacement, we are expecting an increase in customer enquiries and complaints as a result of the accelerated smart meter rollout. We also expect to see an increase in Retailer Temporary Isolations (RTIs) and Multi occupancy or shared fuse site co-ordination.
LMRP development and Management	The success of achieving a LMRP by 2030 depends largely on the development and implementation of a quality plan, that considers the attributes of various stakeholders and exploits efficiencies of a coordinated approach. Dedicated resources will be assigned to develop and manage this plan.
Communication	Investing in a targeted Communication Campaign is vital for a smooth smart meter rollout. This involves tailored content, community events, and strategic channel use. The expected impact is an informed and supportive public, minimising resistance. SA Power Networks considers that proactive communication is crucial for building trust and has been strongly encouraged by stakeholder to ensure we are communicating broadly through our ongoing customer engagement. This investment will support a seamless transition to smart meter adoption.
Efficient Meter Disposal and Storage Logistics	Crucial to the accelerated changeover is the adoption of larger salvage bins. Labour costs for handling and transport of metering some of which will contain asbestos components. This strategic approach in logistics covers handling, unloading, and storage at the Angle Park

¹² These incremental costs are over and above the costs already included within SA Power Networks' SCS opex proposal or base legacy metering opex.

Functional area	Expected impact
Technology Enhancement for Data Management	Warehouse, coupled with expected equipment maintenance costs. Ensuring a cost-effective process for meter disposal and storage aligns seamlessly with the demands of the accelerated program. In response to rising data volumes, the technology team plans essential ICT system upgrades in ERP, SAP, and CIH tools. This aims to streamline notification management and proactively address property data discrepancies. The impact is a more efficient process for handling daily exceptions and ensuring accurate linking of Life Support Customers to the LV Network during meter exchanges. These upgrades play a vital role in maintaining data integrity within Customer Information Systems and LV Network mapping.

7.2 Legacy metering transitional cost assessment

We have undertaken our assessment of the transitional costs required to support and manage the program to accelerate the smart meter rollout in South Australia. We have developed this assessment based on information available at the time.

The forecast costs rely on historical data and anticipated future growth based on the middle peak rollout scenarios. The data provided within this document reflects the prudent expenditure required over the rollout period.

Crucially, the resourcing aspect constitutes a significant portion of the costings. A number of workshops were held with various internal stakeholders at SA Power Networks to gain insights into the expected resource requirements to support the accelerated rollout. We also provided these stakeholders with an impact assessment of work volumes forecasted based on the middle peak rollout plan, and their resource requirements are based on this. The results of these assessments are provided below, outlining the expected resourcing requirement and incremental costs for each functional area set out in Table 5 above.

7.3 Smart Meter Implementation Management

SA Power Networks has appointed a dedicated manager to ensure the success of the accelerated rollout program. This is a newly formed function and has been designed to manage the LMRP, is responsible for leading a cross-functional, multi-disciplinary team to coordinate the planning and implementation of the plan on behalf of the distribution business.

This will involve working closely with key leaders and teams from across the business, as well as leading engagement with external stakeholders such as retailers, MCs and regulators, to develop delivery plans and effectively manage the impacts of the smart meter rollout on our customers and our business.

The appointment of this role was made in late 2023 recognising the resourcing required now, and into the next regulatory period¹³. It is expected that additional resources will be required from 2025 when coordination with external stakeholders becomes more intensive. We expect the resource requirement will ramp up from December 2025 aligned with the updated rollout timeline.

The introduction of this function is crucial to efficiently execute the smart meter rollout. The allocation of resources, particularly for travel and engagement with stakeholders, is a strategic necessity to ensure the successful implementation of this significant project.

As mentioned above, communication is a key element to ensuring the success of the smart meter deployment. We expect customers will reach out to advocacy and support service agencies regarding the smart meter rollout.

¹³ This position was filled by an internal secondment. While we acknowledge these costs of this resource would be in our opex base year, we are seeking to backfill this substantive position therefore these costs are not duplicated with SCS opex.

We are proposing a communication plan that will involve broad communications when metering exchanges are taking place in a concentrated area, to alert consumers to the program and provide a level of surety about the upcoming exchange. The plan also needs to include several agencies to support the program of work, provide visibility of activities and build general awareness. The plan is likely to involve the following agencies detailed in section 6.1 above. The funding for this communication plan has been included in Table 6 below.

