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AusNet 2026 - 2031 Regulatory Proposal

REVIEW OF PROPOSED EXPENDITURE FOR ICT

Public Version

Report prepared for:

AUSTRALIAN ENERGY REGULATOR (AER)

August 2025

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Preface

This report has been prepared to assist the Australian Energy Regulator (AER) with its determination of the appropriate revenues to be allowed for the prescribed distribution services of AusNet from 1st July 2026 to 30th June 2031. The AER's determination is conducted in accordance with its responsibilities under the National Electricity Rules (NER).

This report covers a particular and limited scope as defined by the AER and should not be read as a comprehensive assessment of proposed expenditure that has been conducted making use of all available assessment methods nor all available inputs to the regulatory determination process. This report relies on information provided to EMCa by AusNet. EMCa disclaims liability for any errors or omissions, for the validity of information provided to EMCa by other parties, for the use of any information in this report by any party other than the AER and for the use of this report for any purpose other than the intended purpose. In particular, this report is not intended to be used to support business cases or business investment decisions nor is this report intended to be read as an interpretation of the application of the NER or other legal instruments.

EMCa's opinions in this report include considerations of materiality to the requirements of the AER and opinions stated or inferred in this report should be read in relation to this over-arching purpose.

Except where specifically noted, this report was prepared based on information provided to us prior to 1 June 2025 and any information provided subsequent to this time may not have been taken into account. Some numbers in this report may differ from those shown in AusNet's regulatory submission or other documents due to rounding.

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ABBREVIATIONS

Term	Definition
ACS	Alternative Control Service
ADMS	Advanced Distribution Management System
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AMI	Advanced Metering Infrastructure
API	Application Programming Interface
ARM	Advanced RISC Machine (Machine Learning model)
ASD	AusNet Distribution
B2B	Business to Business
BC	Business Case
CAPEX	Capital expenditure
CBA	Cost Benefit Analysis
CER	Consumer Energy Resources
CONF	Confidential
CRM	Customer Relationship Management
Current RCP	2022-2026 RCP
DER	Distributed Energy Resources
DERMS	Distributed Energy Resources Management System
DNSP	Distribution Network Service Provider
DPF	Distribution Power Flow
DSO	Distribution System Operator
EDPR	Electricity Distribution Price Review
ERP	Enterprise Resource Planning
ESV	Energy Safe Victoria
FLISR	Fault Location Isolation and Service Restoration
FSP	Functional Supply Point
FTE	Full-Time Equivalent
[redacted]	[redacted]
GIS	Geographic information System
GSL	Guaranteed Service Level
HEI	Human Error Identification
HV	High Voltage

Term	Definition
HW	Hardware
ICT	Information and Communication Technology
IDAM	Identity and Access Management
IDX	Industry Data Exchange
IR	Information Request
IT	Information Technology
LIDAR	Light Detection and Ranging
LV	Low Voltage
MITE	Market Interface Technology Enhancements
MVRS	Mechanical Vibration Rectifier System
NEM	National Electricity Market
NER	National Electricity Rules
NMI	The National Meter Identifier
NPV	Net Present Value
NSP	Network Service Provider
Opex	Operational expenditure
OT	Operational Technology
PQ	Power Quality
PV	Present Value
RCP	Regulatory Control Period
RP	Regulatory Proposal
SAPN	South Australia Power Network
SCADA	Supervisory Control and Data Acquisition
SCS	Standard Control Service
SI	System of Units
TAM	Technology Asset Management
TOTEX	Total expenditure

EXECUTIVE SUMMARY

Introduction and context

1. The AER has engaged EMCa to undertake a technical review of the ICT capex and opex step changes that AusNet has proposed in its Regulatory Proposal (RP) for the 2026-31 Regulatory Control Period.
2. The assessment contained in this report is intended to assist the AER in its own analysis of the proposed capex and opex allowances as an input to its draft determination on AusNet's revenue requirements for the next RCP.

