Legacy Metering Transition – Towards 2030

2025-30 Regulatory Proposal

Supporting document 19.4

January 2024

SA
Power
Networks

Empowering South Australia

Contents

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
DNSP	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 preliminary assessment of the transitional costs required to support the acceleration of the deployment of smart meters by 2030 in South Australia.

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

1.2 Expenditure category

- Legacy metering services (**SCS**): Metering Transition – Step Change – 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.

Table 1: 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 metering services to the legacy metering, including manual reading, testing and maintenance of those 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 recommends accelerating the rollout of smart meters to all customers by 2030, with distribution network service providers (**DNSP**s) 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. We note a formal rule change has not yet been finalised and industry consultation on expected changes is still in its infancy. 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 AEMO and market participants on 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 MSR-WG will also consider and share knowledge to support the AEMC's Rule Change process.

This document sets out our **preliminary 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 preliminary assessment based on information available at the time. We will continue to work through the implications of the accelerated rollout program and development of our LMRP in consultation with retailers over the 2024 calendar year.

Our total operating expenditure (**opex**) forecast to support the accelerated rollout of smart meters over the 2025-30 RCP is **$35** million ($ June 2022). This includes $30 million in metering transition costs included as a step change within the metering component of Standard Control Services (**SCS**) and $4 million in information technology (**IT**) upgrade costs included as a step change in Main SCS. We expect this to reflect the upper bound of expenditure required over the 2025-30 RCP and will revise these estimates as better information becomes available.

Table 2 - 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	596	619	642	666	691	**3,214**
Customer Management Contact Resolution	802	834	866	900	935	**4,337**
Billing and Credit	481	801	1,144	1,691	2,093	**6,210**
NEM Operations	866	901	936	972	1,009	**4,684**
Revenue Protection (Larceny)	831	863	896	930	965	**4,485**
Defect Management and Investigations	807	838	870	903	937	**4,355**
Meter Disposal and Storage	289	300	312	324	336	**1,561**
Data Quality and Compliance	303	315	327	339	352	**1,636**
Total Legacy Metering Services (SCS) – Transition Costs	**4,975**	**5,471**	**5,993**	**6,725**	**7,318**	**30,482**
Main SCS – smart meter rollout IT upgrades	**318**	**531**	**743**	**1,061**	**1,592**	**4,245**
Total forecast expenditure	**5,293**	**6,002**	**6,736**	**7,786**	**8,910**	**34,727**

2.2 AEMC metering review

In 2015, the AEMC made a rule introducing metering contestability, as part of its broader Power of Choice reform package.[1] 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 report[2] 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.

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[1] *National Electricity Amendment (Expanding competition in metering and related services) Rule 2015 No. 12*.
[2] AEMC Final Report Review of the Regulatory Framework for Metering Services, 30 August 2023.

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 2030[3].

- 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.

This rule change is expected to be finalised in 2024 to enable the accelerated rollout to commence from 1 July 2025.

2.3   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 point[4]. 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 5.

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' preliminary 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;

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[3] 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.

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

- Defect management and investigations, this often requires sending a field employee to site to investigate the installation or remediate SA Power Networks' equipment on site; and
- 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 6 of this document.

3 The scope of this document

The scope of this document is to set out our initial thinking in development of the LRMP, to establish an initial response by SA Power Networks to the AEMC's requirements, and to assess a first round of forecast costs that may be required to implement the plan.

Some initial meetings have been held with one retailer to assist SA Power Networks make an informed view of the current plan. This plan will develop further over the 2024 calendar year, informed by more detailed consultation with stakeholders particularly retailers and MCs who will be responsible for installing the new meters.

This document will be updated as we continue to work through the implications of the accelerated rollout program and development of our LMRP in consultation with retailers over the 2024 calendar year.

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

- Legacy Metering Services (SCS) – Metering transition costs (refer to section 6); and
- Main SCS – smart meter rollout IT upgrades (refer to section 7).

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 - Explanation. This business case details the strategic replacement of customer service technologies to deliver improved capabilities related to a broad range of customer services including "Customer Management and Contact Resolution" in the context of the accelerated smart meter rollout program. 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.