The costs expected in the forecast period include:

Table 6 -Smart Meter Implementation Management resourcing and forecast costs (\$ June 2022)

Year ended June 30:	2026	2027	2028	2029	2030
Staff increases (Transition Manager)	1.0	1.0	1.0	1.0	1.0
Staff increases (Analyst / Coordinator)	1.5	2.0	2.0	1.0	1.0
Forecast FTE Increase	2.5	3.0	3.0	2.0	2.0
Staff increases	388	555	555	388	388
External Communications	200	200	200	200	200
Other – Total	20	20	20	20	20
Total costs (\$'000)	691	774	774	608	608

7.4 Customer Management and Contact Resolutions

The Customer Management and Contact Resolutions team plays a pivotal role in SA Power Networks. It encompasses various functions, such as the Call Centre, handling customer complaints, addressing Ombudsman and MP inquiries, and scheduling for RTIs, Multi Occupancy, and shared fuse sites.

The accelerated replacement of meters has led to a significant change in the current cost structure of this functional area. Notably, meter changes have increased from 50,000 units in the financial years ending 2020 and 2021 to 80,000 units per annum in 2022 and 2023, based on Regulatory Information Notice reports.

Over the past two years, the team has actively responded to this change in activity. Monthly average meter-related calls have increased from 286 in 2021 to 442 in 2023. Additionally, monthly average meter-related complaints have increased from 28 in 2021 to 81 in 2023. These trends indicate a steady increase in workload.

Looking ahead to 2025/26 through to 2029/30, we anticipate a more complex landscape, with an expected increase in telephony traffic and customer complaints and queries associated with the rollout. Many customers will seek clarity from SA Power Networks, leading to an increase in telephony traffic, complaints, and overall complexity in the customer management landscape. It is expected that customer enquiries will increase in response to increased general community awareness and communication and directly related to individual notifications for meter exchange. Once the LMRP concludes, we expect the volume will decrease back to pre-LMRP volumes and FTE has been phased accordingly.

These insights underscore the team's adaptability and readiness to handle changing dynamics and increased workload. It highlights the strategic allocation of resources and the team's proactive approach to anticipate customer needs and challenges, while effectively managing costs and maintaining operational excellence.

The forecast resourcing and costs expected are summarised below.

Table 7 - Customer Management and Contact Resolutions resourcing and forecast costs (\$ June 2022)

Year ended June 30:	2026	2027	2028	2029	2030
Staff increases (Contact Resolution Staff)	2.0	2.0	2.0	2.0	1.0
Staff increases (Investigations Officer)	1.0	1.0	1.0	1.0	1.0
Forecast FTE Increase	3.0	3.0	3.0	3.0	2.0
Total costs (\$'000)	499	499	499	499	333

7.5 Billing and Credit

The accelerated rollout program will increase the rate of data exceptions and tariff changes or tariff enquiries that our billing team needs to manage. We anticipate there will be an element of this that will be transitional in nature due to the increased meter churns triggering changes in the market which will drive up our data and billing related exceptions during the transition. We will also be required to monitor and ensure customers move to time of use tariffs, and action any other tariff change requests particularly as retailers will look to take advantage of our prosumer and/or demand tariff options in the small business and residential spaces.

It is expected that volumes will increase over the LMRP period as exceptions are related to churn activity, once LMRP concludes it is expected that volume will decrease back to pre-LMRP volumes and FTE has been phased accordingly.

The costs expected in the forecast period include:

Table 8 –Billing and Credit resourcing and forecast costs (\$ June 2022)

Year ended June 30:	2026	2027	2028	2029	2030
Staff increases (B&C Officers)	-	2.2	2.4	0.8	-
Staff increases (B&C Sr. Analyst)	-	1.0	1.0	1.0	-
Forecast FTE Increase	-	3.2	3.4	1.8	-
Total Costs (\$'000)	-	532	566	299	-

7.6 NEM Operations

The NEM Operations team at SA Power Networks has a crucial role in overseeing meter churn transactions. This includes managing all inbound Notice of Metering Works (**NOMW**) and Change Requests (**CR**), as well as dealing with exceptions related to these transactions. For the past two years, the volume of these transactions has been consistent, ensuring efficient network operations. In addition, when we implemented our new Billing and Market Systems in 2021, we placed a focus on ensuring the meter churn process and related market transactions were as automated as possible which has allowed us to manage increased churn rates since the implementation of metering contestability in 2017.