Expenditure under assessment

3. AusNet has proposed ICT capex of $418.8m and ICT opex step changes totalling $39.9m over the period.[1] AusNet's proposed capex would be 24% more than it expects to incur in the current period.[2] The expenditure is proposed under several headings, as we show below:
   - Recurrent capex of $100.1m, for business systems (applications) and infrastructure refresh
   - Non-recurrent capex for proposed investment in nine ICT projects totalling $291.2m which can be further categorised as follows:
     - Five of these, totalling $214m, are for business-related ICT projects
     - Two of these, totalling $25.3m are to meet new obligations relating to market reform and metering
     - One of these ($40.8m) is to provide proposed CER-related functionality
     - One of these ($11.2m) is to provide for ICT aspects of a 'repex' program based on utilising LIDAR to assess and manage line clearances.
   - Cyber security capex of $27.5m.
4. AusNet's proposed opex step changes are for additional opex that AusNet states it will require for the new or enhanced systems referred to above.

Assessment and findings

ICT strategy and forecasting methods

5. AusNet's ICT Strategy and Technology Plan presents as an appropriate identification of macro drivers and strategic objectives. We observe frequent references to the objective of improving outcomes, improving reliability and enhancing performance and, consistent with AER's guidelines, we sought evidence of positive and credible business cases that would justify the relevant investments.
6. We found that, where they were positive, AusNet's CBAs were only marginally so and for one project its CBA presented a significantly negative NPV. In reviewing AusNet's capex forecasting methods, we found several significant and recurring issues:

[1] Expenditure is shown in this report in escalated $2026 terms, consistent with AusNet's regulatory proposal, unless stated otherwise.

[2] $84m per year / $68m per year (in $2024 terms. See Figure 3.1

- Each 'project' is more akin to a program of work in a particular subject area and is presented as an aggregation of numerous individual initiatives. There is minimal justification for each of the proposed initiatives, some of which AusNet acknowledged as being 'low maturity', and AusNet had not explored options that could have involved a subset of such initiatives and with some form of prioritisation focus. Some significant new, and minimally justified, initiatives were included in AusNet's proposal for the final years of the period.
- To the extent that AusNet presented consideration of 'options' this analysis was of little determinative value. Apart from the option that it had proposed, AusNet tended to present an option of 'doing nothing' at one extreme or 'replacing all existing systems' at the other, neither of which was credible.
- AusNet's costings for each project are an aggregation of highly rounded, and often substantial, amounts for each initiative. AusNet provides no evidence of the reasonableness of such costs, other than describing how they arose in the course of a workshop-type process involving its own IT management and vendors.
- Of significant concern, with only one exception, AusNet had proposed all of the capex for each project to SCS Distribution. Following our information request, AusNet disclosed that it would allocate varying, and often significant, amounts of these project estimated costs to ACS or other than to Distribution, but it had not done so for its regulatory submission.

Assessment of proposed recurrent capex

7. AusNet proposes $100.1m for recurrent ICT capex, which would represent a significant increase on current period expenditure.

8. We consider that this overstates AusNet's requirements, primarily because:
   - AusNet has assumed refresh of applications and infrastructure based on vendor-proposed lifecycles, but based on industry experience we consider it is reasonable to assume that AusNet will take a risk-based approach that will allow for some life extension
   - AusNet has not applied the allocations to distribution SCS that it advised to us
   - Cost estimates are likely to incorporate an upward bias when aggregated
   - AusNet is likely to be able to gain synergies when it integrates its plans for recurrent and non-recurrent projects.

Assessment of non-recurrent projects

9. Of the nine non-recurrent projects that AusNet proposes, totalling $291.2m, we consider that AusNet's proposed capex for market systems and for metering systems is reasonable and these systems are required to meet new market obligations. AusNet had allocated the cost of its metering systems project between SCS and ACS.

10. For the remainder, AusNet's economic business cases are either marginal or (in one case) negative. For each project, we consider that AusNet's proposed capex is significantly overstated, due to one or more of the following factors:
    - AusNet has proposed the whole project cost to SCS distribution, rather than the proportionate allocation that it advised
    - Some scope initiatives/line items are included with minimal and insufficient justification and which with proper consideration of project maturity would likely be deferred beyond the next RCP or otherwise not proceed
    - There is already evidence of some project delays and which we consider likely to cascade, delaying the pace of proposed investment leading to less investment in the next period
    - As stated more generally, there is evidence of cost over-estimation bias.

11. For reasons that we describe in our separate cyber security report, we consider that AusNet's proposed ICT capex for this is justified.

