

Transmission Revenue Reset

TRR (2027-32)

Revised Proposal Addendum: Metering Digital Systems

Date: 1 September 2026



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Executive Summary

As a Metering Coordinator (MC) and as Transmission Network Service Provider (TNSP), AusNet has regulatory obligations under the National Electricity Rules to ensure meters provide accurate data for the purpose of market settlement and network billing. In our initial TRR 2027-32 regulatory proposal, we sought to progress a range of digital initiatives including a meter reading system, a meter storage and analytics system, a metering streaming system, and a meter asset register. Importantly, the initiative in the digital business case is independent of the meter replacement program proposed in the physical metering business case.

The AER's Draft Determination did not approve AusNet's initial proposal for metering digital systems, with the program removed entirely as detailed in **Table 1** below.

Table 1 - AER Alternative Forecast Expenditure (\$m, real 2027)

Cost item	Initial Proposal	AER Alternative	Adjustment
Capex	11.3	0.0	-100%
Opex	9.4	0.0	-100%

The AER details rationale for the Draft Determination outcome, which AusNet has addressed in our Revised Proposal as set out in **Table 2**.

Table 2 – AER Draft Determination and AusNet's Revised proposal

AER Draft Decision Feedback	How this has been addressed in AusNet's Revised Proposal
The AER stated that AusNet's metering ICT expenditure is for systems to support new meter models but that some of AusNet's existing meters do not require replacement. The meters that do need replacing can be replaced with EDM1 Mk6e models that can be integrated with AusNet's current ICT systems.	The metering digital systems initiatives included in our Revised Proposal, being meter data storage & analysis and meter asset register, are independent of the physical meter replacement program and are hence still justified and required. We have provided additional information on the need for these initiatives, and in the case of the meter data and analysis initiative, we have proposed a lower cost consolidated solution that fully leverages AusNet's current digital systems. We note that the AER's draft determination did not accept the replacement of EDM1 Mk6e meters in our physical metering business case. This has necessitated revised expenditure for a custom-built software update (EziView) to meet our meter testing obligations. We have provided further evidence of the need based on engagement with the vendor.

AusNet's revised digital systems metering expenditure is set out in **Table 3**. The revised business case comprises \$7.6 million of capital expenditure and \$0.3 million of operating expenditure (\$real 2025), representing reductions of \$3.7 million and \$9.1 million, respectively, compared to the original proposal. All costs of this program are 100% allocated to AusNet's transmission network.

Table 3 - Forecast expenditure for AusNet's Revised Proposal for digital metering systems (\$m real 2025)

Cost item	RY28	RY29	RY30	RY31	RY32	Total
Capex	2.5	5.1	0.0	0.0	0.0	7.6
Project Implementation Opex ("propex", non-recurrent opex)	0.0	0.0	0.0	0.0	0.0	0.0
Ongoing Licences & Support Opex (recurrent opex)	0.0	0.0	0.1	0.1	0.1	0.3
Total	2.5	5.1	0.1	0.1	0.1	7.9

1. AusNet's proposal and AER Draft Determination

1.1. Initial Submission Summary

In our initial TRR 2027-32 regulatory proposal, AusNet highlighted that our transmission business is the Metering Coordinator (MC) and Metering Provider (MP) under the National Electricity Rules (NER) for all relevant connection points on our transmission network. As a MC, we have regulatory obligations under the NER to ensure meters provide accurate data for the purpose of market settlement and network billing and to comply with regulatory reporting obligations for greenhouse emissions reporting.

In our Initial Proposal, we identified the following needs:

- Investing in a meter data storage system and data analytics system to enhance our ability to test and validate meter data. Currently, we are reliant on the third-party Meter Data Provider (MDP) in terms of data accuracy for market settlement, particularly where disputes arise. We highlighted the criticality of improving our ability to forensically and proactively validate the accuracy of meter data, given the increasing complexities arising from multi-directional flows that increase the risk of error.
- Investing in a meter asset register to support the development of more advanced meter asset management plans and reduce employee effort.
- Investing in a new meter reading system that integrates with modern meters. The current meter system used by our third-party MDP is not compatible with modern meter technology, requiring significant integration cost and time. A new meter reading system also enables the transmission business to use power quality data for operational purposes and to access raw data for validation of meter data accuracy and the calculation of transmission losses for regulatory reporting.
- Investing in a streaming system that provides real time information to support the management of meters, improves our reporting accuracy of transmission line losses for greenhouse reporting, and potential network operational benefits.