3.1 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 rule change lodged on 29 September 2023 seeks to facilitate the replacement of all basic metering with smart metering in the 2025 to 2030 period. 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.
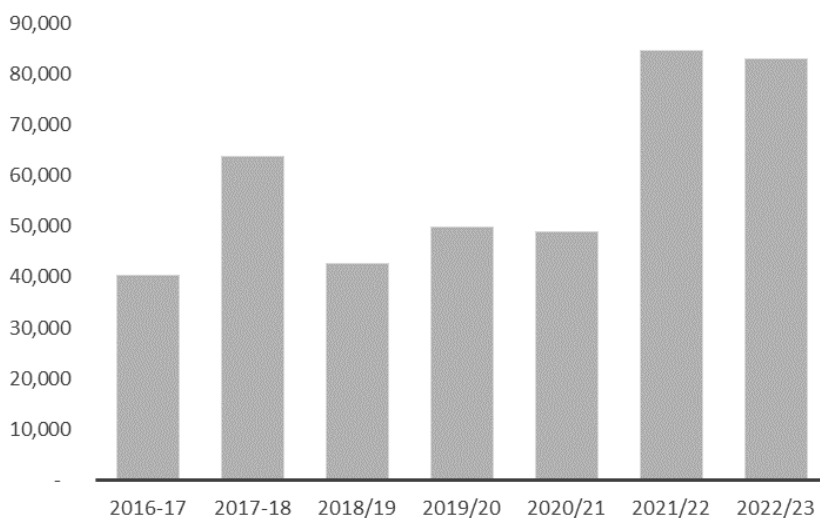
4 Legacy meter replacements

Since the introduction of metering contestability in 2017, SA Power Networks' legacy metering fleet has reduced from around 1 million meters to approximately 680,000 (on 30 June 2023).

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 over the last two years of 2021/22 and 2022/23, as show in Figure 1[5] 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 (**NMIs**)[6]. We note, one premises may have more than one meter, with an average of 1.25 meters per NMI.

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[5] This data is derived from the Category Analysis Regulatory Information Notice – table 4.2.1 Metering Descriptor Metrics
[6] One NMI 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 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 680,000 legacy meters (on 30 June 2023), 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 (680,000 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 encompasses complexity 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.

4.1 Residual meters into the future

SA Power Networks has limited data on customer installations and estimates approximately 15% of legacy meters will remain in service on 1 July 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.

5 The plan

SA Power Networks has identified that a successful implementation of the LRMP 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.

5.1 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
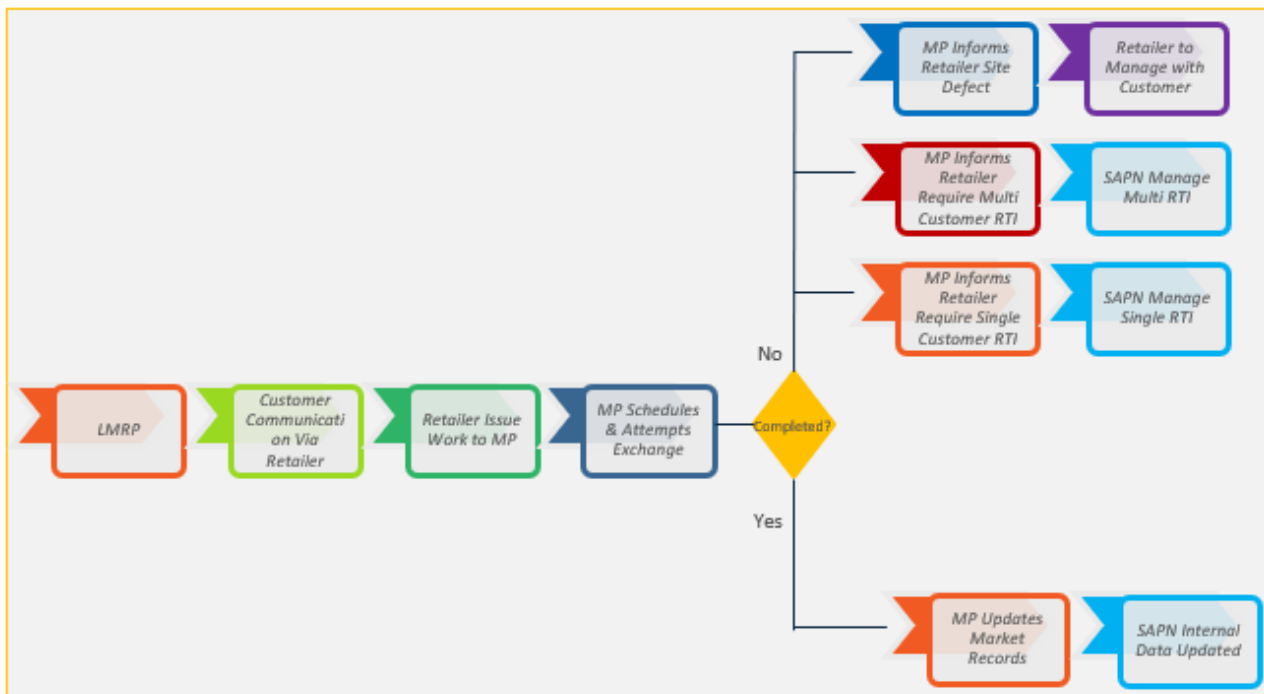
Communication is a key element to ensuring the success of the smart meter deployment and whilst the onus for communicating directly with customers will rest with Retailers, we see the requirement for a broader communication strategy with key stakeholders to assist in the success of the LMRP. Some stakeholders 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**).