Assessment of proposed opex step changes

12. Of the $39.9m opex step change that AusNet has proposed, we consider that the majority is not justified. Reasons for this include that:

- The proposed ICT opex step change does not account for, and should be offset by, lower business opex resulting from productivity improvements and cost efficiencies that AusNet claims that its proposed ICT investments will enable;
- AusNet has proposed the whole of its assessed incremental project opex to SCS distribution, rather than the proportionate allocation that it advised
- Likely delays in implementing some assumed project modules, leading to delay in incurring incremental operating and licencing costs.

Implications for expenditure allowances

13. In deriving an estimate for alternative forecasts, we have taken account of the implications of our findings for capex and opex, to the extent that they apply for each proposed ICT project. On this basis, we consider that:

- a reasonable alternative forecast for ICT capex would be 25% to 35% lower than AusNet has proposed
- a reasonable alternative forecast for incremental ICT opex would be around 50% to 60% less than AusNet has proposed.

1 INTRODUCTION

The AER has asked us to review and provide advice on aspects of AusNet's proposed expenditures over the 2026-31 Regulatory Control Period (next RCP) relating to information and communication technology (ICT), including consumer energy resources (CER) related ICT and cyber security. Our review is based on information that AusNet provided and on aspects of the NER relevant to assessment of expenditure allowances.

1.1 Purpose of this report

14. The purpose of this report is to provide the AER with a technical review of aspects of the expenditure that AusNet has proposed in its regulatory proposal (RP) for next RCP'

15. The assessment contained in this report is intended to assist the AER in its own analysis of the proposed expenditures allowance as an input to its Draft Determination on AusNet's revenue requirements for the next RCP.

1.2 Scope of requested work

16. Our scope of work, covered by this report, is as defined by the AER. Relevant aspects of this are as summarised in Figure 1.1.

Figure 1.1: Scope of work covered by this report

Scope of work covered by this report.

The scope of this review, as requested by the AER, covers the following.

- Capex (ex ante)
  - ICT (recurrent and non-recurrent)
- Opex step changes related to:
  - ICT

17. Other aspect of AusNet's expenditures, including repex, augex and opex (pole inspection and hazard tree reduction), CER and cyber security are covered in separate reports.

18. While we reference in this report AusNet's proposed ICT for AusNet's CER program, and ICT for one of its repex programs (conductor compliance), our assessments of those two proposals are in our Technical Report, where we report on the technical and ICT elements of these two programs together. For completeness however, we include a summary of our findings for these two programs with respect to ICT, in the current report.

19. For reference, we also assess in the current report OT investment that AusNet proposes as part of its ICT ADMS project.

1.3 Our review approach

20. In conducting this review, we first reviewed the RP documents that AusNet has submitted to the AER. This includes a range of appendices and attachments to AusNet's RP and certain Excel models which are relevant to our scope.

21. We next collated several information requests. The AER combined these with information request topics from its own review and sent these to AusNet.

22. In conjunction with AER staff, our review team met with AusNet at its offices on 2 – 4 April 2025. AusNet presented to our team on the scoped topics, and we had the opportunity to engage with AusNet to consolidate our understanding of its proposal.

23. AusNet provided the AER with responses to information requests and, where they added relevant information, these responses are referenced within this review.

24. We have subjected the findings presented in this report to our peer review and Quality Assurance processes and we presented summaries of our findings to the AER prior to finalising this report.

1.3.1 Conformance with NER requirements

25. In undertaking our review, we have been cognisant of the relevant aspects of the NER under which the AER is required to make its determination and relevant AER Guidelines.

Capex objectives and criteria

26. The most relevant aspects of the NER in this regard are the 'capital expenditure criteria' and the 'capital expenditure objectives.' Specifically, the AER must accept the Network Service Provider's (NSP) capex proposal if it is satisfied that the capex proposal reasonably reflects the capital expenditure criteria, and these in turn reference the capital expenditure objectives.

27. The NER's capital expenditure criteria and capital expenditure objectives are reproduced in Figure 1.2 and Figure 1.3.