However, estimates indicate that to now manage the increased churn rate due to the acceleration of the smart meter roll-out, the NEM Operations team will need to increase their headcount by 1 operator during the transition period.

The costs expected in the forecast period include:

Table 9 - NEM Operations resourcing and cost forecast (\$ June 2022)

Year ended June 30:	2026	2027	2028	2029	2030
Staff increases (NEM Operations)	-	1.1	1.1	-	-
Forecast FTE Increase	-	1.1	1.1	-	-
Total costs (\$'000)	-	183	183	-	-

7.7 Meter disposal and storage

The Logistics Operations team is responsible for handling, transport and storage of materials and salvage/recycling. In regard to salvage meters this would involve prepping of salvage bins at metropolitan and regional locations for transport to our Angle Park Warehouse, transport to Angle Park and then handling at Angle Park.

An accelerated changeover program would mean that we would need to do this more often. In addition to this acceleration we anticipate an impact on labour costs are likely due to handling and managing asbestos that is prevalent in some older metering components.

There may be small increases in transport costs that are hard to quantify. Where SA Power Networks has an hourly rate for transport there will be a small increase in time to load a salvage bin a little more often and then secure it. The kilometre transport rates will not be affected, but some third-party transport contractors charge by pallet space so there will also be a small increase in pallet space charges if we are transporting salvage bins more frequently.

To cater for additional volumes, we would also purchase larger salvage bins. This will partially offset the additional handling and transport charges. It is estimated that we would require approximately 20 bins at \$1k each to be placed in our larger depots.

The costs expected in the forecast period include:

Table 10 - Meter Disposal and Storage resourcing and cost forecast (\$ June 2022)

Year ended June 30:	2026	2027	2028	2029	2030
Staff increases	-	-	-	-	-
Forecast FTE increase	-	-	-	-	-
Salvage Bins & Asbestos handling (\$'000)	289	289	289	289	289
Forecast total costs (\$'000)	289	289	289	289	289

7.8 Total legacy metering transition costs

As discussed above, an increase in the volume of smart meter exchanges will require a short-term increase in resourcing to support the smart metering accelerated rollout during the 2025-30 RCP.

The table below outlines the estimates of incremental FTE required to support the accelerated rollout, ranging from 5 FTE in Year 1 to 10 FTE in Year 2 and down to 4 FTE in Year 5.

Table 11 – Forecast total FTE increase

Total FTE Deployed	2026	2027	2028	2029	2030
Smart Meter Implementation Management	2.5	3.0	3.0	2.0	2.0
Customer Management Contact Resolution	3.0	3.0	3.0	3.0	2.0
Billing and Credit	-	3.2	3.4	1.8	-
NEM Operations	-	1.1	1.1	-	-
Meter Disposal & Storage	-	-	-	-	-
Forecast Total FTE Increase	5.5	10.3	10.5	6.8	4.0

The table below outlines the indicative total costs anticipated for the period, ranging from \$1.4 million in Year 1 to \$2.3 million in Year 2 and 3, cumulating in a total indicative cost of \$9 million.

Table 12 - Total legacy metering transition costs (\$ June 2022)

Legacy Metering Transition Costs	2026 (\$'000)	2027 (\$'000)	2028 (\$'000)	2029 (\$'000)	2030 (\$'000)	Total (\$'000)
SM Implementation Management	691	774	774	608	608	3,455
Customer Management Contact Resolution	499	499	499	499	333	2,329
Billing and Credit	-	532	566	299	-	1,397
NEM Operations	-	183	183	-	-	366
Meter Disposal & Storage	289	289	289	289	289	1,455
Total Legacy Metering Transition Costs	1,479	2,277	2,311	1,695	1,230	8,992

Additional detail is provided in supporting document SAPN - 19.5 - Legacy Metering Step Change Model - December 2024 – Public.

8 Information Technology

In the Draft High Level Implementation Assessment for the Metering Services Review, AEMO recognised

*“the significant system and process changes needed by participants to meet the obligations of the rule”.*¹⁴

As a DNSP we need to:

1. Meet the new compliance obligations to deliver the LMRP as a program of works; and
2. Ensure we continue to meet our existing market compliance obligations as the volumes of data increase significantly.

For SA Power Networks this includes three types of changes and associated costs:

1. The systems and process changes to enable the LMRP program itself, including managing site defects, shared fuse arrangements etc.
2. Remediating our market and billing systems to maintain system stability and continue to achieve our existing service obligations and enable the increased volumes of data.
3. The incremental increase in costs to store, manage, backup and consume the increased volumes of data on an ongoing basis.