5.2 Costs of the meter exchange process

Noting the timing of release of the AEMC's final decision, SA Power Networks has had limited opportunity to consult with the retailers and the MCs regarding the accelerated rollout of smart meters in South Australia. Extensive consultation is scheduled for early 2024 as we commence development of our LMRP in conjunction with retailers and MCs.

The experience to date indicates that the installation of new smart meters has generally been driven by customer-led changes such as requests for new supply connections or upgrades, installing solar and batteries, or retailers offering smart meter solutions for customers. It is assumed that these installations have generally not been at multi-meter sites, or involving customers' meter boards that have complexities associated with substandard wiring, asbestos, and other issues. We expect the process of installation of smart meters going forward will reveal more sites with instances of faults, theft, meter enclosure issues and more shared fuse installations with consequent complexities of coordinating multiple retailers.

SA Power Networks has considered these matters in our preliminary assessment of the costs expected to be incurred in the execution of the plan.

This preliminary analysis indicates the requirement of SA Power Networks to respond to:

- The consultation with, and coordination of, various stakeholders in the development and execution of the LMRP.

- Customer and stakeholder communications on the LMRP.

- Assistance with Retailer Temporary Isolations (**RTI**s) for interrupting power to a site, coordinating outages for multi-site / shared fused installations.

- Increases in identification of faults and theft of energy.

- Managing exceptions and proactively managing resources for efficient meter churn operations.

- Navigating data quality challenges.

5.3 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'.[7]

Therefore, SA Power Networks will develop and refine the process for the LMRP in consultation with the 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.

The plan will develop substantially during 2024 when SA Power Networks engages with retailers and MCs on the development of the LMRP.

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.

5.4 Rollout Strategy

In our initial planning to develop the LMRP, we have considered three different rollout strategies, each presenting distinct considerations that will become more apparent once communications with retailers and other stakeholders commence in early 2024. These scenarios are as follows:

- 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.

Anticipating an initial meter volume of approximately 525,000 legacy meters at the start of the rollout (1 July 2025) and a residual 15% of legacy meters at 30 June 2030 of 81,000 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 15% of legacy meters may

remain in service at the end of the rollout period, all 525,000 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 Scenarios

	Even LMRP		Middle Peak		Back End Peak	
	% of Meters	*Volume*	*% of Meters*	*Volume*	*% of Meters*	*Volume*
2025/26	20%	105,000	15%	80,000	15%	80,000
2026/27	20%	105,000	15%	80,000	15%	80,000
2027/28	20%	105,000	25%	130,000	20%	105,000
2028/29	20%	105,000	25%	130,000	25%	130,000
2029/30	20%	105,000	20%	105,000	25%	130,000

These rollout strategies will be discussed with retailers and MCs as part of our preliminary consultation in early 2024. Initial conversations with retailers suggest a transitional phase may be preferred to enable adequate coordination, training, and resource planning.

Anticipating an initial legacy meter volume of approximately 525,000 meters, recent churn volume trends suggest an average of 80,000 meters are currently being replaced per year. The even LMRP churn may be difficult to achieve particularly in year 1 (2025/26) and a ramp up is expected. The back-end peak could also eventuate, but the anticipation is that retailers should be able to at least continue the current cadence of meter churn in year 1. The graph below highlights the different phasing of the respective strategies.