Figure 1.2: NER capital expenditure criteria

NER capital expenditure criteria

The *AER* must:

*(1) subject to subparagraph (c)(2), accept the forecast of required capital expenditure of a Distribution Network Service Provider that is included in a building block proposal if the AER is satisfied that the total of the forecast capital expenditure for the regulatory control period reasonably reflects each of the following (**the capital expenditure criteria**):*

(i) the efficient costs of achieving the capital expenditure objectives;

(ii) the costs that a prudent operator would require to achieve the capital expenditure objectives; and

(iii) a realistic expectation of the demand forecast, cost inputs and other relevant inputs required to achieve the capital expenditure objectives

Source: NER 6.5.7(c) Forecast capital expenditure, v230

Figure 1.3: NER capital expenditure objectives

NER capital expenditure objectives

*(a) A building block proposal must include the total forecast capital expenditure for the relevant regulatory control period which the Distribution Network Service Provider considers is required in order to do each of the following **(the capital expenditure objectives)**:*

(2) meet or manage the expected demand for standard control services over that period;

(3) comply with all applicable regulatory obligations or requirements associated with the provision of standard control services;

(4) to the extent that there is no applicable regulatory obligation or requirement in relation to:

(i) the quality, reliability or security of supply of standard control services; or

(ii) the reliability or security of the distribution system through the supply of standard control services,

to the relevant extent:

(iii) maintain the quality, reliability and security of supply of standard control services; and

(iv) maintain the reliability and security of the distribution system through the supply of standard control services;

(5) maintain the safety of the distribution system through the supply of standard control services; and

(6) contribute to achieving emissions reduction targets through the supply of standard control services.

Source: NER 6.5.7(a) Forecast capital expenditure, v230

Opex Objectives and Criteria

28. The most relevant aspects of the NER in this regard are the 'operating expenditure criteria' and the 'operating expenditure objectives.' The NER's opex criteria and opex objectives are reproduced below.

Figure 1.4: NER operating expenditure criteria

NER operating expenditure criteria

*(c) The AER must accept the forecast of required operating expenditure of a Distribution Network Service Provider that is included in a building block proposal if the AER is satisfied that the total of the forecast operating expenditure for the regulatory control period reasonably reflects each of the following (**the operating expenditure criteria**):*

(1) the efficient costs of achieving the operating expenditure objectives;

(2) the costs that a prudent operator would require to achieve the operating expenditure objectives; and

(3) a realistic expectation of the demand forecast, cost inputs and other relevant inputs required to achieve the operating expenditure objectives.

Source: NER 6.5.6(c) Forecast operating expenditure, v230

Figure 1.5: NER operating expenditure objectives

NER operating expenditure objectives

*(a) A building block proposal must include the total forecast operating expenditure for the relevant regulatory control period which the Distribution Network Service Provider considers is required in order to do each of the following (**the operating expenditure objectives**):*

(1) meet or manage the expected demand for standard control services over that period;

(2) comply with all applicable regulatory obligations or requirements associated with the provision of standard control services;

(3) to the extent that there is no applicable regulatory obligation or requirement in relation to:

(i) the quality, reliability or security of supply of standard control services; or

(ii) the reliability or security of the distribution system through the supply of standard control services,

to the relevant extent:

(iii) maintain the quality, reliability and security of supply of standard control services; and

(iv) maintain the reliability and security of the distribution system through the supply of standard control services; and

(4) maintain the safety of the distribution system through the supply of standard control services; and

(5) contribute to achieving emissions reduction targets through the supply of standard control services.

Source: NER 6.5.6(a) Forecast operating expenditure, v230

How we have interpreted the capex criteria and objectives in our assessment

29. We have taken particular note of the following aspects of the capex criteria and objectives:

- Drawing on the wording of the first and second criteria, our findings refer to efficient and prudent expenditure. We interpret this as encompassing the extent to which the need for a project or program or opex item has been prudently established and the extent to which the proposed solution can be considered to be an appropriately justified and efficient means for meeting that need.
- The criteria require that the forecast '*reasonably reflects*' (emphasis added) the expenditure criteria and in the third criterion, we note the wording of a '*realistic expectation*'. In our review we have sought to allow for a margin as to what is considered reasonable and realistic, and we have formulated negative findings where we consider that a particular aspect is outside of those bounds.
- We note the wording '*meet or manage*' in the first objective (emphasis added), encompassing the need for the NSP to show that it has properly considered demand management and non-network options.
- We tend towards a strict interpretation of compliance (under the second objective), with the onus on the NSP to evidence specific compliance requirements rather than to infer them.
- We note the word '*maintain*' in objectives 3 and 4 and, accordingly, we have sought evidence that the NSP has demonstrated that it has properly assessed the proposed

expenditure as being required to reasonably maintain, as opposed to enhancing or diminishing, the aspects referred to in those objectives.

1.3.2 Technical review

30. Our assessments comprise a technical review. While we are aware of stakeholder inputs on aspects of what AusNet has proposed, our technical assessment framework is based on engineering considerations and economics.