SA Power Networks receives the smart meter interval data via the AEMO national market systems on a daily basis. This data is used for network billing and for analytics to assist customer and network decision making. The smart meter data is in 5-minute intervals, and consequently in much higher volumes than the older accumulation meters that are being replaced.

To forecast smart metering volumes up to 2030, key assumptions have been applied to the current volume of smart meters in service as of 30 June 2024:

1. The baseline volume of the Smart Metering fleet in service as of 30 June 2024 is approximately 455,000.
2. We've used the historical and Middle Peak Yearly Rollout Profile to determine the meter churn profile for each year.
3. We've estimated the growth in smart meter volume using a consolidation factor applied to basic meter removal volumes. This factor accounts for the consolidation and abolishment of basic metering, with one smart meter installed for every 1.25 basic meters removed.
4. Lastly, we've factored in an additional increase in smart metering following a New Connection, with an average of 13,000 new connections per year.

Table 13 below shows the dramatic increase in data volumes such that by June 2030 (with the LMRP) we expect data from 370.9 million meter reads per day to be flowing through our systems, almost double the amount (199.7 million reads) compared to June 2025.

¹⁴ [AEMO May 2024 Metering Services Review - Draft High Level Implementation Assessment](#), p. 29.

Table 13 – Growth in the total number of data reads per day (millions) that need to be processed through the SA Power Networks systems, based on the number of smart meters¹⁵

Scenario	Item	June 2021	June 2025	June 2030
LMRP Fully Successful	No. of smart meters	209308	533448	990674
	Total no. of data reads per day (millions)	72.3	199.7	370.9
BAU (2024) rollout rates	No. of smart meters	209308	533448	853448
	Total no. of data reads per day (millions)	72.3	199.7	319.5

The costs associated with these IT changes are summarised in Table 14. While the total costs for the changes are \$7.6 million, we are only seeking \$7.3 million within the 2025-30 RCP, reflecting that some of this activity will be undertaken in 2020-25. The 2025-30 funding request consists of \$6.2 million in non-recurrent capex and \$1.1 million of recurrent opex.

Table 14 – IT Non-Recurrent and Recurrent Costs by Project/Driver (\$June 2022)

Expenditure Type	Project/ Driver	2025 (\$'000)	2026 (\$'000)	2027 (\$'000)	2028 (\$'000)	2029 (\$'000)	2030 (\$'000)	Total Cost	2025-30 Request
Non-Recurrent (capex)	AEMO LMRP System Compliance	224	2,128					2,353	2,128
	Market & Billing Systems Stabilisation & Remediation				1,836	2,240		4,076	4,076
	Subtotal	224	2,128	0	1,836	2,240	0	6,429	6,204
Recurrent (opex) (Storage & compute)	Billing		20	21	21	163	305	530	530
	Analytics			52	131	195	234	612	612
	Subtotal	0	20	73	152	358	539	1,142	1,142
Total		224	2,148	73	1,988	2,598	539	7,571	7,346

8.1 Non-Recurrent Compliance and Remediation

The non-recurrent capex costs fall into two categories.

1. Systems changes to enable the LMRP project and achieve compliance with new AEMO and market obligations; and
2. System changes to remediate our systems in order to continue maintain to our system stability and to continue to meet our existing market service and compliance obligations.

Detailed costs are in the spreadsheet '19.4 - Legacy Metering Transition - IT Non-Recurrent Capex – Dec 2024'. These costs are detailed bottom-up estimates based on the standard IT costing methodology and based on past experience of similar changes.

8.1.1 AEMO LMRP System Compliance

In the draft implementation assessment AEMO has identified market process changes and system impacts that DNSPs will need to undertake as result of the implementation phase for the LMRP, including¹⁶:

- Change request processes;

¹⁵ The total number of reads per day is calculated by: One read every 5 minutes (288 per day) x no. of smart meters x 1.3 – to reflect that about 30% of the smart meters have multiple registers as people seek to consolidate meters during the replacement process. Each of these registers is a data point that needs to be read and stored.