In parallel with this digital investment, AusNet proposed a separate business case to replace its ageing EDM1 Mk3 and Mk6e meter fleet. Together, these proposals formed AusNet's broader metering investment program for the 2027-32 period.

Table 4 sets out the forecast expenditure for digital metering systems.

Table 4 - Initial proposal - Digital metering systems (\$m, real 2025)

Cost item	RY28	RY29	RY30	RY31	RY32	Total
Capex	2.1	7.2	0.0	2.0	0.0	11.3
Project Implementation Opex ("propex", non-recurrent opex)	2.4	2.7	0.0	0.0	0.0	5.1
Ongoing Licences & Support Opex (recurrent opex)	0.0	0.3	1.3	1.3	1.3	4.3
Total	4.5	10.2	1.3	3.3	1.3	20.7

While not included in the digital meter business case, AusNet's Initial Proposal for physical meters had noted that a key driver for replacing Mk6e meters was the risk with operating legacy and unsupported software (EziView) to meet AusNet's meter testing obligations.

1.2. AER Information requests

Through the AER review process, AusNet provided further supporting information and clarifications regarding the proposed metering digital systems program in response to information requests. **Table 5** below outlines the key items addressed through these information requests.

Table 5 - Summary of AER information requests related to metering

Ref	Summary of AER Question	Summary of AusNet's response
IR021	The AER sought additional information on the need for the proposed metering systems, including capability requirements, benefits methodology and potential overlap with existing MDP services.	AusNet clarified how the proposed capabilities differ from and complement existing MDP services, and provided updated benefits modelling to correct errors identified in the original calculation methodology.
IR022	The AER sought further information on the operational need for the proposed metering capabilities, including potential overlap with AEMS, SCADA and existing metering systems.	AusNet explained how the proposed metering capabilities provide distinct operational value to PMU and SCADA systems through broader network coverage, power quality monitoring and support for incident investigations.

1.3. AER Draft Determination feedback

The AER did not accept AusNet's proposed metering digital systems expenditure. The Draft Determination removed the program as shown in **Table 6 below**.

Table 6 - AER Alternative Forecast Expenditure (\$m, real 2027)

Cost item	Initial Proposal	AER Alternative	Adjustment
Capex	11.3	0.0	-100%
Opex	9.4	0.0	-100%

The AER Draft Determination linked assessment of the metering digital program to the physical meter replacement program, providing the following rationale for the removal of the digital program:

- The AER viewed that AusNet's metering ICT expenditure is for different systems to support new meter models, but that much of AusNet's existing meters are relatively new Mk6e models that do not require replacement. The AER viewed that the meters that do need replacing can be replaced with Mk6e models that can be integrated with AusNet's current ICT systems.
- The AER viewed that no additional metering ICT expenditure was required. However, the AER recognised that the alternative forecast may change if AusNet provides sufficient evidence to support the program in its Revised Proposal.

In addition, the AER's Draft Determination on the physical meter replacement program highlighted implication for the existing meter testing software. AusNet had highlighted compatibility issues with EDM1 Eziview software, used to undertake meter testing obligations, as one of the considerations driving physical meter replacement. The AER Draft Determination did not accept replacement of the newer Mk6e meters and considered that AusNet should address the compatibility issues with the Eziview software through continued discussions with the vendor. The AER recognised the potential need to revisit software expenditure once those discussions were resolved.

2. AusNet's Revised Proposal

In response to the AER's Draft Determination, AusNet has reviewed the metering systems digital program. This section details the approach taken to specifically address the Draft Determination feedback, and the Revised Proposal changes that have resulted from this review.

Importantly, we note that the AER's rejection of the initial program assumed that the digital initiatives were solely dependent on our proposed physical meter replacement program.

However, with the exception of the meter reading system initiative, all other Initial Proposal digital initiatives were independent of physical meter replacement and are predominantly addressing compliance gaps relative to our regulatory obligations as a Metering Coordinator to provide accurate data for market settlement and network billing.

Nevertheless, recognising the AER's feedback, for our Revised Proposal we have re-assessed each digital program initiative to reconfirm the need and cost-benefit justification for the project. As part of our Revised Proposal we have also re-assessed each of the solutions to ensure we have identified the lowest cost option to address the need. Our Revised Proposal also includes new digital expenditure to upgrade the EziView software, following engagement with the vendor and in light of the AER's Draft Determination not accepting the replacement of Mk6e meters.

2.1. Revised Program

For our Revised Proposal we have re-evaluated our digital metering systems program to target the most critical and high value capabilities, while reducing overall scope and cost, and deferring initiatives where appropriate. This is set out in **Table 7** below.