31. We have sought to assess AusNet's expenditure proposal based on AusNet's analysis and AusNet's own assessment of technical requirements and economics and the analysis that it has provided to support its proposal. Our findings are therefore based on this supporting information and, to the extent that AusNet may subsequently provide additional information or a varied proposal, our assessment may differ from the findings presented in the current report.

32. We have been provided with a range of reports, internal documents, responses to information requests and modelling in support of what AusNet has proposed and our assessment takes account of this range of information provided. To the extent that we found discrepancies in this information, our default position is to revert to AusNet's RP documents as provided on its submission date, as the 'source of record' in respect of what we have assessed.

1.4 This report

1.4.1 Report structure

33. In section 2 we provide an overview of AusNet's ICT strategy and observations on the methods by which it has produced its forecast of its ICT requirements.

34. In section 3 we provide our assessment of each project that AusNet has proposed. For each project we present:

- An overview of the proposed expenditure and a summary of AusNet's justification for that expenditure
- Our observations on AusNet's application of its forecasting methodology to the project
- Our assessment of project need and justification, and
- Our findings for each project, including with respect to proposed capex and any associated proposed opex step change.

35. In section 4, we summarise our findings and the implications of those findings for Ausnet's proposed ICT capex and opex.

36. In Appendix A, we summarise relevant aspects of the AER Guidelines that we have taken into account in our review.

37. We have taken as read the considerable volume of material and analysis that AusNet provided, and we have not sought to replicate this in our report except where we consider it to be directly relevant to our findings.

1.4.2 Information sources

38. We have examined relevant documents that AusNet has published and/or provided to the AER in support of the areas of focus and projects that the AER has designated for review. This included further information at onsite meetings and further documents in response to our information requests. These documents are referenced directly where they are relevant to our findings.

39. Except where specifically noted, this report was prepared based on information provided by AER staff prior to 1 June 2025 and any information provided subsequent to this time may not have been taken into account.

40. Unless otherwise stated, documents that we reference in this report are AusNet documents comprising its RP and including the various appendices and annexures to that proposal.

41. We also reference responses to information requests, using the format IRXX QYY being the reference numbering applied by the AER and, where relevant, the Question number within that IR. Noting the wider scope of the AER's determination, the AER has also provided us with IR documents that it considered to be relevant to our review.

1.4.3 Presentation of expenditure amounts

42. Expenditure is presented in this report in $2025-26 real terms, unless stated otherwise. In some cases, we have converted to this basis from information provided by the business in other terms.

43. While we have endeavoured to reconcile expenditure amounts presented in this report to source information, in some cases there may be discrepancies in source information provided to us and minor differences due to rounding. Any such discrepancies do not affect our findings.

2 AUSNET ICT STRATEGY AND FORECASTING METHODS

We find that there are several significant aspects of AusNet's approach to forecasting its ICT capex requirement that are in effect systemic issues that detract from the credibility of the expenditure that it proposes. The systemic issues relate to:

- Scope of the underlying initiatives that form each project, including low maturity initiatives for which little or no justification is provided
- Lack of justification of the underlying cost estimates
- Cost allocation to distribution SCS not accounted for
- Deficiencies in AusNet's options analysis
- Deficiencies in AusNet's CBA.

These systemic issues are present to varying degrees in almost all the projects that AusNet has proposed.

2.1 AusNet's ICT strategy

44. AusNet provides an overview of its ICT strategy in the document of this title, provided along with its regulatory submission.