¹⁶ [AEMO May 2024 Metering Services Review - Draft High Level Implementation Assessment](#), pp. 12 -13

- NMI standing data;
- Retail B2B processes;
- Blind update tool;
- Data exchange;
- B2B schema changes;
- B2M schema changes;
- Consumer Administration and Transfer Solution (**CATS**) Reports; and
- Retail Market (RM) Reports and Standing Data Quality Report (**SDQ**) Reports;

In addition, SA Power Networks has identified changes required in our billing and marketing systems, including Participant Batchter (AEMO supplied communications tool) and other downstream systems such as Click (used by Field Services) and REX (Registered Electrician’s Portal), to name a few.

We expect this activity will be undertaken during 2025. The total estimated cost for this is \$2.4 million in non-recurrent capex, of which \$2.1 million is in the 2025-30 RCP.

8.1.2 Market & Billing System Stabilisation and Remediation

The last major system change to our billing and market systems was in 2021. We assumed a steady BAU growth of smart meters and smart meter data as at that time, and we expected that the performance of the system would be sufficient to process the gradual increase in the number of smart meters and associated data. Clearly though the accelerated LMRP will result in data volumes significantly above this (refer Table 13). Retailers have already uplifted their rollout rates in expectation of the LMRP and we have noticed a reduction in processing capability and slower processing times as the volumes have increased. We expect that this will reach a critical point in the next RCP such that we will be unable to process all of the required data within the required timeframes. Three out of four of the largest retailers have already raised concerns with us in relation to our processing capabilities. Specifically, slowing of our own data processing has a related flow-on effect to how we process and validate customer data between ourselves and retailers, resulting in more transaction errors and exceptions – for both billing and non-billing related transactions. These errors need to be manually rectified by both the retailer and SA Power Networks. These errors will increase as the data volume increases. Clearly a significant uplift in meter numbers and associated data will impact on our ability to maintain our existing service obligations. This will have serious compliance and business ramifications to customers, our retailer partners and ourselves, as the sole distributor in South Australia.

Not remediating and stabilising our market systems will result in:

- Not being able to handle core market transactions through our systems;
- Not being able to process network billing; and
- Not being able to provide interval data for Network Operational decision making.

Based on current estimated data loads we expect that by 2029 we will be encountering significant issues with our market data processing times. Hence, we plan to perform the remediation and stabilisation activity in 2028 for a total cost of \$4.1 million in non-recurrent capital.

8.2 Recurrent Data Storage and Compute

In addition to the non-recurrent change costs there is an increase in the ongoing costs to store and consume the larger volumes of additional data. The cost impact is cumulative as more meters are changed but will reach an asymptote after the last meter is changed. The change effectively brings forward costs from future RCPs (ie. increases the opex costs earlier) that would otherwise have been incurred under a slower rollout.

The IT systems involved are all cloud based and hence the costs are all opex. These costs represent the additional costs associated with the acceleration (i.e the delta) compared to the BAU rollout scenario.

The estimates are further explained below.

The detailed cost models are provided in the attachment “19.4 - Legacy Metering Transition - ICT Cloud Growth Costs – CONFIDENTIAL-Dec 2024”.

8.2.1 Billing

SA Power Networks produces the monthly network bill based on customer consumption information. The information is then sent to the retailers. More data means more storage and computational capacity is required and hence a greater cost. Using existing costs from our billing systems (SAP HANA database and application servers), we calculate the expected costs based on the growth of smart meter data volumes within the key tables of the billing system. The pricing is based on purchasing additional blocks of database space as the data volume increases and capacity thresholds are reached - and hence is a stepped rather than linear cost. The estimates remove any non-smart meter data that is in the tables. We also assume that detailed smart meter data will be archived after 2 years to keep costs down. The additional cost over the 2025-30 RCP is \$0.5 million opex.

8.2.2 Analytics

Using existing costs for our analytics systems (Snowflake, Azure Data Bricks) we calculate a per kilobyte cost for storage and compute and then use that to derive the cost for each additional NMI worth of smart meter data per annum. For modelling purposes, we have assumed a level of price reduction over time and used that reduced cost as the estimate for the whole of the RCP. Archiving of the detailed data that is more than 2 years old is assumed to take place to keep the costs down and ensure growth reaches an asymptote. The additional cost over the 2025-30 RCP is \$0.6 million opex.

9 Comparison of options

The proposed step changes for ‘legacy metering transition costs’ and ‘smart meter rollout IT upgrades’ are in response to the AEMC’s accelerated smart meter rollout rule change.