Table 7 – Summary of Revised Proposal for digital metering systems (\$'M, real 2025)

Initiatives	Position	Capex	Opex	Suymmary of Revised Proposal basis
Meter data storage and Meter data and analytics	We have combined and redesigned a lower cost solution that more fully leverages existing AusNet systems: [C-I-C] (meter data platform) and [C-I-C] (data analytics platform)	[C-I-C]	[C-I-C]	Our Revised Proposal confirms the need for both capabilities. The initiatives have been consolidated as they can be implemented into consistent systems, and realise synergies through a single delivery program/ Further information is provided in Section 2.2 below
Meter asset register	Same scope as Initial Proposal	[C-I-C]	[C-I-C]	We have clarified in our Revised Proposal how a meter asset register supports planning and scheduling activities and ensures compliance with NER Chapter 7 and relevant Australian standards. Further information is provided in Section 2.3 below.
Meter testing software upgrade (EziView Upgrade)	Revised Proposal includes estimated costs for custom-built software	[C-I-C]	[C-I-C]	Our Revised Proposal confirms the need for the vendor (EDMI) to custom-build functionality to ensure we can undertake our meter testing obligations for existing Mk6e meters. In Section 2.3 below, we have provided further information to verify the need for the software upgrade.
Meter reading system	Revised Proposal excludes this initiative entirely	-	-	At this stage we consider the meter reading system can be prudently deferred.
Meter streaming	Revised Proposal excludes this initiative entirely	-	-	While we see a need for more advanced data as the energy market, we will reassess the need for the project as the period progresses.

2.2. Meter data storage and analysis system

In our Initial Proposal, we proposed a separate meter storage system and a meter analysis system to improve meter data integrity. In its assessment of our proposal, the AER requested further information on whether our proposed metering initiatives would be a duplication of the services provided by an external MDP. In our response we noted that data analytics would be used to identify meter data abnormalities, and analytics would help diagnose issues early.

We have confirmed the need for both a data storage and analysis system. The driver is that the external MDP services do not provide the transparency, granularity or access required for AusNet to independently assure the integrity of transmission metering data, limiting our ability to efficiently meet our regulatory obligations and manage transmission metering risks. This capability extends beyond the standard scope of MDP services, requiring dedicated data exchange, transformation and analytical capabilities that are not typically provided by MDPs and would require significant changes to existing service arrangements. Importantly, these initiatives are not related to the accuracy or replacement of physical meters.

These initiatives support AusNet's obligations under Chapter 3 of the NER (Clause 3.6.2A(e)) and our role in supporting AEMO's Marginal Loss Factor (MLF) calculations through the provision of accurate transmission metering and network data. These MLFs apply to the entire value of the electricity wholesale market in Victoria.

AusNet is accountable for the accuracy and integrity of the metering and network information used by AEMO for MLF calculations and market settlement outcomes. Current processes are largely reactive, with data quality issues often identified by AEMO rather than through AusNet's own controls. Improved visibility and validation of metering and network data will strengthen compliance, reduce the risk of settlement errors, and support the timely identification and remediation of data quality issues. [C-I-C].

As part of this Revised Proposal, we have developed a consolidated solution that significantly reduces the implementation cost by fully leveraging our existing systems. The proposed solution involves integrating [C-I-C] raw data output, storing and analysing the meter data through AusNet's existing [C-I-C] system (currently used solely for our Distribution business) to visualise time slice versions of the data, pushing through the data to our existing data platform ([C-I-C]) for analytics, and building PowerBI dashboards to operationalise data for the metering team's assessment. This consolidation and redesign has resulted in a material cost saving compared relative to the Initial Proposal, which was based on implementing new systems.

Consistent with this basis, we have revised our NPV analysis to incorporate the lower costs and the analysis shows a positive NPV of [C-I-C]. The quantified benefit relates to the avoided reporting errors for financial settlement through early detection of errors.

2.3. Meter asset register

In our Initial Proposal, we proposed a meter asset register to support the development of more advanced meter asset management plans and reduce employee effort. Relevantly, the proposed expenditure was not related to the replacement of physical meters, but to consolidate disparate excel spreadsheets that are currently utilised for meter information.

We confirm the need for this project. A better asset register and streamlining data helps us with the sustainable management of our meters, which supports our NER obligations as Metering Coordinator (NER 7.15.2a). The initiative supports sustainable management of the metering system and allows for a range of contractual arrangements for service delivery. Within our terminal stations, we have 105 NMLs with the most complex metering arrangements (AEMO's special sites and technology guideline categorises of Type A & C), which is more than any other transmission network and represents 47% of the most complicated metering installations in the NEM.