Figure 3 - Five-year rollout strategy
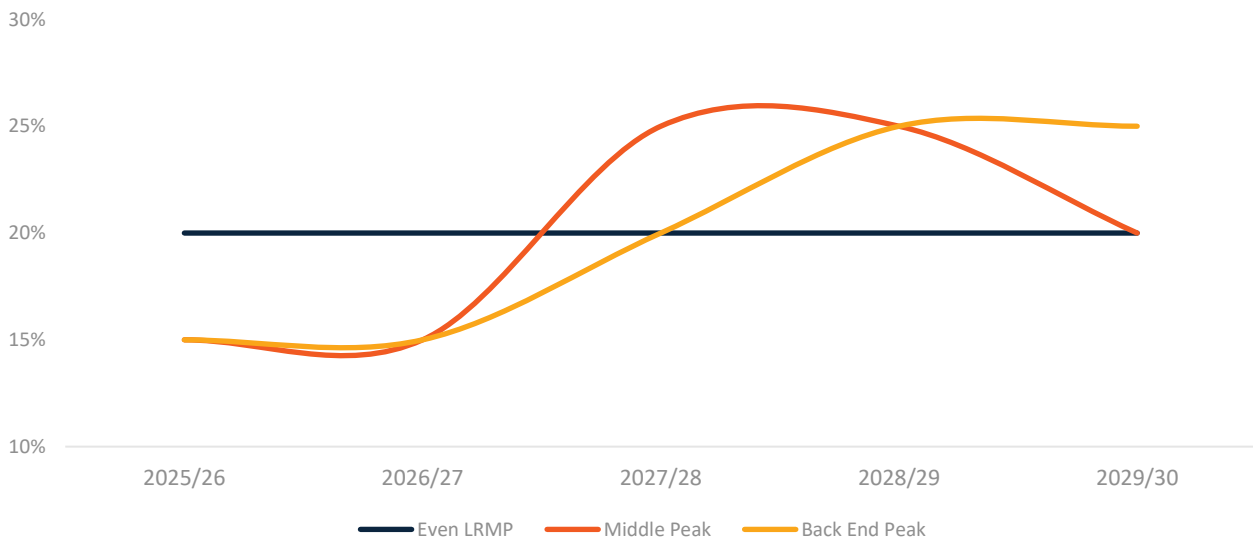
From initial conversations with retailers, we have adopted the middle peak scenario for our 2025-30 Regulatory Proposal. This provides for a lower number of replacements in the first two years as industry participants continue to refine new business processes and systems introduced to support the accelerated rollout. We acknowledge this may change once consultation on the LMRP commences and will update the forecast meter replacement volumes as required.

6 Legacy metering transition costs

The accelerated rollout of smart meters will occur between 1 July 2025 and 30 June 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 costs[8] required over the 2025-30 period to support the accelerated rollout of smart meters are described below.

6.1 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.
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.
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 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. This investment ensures 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 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.
Revenue Protection Unit (RPU) Capacity Building	Enhancing skills and capacity through advanced training for the existing RPU team to adeptly handle the surge in field visits and theft reports initiated by third-party MPs. This strategic move ensures the team's efficiency in investigating and recovering revenue from instances of electricity theft, reinforcing their role in safeguarding revenue protection.
Technology Enhancement for Data Management	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.

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

6.2 Legacy metering transitional cost assessment

We have undertaken a preliminary assessment of the incremental expenditure associated with supporting and managing the program to accelerate the smart meter rollout in South Australia. We have developed this preliminary assessment based on information available at the time.

The forecast costs rely on historical data and anticipated future growth based on the various rollout scenarios. The data provided within this document reflects the upper bound of expenditure required over the rollout period and will be revised as necessary as better information becomes available.

Crucially, the resourcing aspect constitutes a significant portion of the costings. A number of workshops were held with various stakeholders at SA Power Networks to gain insights into the expected resource requirements to support the accelerated rollout. The results of these preliminary assessments are provided below, outlining the expected resourcing requirement and incremental costs for each functional area set out in Table 5 above.

6.3 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 period[9]. It is expected that an additional resource will be required from late 2024 when coordination with external stakeholders becomes more intensive.

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.

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 5.1 above. The funding for this communication plan has been included in Table 6 below.

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[9] 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.

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	1	1	1	1
Staff increases (NMI Coordinator)	1	1	1	1	1
Forecast FTE Increase	**2**	**2**	**2**	**2**	**2**
Staff increases	368	384	399	414	430
External Communications	208	214	221	230	238
Other – Total	20	21	22	22	23
Total costs ($'000)	**596**	**619**	**642**	**666**	**691**

6.4   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.