The AEMC engaged an independent consultant to undertake an economic cost–benefit assessment of accelerating the deployment of smart meters across the NEM, finding that there are significant net benefits from the accelerated deployment of smart meters. These benefits will be realised across all NEM participants and their customers. The split-benefits were a key driver for the AEMC’s competition in metering rules which started in December 2017, with individual participants unable to justify the rollout of smart meters on their own.

In developing our proposed step changes for the 2025-30 proposal, we considered alternative options as set out below. Noting the short duration of the transitional period and nature of the requirements, limited viable options are available.

9.1 The options considered

SA Power Networks considered delivery of the increased capability through the following options:

1. Do nothing;
2. A resource uplift – a short term increase in resources to support the increased workload during the rollout period; and/or
3. The development of systems (ICT) solutions – where our IT systems would be updated to process transactions during the transitional period and manage additional data volumes on an ongoing basis.

9.2 Options investigated but deemed non-credible

9.2.1 Do nothing

The proposed uplift in capability is directly driven by the AEMC’s accelerated smart meter rollout rule change. The mandated acceleration of the smart meter rollout over a 5-year period will result in an increase in meter exchange transactions and an increase in associated interval metering data as smart meters are installed.

As detailed in section 7, we expect the accelerated rollout will generate greater work for SA Power Networks to ensure we remain able to meet our compliance obligations. This increase in workload is forecast to support the accelerated rollout to manage customer enquiries associated with the rollout and to process meter exchange and billing exceptions. For example, while meter exchange transactions are automated within our systems, exceptions will still occur which require manual intervention. We expect the volume of exceptions will increase proportionally to the volume of legacy meter exchanges completed, resulting in an increase in exceptions during the accelerated rollout period.

As detailed in section 8, systems changes are required to enable the LMRP project and achieve compliance with new AEMO and market obligations; and to remediate our systems in order to continue to maintain our system stability and to continue to meet our existing market service and compliance obligations.

Therefore, a ‘Do Nothing’ option is not considered viable as we would not be able to continue to meet our compliance obligations.

9.2.2 Resource uplift – for recurrent activities

While we note there are transitional activities related to the acceleration of the smart meter rollout, there will also be ongoing activities required to support changes to market systems and increased volume of interval meter data received from smart meters into the future. These requirements will exist beyond the completion of the accelerated rollout program.

Due to the nature of these changes, they are unable to be effectively delivered through a resource uplift solution. While resources can process market transactions (B2B transactions) through the market system browser, this is a resource intensive process. It is also not consistent with the existing methodology for receiving, acknowledging, and responding to B2B requests creating additional complexity for staff involved. We would also be unable to consistently achieve our compliance driven market response times.

Therefore, a systems solution is considered the only viable solution for this capability uplift.

9.2.3 Systems (ICT) solutions – for transitional (non-recurrent) activities

SA Power Networks is forecasting an increase in capacity is required to support the accelerated rollout to coordinate the LMRP, manage an increase in customer enquiries and to process meter exchange and billing exceptions. This uplift in capability is only required for the period of the rollout, currently scheduled to occur over the 5-year period between 1 July 2025 and 30 June 2030.

Noting the nature of the workload, predominantly coordination, contact management and exceptions processing, a systems solution was not considered viable. These tasks are generally at a higher level of complexity, meaning automation is generally not possible or very expensive. Given the short-term nature of this work (5-year period) a resource uplift is considered the most viable option.

9.3 Analysis summary and recommended option

The proposed legacy metering step changes reflect the uplift in capability required to support the accelerated rollout of smart meters over the 2025-30 period.

We are proposing a resource uplift to manage the transitional (non-recurrent) tasks associated with the rollout systems (ICT) solutions to process updates required to support the AEMO market changes and increased data management.

Our expenditure has been forecast on the basis of proposing expenditure that:

- meets the opex objectives in the NER ((6.5.6)(a))
- is prudent and efficient and reflects a reasonable expectation of our costs over the RCP, consistent with the opex criteria in the NER (6.5.6)(c); and
- which provides us with an opportunity to recover at least our efficient costs of providing services over the RCP consistent with the Revenue and pricing principles in the NEL”.

Refer to section 7 and 8 for detailed analysis.

Appendix A: Attachments (available on request)

19.4.1 – Legacy Metering Step Change Model

19.4.2 - Legacy Metering Transition - IT Non-Recurrent Capex

19.4.3 - Legacy Metering Transition - ICT Cloud Growth Costs – CONFIDENTIAL