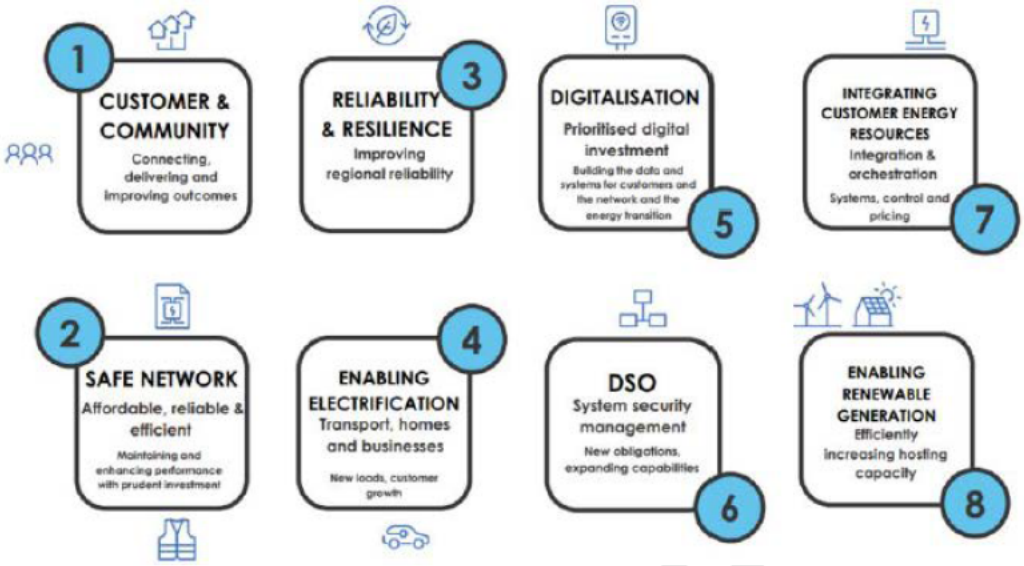
2.1.1 Macro drivers

45. In summary, AusNet describes its ICT strategy as responding to macro drivers of change, which it lists as:
    - Complexities of adapting to the energy transformation
    - Resilience to climate change
    - Digital landscape expanding
    - Cyber threats, and
    - Managing its assets to ensure reliability and safety.

2.1.2 Feedback from customer engagement

46. From customer engagement, AusNet has deduced the following key themes in describing what customers expect:
    - Network resilience
    - Outage response communications and responsiveness
    - Information accessibility and ease of interactions, and
    - 'Future Networks' that facilitate customer participation in the energy transition.
47. From this, AusNet distils its strategy into eight themes as presented in Figure 2.1.

Figure 2.1: AusNet distribution business – ICT EDPR FY2027-31 themes



Source: AusNet ICT strategy and technology plan, figure 2 (page 12)

2.1.3 Summary of ICT strategic objectives

48. From these themes, AusNet derives its strategic objectives, which it lists as follows:

- Enhance our customer systems
- Modernise our operations capability
- Enhance our asset management systems, and
- Maintain resilient, secure and compliant digital systems.[3]

2.1.4 Observations on AusNet's ICT strategy

49. We consider that AusNet's ICT strategy as articulated in its Strategy and Technology Plan presents an appropriate identification of macro drivers and reasonable strategic objectives that relate to the identified macro drivers and to its customer feedback.

50. We observe that four of the eight 'themes' that AusNet identifies (that is Integrating Customer Energy Resources, Enabling Electrification, DSO and Enabling Renewable Generation) relate to enabling the energy transition. It could be considered that there is a degree of overlap between these but, regardless (and without downplaying the significance of the energy transition itself), AusNet's emphasis on this in defining its strategic objectives is notable. In our assessment we consider the extent to which these themes feature, and are adequately justified, in AusNet's proposed programs and expenditures.

51. We also observe references to improving outcomes, improving reliability and enhancing performance. To the extent that this is a driver of proposed increased ICT investment, and in line with AER's guidelines, we seek in our assessment evidence that AusNet has justified such improvements, and the additional investment proposed to achieve them, as compared with ongoing expenditure required to maintain current outcomes and performance levels.

[3] As above, page 13

2.2 Assessment of AusNet's forecasting methods

2.2.1 Overview

52. AusNet has applied a common method in forecasting its proposed ICT expenditure forecast, which we summarise as follows:

- For each project, AusNet has defined a number of 'line items' each of which typically reflects an aspect of functionality of the system, or an associated business or data-related process or initiative[4]
- For each line item, AusNet has defined a costing in each year, with each line item denoted as either capex or opex; the sum of these line costs defines AusNet's estimate of the total project, and
- In response to an Information Request, AusNet provided a further workbook in which it showed allocations between SCS and ACS and between Distribution, Transmission and Gas; AusNet provided this allocation information for each ICT project at a 'line item' level.[5]

2.2.2 Scope of each project

AusNet presents each project as comprising a number of 'initiatives'

53. In Figure 2.2 we illustrate how AusNet has defined the scope of each project, by reference to its proposed Asset Management project. This single 'project' comprises eleven capex initiatives and three opex line items.