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 (Scheduling Team Lead)	1	1	1	1	1
Staff increases (Contact Resolution Staff)	3	3	3	3	3
Staff increases (Investigations Officer)	1	1	1	1	1
Forecast FTE Increase	**5**	**5**	**5**	**5**	**5**
Total costs ($'000)	**802**	**834**	**866**	**900**	**935**

6.5   Billing and Credit

The accelerated rollout program will increase the rate of data exceptions that our billing team needs to manage, with exceptions peaking following any changes to customer metering, such as a meter replacement. In addition, interval meters generally have optionality with tariffs, which increases the number of tariff request changes we process following a meter churn from a basic meter to a smart meter, as retailers and their customer elect the best cost-reflective tariff for their circumstances. This optionality and increased cost reflectivity of tariffs available for smart meters mean sites using more complex Time of Use and Demand tariffs is growing. This leads to more billing enquiries and disputes from Retailers, particularly in the months directly following a meter change where customers are still learning about their new cost reflective tariffs.

To address these challenges, a plan to incrementally add two billing team members annually and introduce a specialised data analyst to handle technical issues related to profile, data, and device management following a meter churn has been proposed to manage the increase in data exceptions and tariff changes during the transition period.

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 Analyst)	2	4	6	8	10
Staff increases (B&C Sr. Analyst)	1	1	1	1	1
Staff increases (B&C Jr. Analyst)	-	-	-	1	1
Forecast FTE Increase	**3**	**5**	**7**	**10**	**12**
Total Costs ($'000)	**481**	**801**	**1,144**	**1,691**	**2,093**

6.6   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 the manage increased churn rates since the implementation of metering contestability in 2017.

However, preliminary 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 6 operators during the next 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)	6	6	6	6	6
Forecast FTE Increase	**6**	**6**	**6**	**6**	**6**
Total costs ($'000)	**866**	**901**	**936**	**972**	**1,009**

6.7   Revenue Protection (Larceny of supply)

The Revenue Protection Unit (**RPU**) plays a vital role in investigating and recovering revenue from customers involved in electricity theft, including theft and tampering within the distribution network. Additionally, the RPU supports the South Australian Police (SAPOL) in dismantling illegal marijuana growing houses, which are frequently equipped with illegal electricity meter bypasses.

It is noteworthy that many illegal meter bypasses, where electricity cables are rerouted to evade meter readings, are discovered when new meters are installed by Meter Providers (**MP**s). When such discoveries are made, MPs promptly notify RPU, and it becomes the responsibility of SA Power Networks RPU to address the issue. As the volume of legacy meter replacements increase, a rise in RPU notifications is foreseeable.

Traditionally, our field visits were primarily driven by customer-initiated requests for metering issues, such as meter tests or faults. However, with the advent of metering contestability, there has been an increase in sites being visited without customer-initiated contact, resulting in a corresponding increase in theft discoveries. Since August 2022, 38% of illegal bypass reports have originated from external MPs. As the installation of type 1-4 meters continues to grow, we can expect a correlated increase in the number of reports.

Despite staffing numbers remaining unchanged, the backlog of work has steadily increased, particularly in remote or overnight travel-requiring rural sites due to the surging number of visits and potential theft reports raised by third-party MPs.

To manage the increasing workload, an initial proposal was made to add one more administrative/office staff (making a total of 2) and an extra RPU field investigator (making a total of 3). However, with the anticipated rise in incidents reported by MPs, we now expect the need for an additional field resource to cope with the escalating number of field visits. As the number of field visits increases, so does the administrative workload, which includes raising sales orders to recover revenue and handling inquiries from MPs via email and phone. The administrative workload is directly linked to the number of RPU field visits, which is expected to continue rising.

Obtaining an extra RPU investigator necessitates the acquisition of an additional vehicle, tools, equipment, and specific external investigator training. These resources are essential for maintaining the effectiveness of the RPU team and ensuring the diligent management of revenue protection.

The costs expected in the forecast period include:

Table 10 - Revenue Protection (Larceny) resourcing and cost forecast ($ June 2022)

Year ended June 30:	2026	2027	2028	2029	2030
Staff increases (RPU Coordinator)	2	2	2	2	2
Staff increases (Operator/Investigator)	3	3	3	3	3
Forecast FTE Increase	**5**	**5**	**5**	**5**	**5**
Total costs ($'000)	**831**	**863**	**896**	**930**	**965**

6.8   Defect Management & Investigations

Within the landscape of our operations, Defect Management & Investigations function, is dedicated to identifying, assessing, and resolving site-related issues. This function encompasses a spectrum of roles, from office and filed positions.