By fully digitising the metering asset register, we reduce the need for additional employees projected to be required over the coming years to manage existing and increasing complex NMLs. Currently, we have 1.5 full time equivalent staff manually managing in Excel our metering asset registers. This initiative will deliver improved employee productivity, as well as enhanced transparency and control over high-value, non-contestable transmission meters. Proper management ensures compliance with ring-fencing obligations and protects against potential revenue impacts and regulatory risks.

The scope and costs of this initiative remain unchanged from our Initial Proposal, with the quantified employee productivity benefits resulting in an NPV of [C-I-C] for this initiative.

2.4. Meter testing software upgrade (EziView upgrade)

In our Initial Proposal, we noted that we currently use the EDMl EziView application to program, read, and test Mk6e meters. We highlighted that the software is obsolete and no longer supported by the vendor. We noted that the legacy software was designed for older Windows versions and requires administrative privileges and outdated libraries to run. Our preliminary testing showed that EziView fails to operate correctly on Windows 11 machines.

While AusNet currently maintains a dedicated Windows 10 laptop to operate the legacy EziView software, this is not a sustainable long-term solution. The approach creates both operational and cyber security risks, as the software relies on an ageing platform that is increasingly difficult to support and the failure of the dedicated device could prevent critical meter testing and configuration activities until a replacement solution is established.

In the AER's Draft Determination, reference was made to public information from EDMl that it continues to promote the Mk6e meter and EziView. The AER encouraged AusNet to continue discussions with EDMl regarding operation of EziView in a Windows 11 environment and revisit the need for software expenditure once those discussions are resolved.

Consistent with the AER's Draft Determination feedback, we have engaged with EDMl and confirmed that they provide a Windows 11 compatible version of EziView. However, EDMl have also confirmed that this version does not provide the full functionality needed to test and reconfigure meters with necessary Current Transformer (CT) and Voltage Transformer (VT) correction factors.

Without the application of these correction factors in our meters, it is more likely that meters, CTs or VTs will result in less accurate metering and settlement outcomes for the entire Victorian wholesale electricity market. It may also trigger for replacement at the next compliance test (i.e., every 5 years). Our EDMl meters currently have combined CT and VT correction factors between 0.0% and 0.2% with an average applied correction of 0.1%. If we test a Mk6e with the Windows 11 version of EziView, then we will lose the CT and VT correction factors leading to either a much tighter tolerance for meter failures or a higher overall measurement error for the connection point.

EDMl have advised that they can custom-build the requested functionality, as the product is not being further developed by EDMl in preference for newer software. EDMl has advised AusNet of their estimate to provide the custom-built software. Refer to the Appendix in this document for correspondence with EDMl regarding development of the EziView upgrade functionality. We have undertaken net present value analysis to demonstrate that the benefits exceed the costs, with a benefit NPV value of [C-I-C]. The benefits are based on the additional market impact of testing Mk6e meters without the EziView correction factor functionality. These benefits would be directly realized by all Victorian Market Participants through the application of MLF in the wholesale market.

Based on the confirmation from EDMl of the EziView capability gap and the likely market impacts to Market Participants operating in Victoria, our proposed expenditure for upgrading or replacing EziView is warranted.

2.5. Recommended Option

Based on re-evaluation of the metering systems digital program, our Revised Proposal consists of meter data storage and analysis, meter asset register, and meter testing software upgrade initiatives. This cost of this recommended option is \$7.6m capex and \$0.3m opex (\$real 2025), which represents a \$3.7m capex and \$9.1m opex decrease relative to AusNet's Initial Proposal. Importantly, all of these investments are independent of AusNet's physical meter replacement program, with separate need drivers and benefit justification.

The summary of this assessment is detailed in **Table 8** below. All costs of this program are 100% allocated to AusNet's transmission network.

Table 8 – Metering digital systems expenditure proposal (\$m real 2025, transmission network allocated costs)

Criteria	Initial Proposal Recommended Option 2	AER Draft Determination	Revised Proposal
Capex (\$million, real 2025)	11.3	0.0	7.6
Opex (\$million, real 2025)	9.4	0.0	0.3
NPV (\$million, real 2025)	27.3	0.0	14.0
Technically feasible	✓	✓	✓
Addresses identified need	✓	✗	✓
Deliverable within timeframe	✓	✓	✓

A. Appendix

A.1. [C-I-C]

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