[redacted]

AusNet's option assessments in its business cases tend to have minimal consideration of scope alternatives

54. In reviewing AusNet's business cases, the line items are presented as initiatives and there is a brief description of each initiative.[6] However, except by description of what is proposed,

4 Refer to the sheets for each project in AusNet EDPR 2027-31 Digital Program NPV model (Confidential) (17970751.1)

5 ASD – IR20 Q43 Digital Programs SCS ACS Split 250502

6 For example, AusNet business case for Asset Management, Table 7 (pages 12 and 13).

the business cases do not present evidence to justify the inclusion of each initiative in the proposed project scope. Nor does it provide information that allows consideration of the extent to which such initiatives are separable or inter-related. For example, it is unclear from the business cases:

- The extent to which certain (or all) initiatives may represent modules that can be optionally included in a solution, nor
- The extent to which certain initiatives may be foundational and/or dependent on predecessor initiatives before they can be deployed.

55. Significantly, the 'options analysis' presented in business cases tends not to explore, or to explore only at a rudimentary level, the merits of including each initiative. For example, for the Asset Management project, the only differences in scope between AusNet's Option 2 and Option 3 are that:

- Option 3 comprises 10 initiatives, compared with 11 in Option 2, and
- Of these, 9 initiatives are the same in Option 3, one is new ('new asset management platform') and two are deleted.

56. For this project, AusNet's option 1 assumes no initiatives at all, therefore zero cost and therefore adds nothing to understanding of the options genuinely available to AusNet in seeking to enhance its asset management.

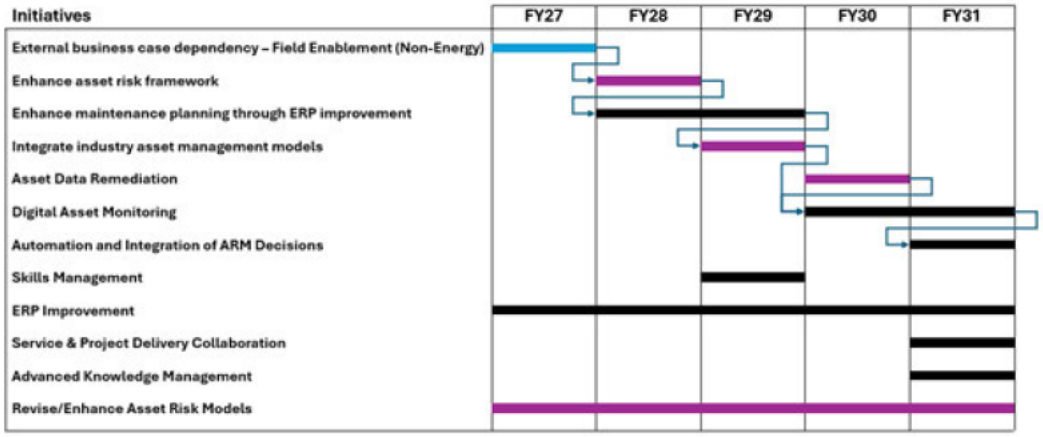
AusNet did not provide information on the inter-relationship between initiatives that would demonstrate its consideration of project options with alternative scope

57. We sought information from AusNet's CBAs that might assist with understanding the inter-relationship between the initiatives that it had included in each 'project'. For example, for the Asset Management project we sought information that would assist with understanding:

- The extent to which the 11 initiatives could potentially be bundled into discrete 'projects'
- Interdependencies, and
- Some form of mapping between the benefits quantified in AusNet's CBA against the initiatives, or to the four 'focus areas' that AusNet identifies in its business case.

58. AusNet responded with the following diagram showing the sequence and interdependency of initiatives. While this is useful in understanding the obvious complexities of this significant program of work, we are surprised that it does not appear in its business case. Moreover, we would expect analysis of such interdependencies to lead to consideration of the relative merits of each initiative, but AusNet does not appear to have done so.

Figure 2.3: Sequence and interdependency of initiatives in AusNet's proposed Asset Management project



Source: AusNet response to IR EMCa20, Q48 (b and c). AusNet notes in its response that those initiatives coloured purple represent those with mutual dependencies and categorised as 'ongoing/evolving requirements"

AusNet did not provide information that would enable consideration of the relative economic case for inclusion of the initiatives that it has proposed

59. We next sought to understand the extent to which AusNet had (or could) disaggregate benefits in its CBA, to align them with the initiatives and focus areas. It is not clear whether AusNet had previously sought to do so, since information in its business case provided no indication of it having reviewed the project from this perspective. Nevertheless, AusNet provided the following assessment in its response to our IR.