As we look towards the transition period, our plan includes a careful augmentation of personnel in key positions such as Manager Investigations, Field Mechanic, and Lineman/Line Crew roles. This staffing approach reflects our commitment to improving our expertise and efficiency in managing defects and

conducting investigations. We anticipate that costs associated with this area will increase substantially from year to year, including not just personnel but also staff overhead and other miscellaneous costs.

Overall, this comprehensive approach to Defect Management & Investigations demonstrates our commitment to proactively addressing site challenges and ensuring a resilient and financially sustainable future.

The costs expected in the forecast period include:

Table 11 -Site Data Quality and Investigation resourcing and cost forecast ($ June 2022)

Year ended June 30:	2026	2027	2028	2029	2030
Staff increases (Manager Investigations)	1	1	1	1	1
Staff increases (Field Mechanic)	2	2	2	2	2
Staff increases (Lineman/Line Crew)	2	2	2	2	2
Forecast FTE Increase	**5**	**5**	**5**	**5**	**5**
Forecast total costs ($'000)	**807**	**838**	**870**	**903**	**937**

6.9   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 12 - 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 ($'000)	289	300	312	324	336
Forecast total costs ($'000)	**289**	**300**	**312**	**324**	**336**

6.10 Data Quality & Compliance

The Data Quality and Compliance team at SA Power Networks plays a crucial role in ensuring the quality of data within Customer Information Systems and Low Voltage (**LV**) Network mapping. This encompasses identifying, prioritising, and fixing property and customer data issues, which involves various processes, including **B2M** and **B2B** operations. Additionally, the team ensures the integrity of downstream systems that rely on ISU (SAP IT Billing system – Industry Specific Solution for Utilities), Customer and Property data.

On a daily basis, the team manages notifications in ERP (Enterprise Resource Planning), the SAP system, which are essential for accurately linking Life Support Customers into the LV Network and executing necessary data updates. As part of their regular duties, the team addresses daily exceptions (BPEMS), which currently total nine different types. In 2023 alone, the team handled over 100,000 exceptions related to customer detail changes, retailer input, MX01 and MX05, property data updates, and proactive monitoring of property data discrepancies. Discrepancies are identified through the Customer Information Hub (**CIH**) and Customer Information Discovery (**CID**), creating work packages for Data Quality Officers to remediate.

To address the growing complexity and volume of work, the plan is to introduce two new roles promptly. This approach involves training newcomers on lower-level tasks to free up more experienced staff to tackle complex issues, such as cross-metering investigations and unregistered meters from the field.

The costs expected in the forecast period include:

Table 13 -Data Quality and Compliance resourcing and cost forecast ($ June 2022)

Year ended June 30:	2026	2027	2028	2029	2030
Staff increases (Data Quality Officer)	2	2	2	2	2
Forecast FTE increase	**2**	**2**	**2**	**2**	**2**
Forecast total costs ($'000)	**303**	**315**	**327**	**339**	**352**

6.11 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 preliminary estimates of incremental FTE required to support the accelerated rollout, ranging from 30 FTE in Year 1 to 39 FTE in Year 5.

Table 14 – Forecast total FTE increase

Total FTE Deployed	2026	2027	2028	2029	2030
Smart Meter Implementation Management	2	2	2	2	2
Customer Management Contact Resolution	5	5	5	5	5
Billing and Credit	3	5	7	10	12
NEM Operations	6	6	6	6	6
Revenue Protection Staff (Larceny)	5	5	5	5	5
Defect Management & Investigations	5	5	5	5	5
Meter Disposal & Storage	-	-	-	-	-
Data Quality & Compliance	2	2	2	2	2
Forecast Total FTE Increase	28	30	32	35	37

The table below outlines the indicative total costs anticipated for the period, ranging from $5.0 million in Year 1 to $7.3 million in Year 5, cumulating in a total indicative cost of $30.5 million.

Table 15 - 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	596	619	642	666	691	3,214
Customer Management Contact Resolution	802	834	866	900	935	4,337
Billing and Credit	481	801	1,144	1,691	2,093	6,210
NEM Operations	866	901	936	972	1,009	4,684
Revenue Protection Staff (Larceny)	831	863	896	930	965	4,485
Defect Management & Investigations	807	838	870	903	937	4,355
Meter Disposal & Storage	289	300	312	324	336	1,561
Data Quality and Compliance	303	315	327	339	352	1,636
Total Legacy Metering Transition Costs	**4,975**	**5,471**	**5,993**	**6,725**	**7,318**	**30,482**

7 Information Technology

SA Power Networks receives smart meter interval data via the AEMO national market 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. Hence the additional smart meters results in a significant increase in cost for data storage, licensing and management from the old meters. The cost impact is exponentially cumulative as more meters are changed but will reach a peak a few years after the last meter is changed. These costs effectively 'bring forward' costs from future RCPs when these costs would otherwise have been incurred.

The key costs associated with this change are summarised in Table 16. The IT systems involved are all cloud based and hence the costs are all opex. These costs represent the delta or the additional costs associated with the acceleration compared to the normal rollout scenarios.

The assumption is that there is an additional 50,000 meters being transitioned each year. As modelling progresses then this may change and hence we expect these costs will be revised in the resubmission.

For optimal purchasing arrangements these costs are a combination of ongoing and periodic.

Table 16 - Additional smart meter data storage, compute and licensing related costs ($June 2022)

Component	2026 ($'000)	2027 ($'000)	2028 ($'000)	2029 ($'000)	2030 ($'000)	Total
Ongoing Storage and Compute	178	531	743	888	1065	3,404
Additional blocks of capacity	141	-	-	174	-	314
Optimisation	-	-	-	-	300	300
Additional Licensing	-	-	-	-	227	227
Total	**318**	**531**	**743**	**1,061**	**1,592**	**4,245**

The components are further explained below.

7.1 Storage and Compute (ongoing):

The storage and computational capacity for the additional smart meter data for market, billing and analytics purposes. More data means more storage and computational capacity is required and hence a greater cost.

7.2 Additional blocks of capacity:

Periodic purchases of additional 'blocks' of capacity as thresholds are reached, allowing additional data storage and compute for more data.

7.3 Optimisation:

Periodic changes to ensure the systems are secured and optimised for the volumes of data being stored and consumed.

7.4 Additional Licensing:

Periodic uplifts in licensing costs to accommodate additional data in our market and billing systems. Similar to the storage capacity – these are sold in blocks once a threshold is reached. We expect the next block to be required at the end of the RCP.

8 Next steps

8.1 Summary steps

As stated above, this document represents an early view of the plan for the retirement of legacy meters operated by SA Power Networks as it responds to the requirements of the AEMC Final Report.

SA Power Networks will continue to refine this plan with the following:

- ***Consultation with the Retailers and the MCs*** – SA Power Networks intends to consult with the retailers and MCs, with the view to developing plans for collaboration in early 2024.

  The success of the plan will be partly dependent on the ability of SA Power Networks to work with retailers and MCs to influence the geographic rollout of the smart meter replacements. This will influence:

  - o the efficiency of resourcing the network activities associated with meter reading, new meter connection, fault clearing and retailer initiated temporary isolations and meter bypass work where required.

  - o the efficiency of dealing with meter disposals.

  - o the development of guides and work procedures for multi-meter, shared fused sites.

- ***Consultation with customer focus groups and Stakeholder groups*** – SA Power Networks considers that consultation with these groups will enable the development of a communication strategy that assists these groups and seeks their support for the success of the LMRP. Without the support of these groups, there is a risk that some customers may not accept a meter replacement, contributing to an incomplete retirement of legacy meters within the target period.

- ***Process improvements and refinement of the plan*** – SA Power Networks' current plans are preliminary and have limited stakeholder consultation to date. We will engage wider with relevant parties and expect the LMRP will be refined.

- ***The process of manually reading the legacy meters*** – SA Power Networks currently manually reads more than 500,000 legacy meters under a quarterly or monthly reading plan. As the LMRP is implemented, the efficiency of manually reading meters in the field will fall dramatically and there will be a point where our meter reading contractor may no longer be able to perform the task economically. SA Power Networks will continue to work with our meter reading contractor in 2024 to better understand the impact of the accelerated rollout on meter reading.

SA Power Networks is also commencing a process to ensure that actual costs incurred in the implementation of the LMRP are captured to better understand any under or over recovery during the 2025-30 RCP.