Table 2.1: Defining benefit streams for mapping to initiatives

ID	Benefit Stream
B1	Improved employee productivity – Standard
B2	Other direct opex improvement
B3	Customer value of outages (AST)

source: AusNet response to IR EMCa20, Q50

Table 2.2: Mapping of focus areas to initiatives and associated benefit streams

Focus area	Initiative	Benefit Stream
1. Risk framework, modelling and investment planning	Integrate industry asset management models	B2
	Revise/Enhance Asset Risk Models	B1, B2 & B3
	Enhance asset risk framework	B1, B2 & B3
2. Asset Data	Asset Data Remediation	B2
	Digital Asset Monitoring	B2
	Service & Project Delivery Collaboration	B1 & B3
3. Maintenance management	Enhance maintenance planning through ERP improvement	B2 & B3
	Automation and Integration of ARM Decisions	B1
4. Knowledge and skills	Skills Management	B1
	Advanced Knowledge Management	B1

source: AusNet response to IR EMCa20, Q50

60. There are complexities in seeking to unpack the benefits of an extensive and integrated project such as AusNet proposes. From the information that AusNet provides, with many-to-many relationship between initiatives and benefit streams, this is analytically not possible without further information to identify the extent to which different initiatives contribute to a given benefit. Nevertheless, we consider that the information AusNet has provided leads to a reasonable conclusion that it has not explored such options and therefore has not adequately justified the scope that it has proposed. AusNet effectively acknowledges this in its response to our IR on its proposed Asset Management project where it states that:

> *Under Option 3, it was assumed that AusNet would implement a new asset management system capable of delivering all required functionalities identified across the relevant initiatives.*

61. In other words, AusNet considered only two options (ignoring Option 1 'do nothing'), both of which have the same functional scope but which would differ only by how they are delivered.

Some initiatives included in proposed projects are immature with regard to defined incremental need, available offerings or both

62. Finally, and while not determinative in our assessment, we observe that for many projects there are initiatives proposed towards the end of the regulatory period, often with considerable cost, that appear to represent either ill-defined incremental needs or immature offerings. For example, AusNet refers in its response to our IR to having included some use cases involving '*new systems without incumbent vendors or where market offerings were still evolving.*'[7] In responding to our IR regarding its Asset Management project, AusNet refers to two of the eleven initiatives as follows:[8]

> *'As a FY31 initiative, the solution option is subject to a change prior to execution, introducing a degree of uncertainty. Implementation is planned post FY29'.*

63. For one of these, AusNet continues, saying that:

> *'The final approach will depend on maturity/availability of technologies at the time of implementation'.*

64. AusNet does not provide sufficient information to definitively identify such initiatives, however again we consider it a deficiency in its business cases that possible initiatives such as these have been effectively given equal weight within the aggregated projects that AusNet has proposed, alongside initiatives that may be more fundamental, which may deliver the majority of the proposed overall benefits and which, if selected, are likely to provide a more robust business case albeit at a lower cost.

2.2.3 Cost estimation

AusNet provided minimal information as to how it had derived its ICT cost estimates

65. AusNet provides no substantive information as to how it has estimated the costs of its proposed projects, in its Regulatory Submission or in its Technology Strategy and Investment Plan. Its business cases similarly provide no indication as to how it has costed what it proposes and typically contain only tables containing its annual estimates of capex and opex for each option.

66. As we have observed from AusNet's information that we have reproduced in Figure 2.2, AusNet's cost estimates are highly rounded and give the appearance of values that have been directly estimated, rather than having been calculated from some other source.

67. We therefore sought information from AusNet on its cost estimation methodology, through an Information Request[9] and we provide AusNet's response in Figure 2.4.

7 AusNet response to IT EMCa20, Q42(b)

8 AusNet response to IR EMCa20, Q48a. The two initiatives are Automation and Integration of ARM Decisions ($2.2m) and Advanced Knowledge Management ($3.0m). (Both costs in $2024)

9 IR EMCa20, Q42

Figure 2.4: AusNet's description of its ICT costing methodology

Derivation of ICT initiative costs

Further information in spreadsheet form (additional to the NPV model) on unit costs and quantifies is not available, as this is not how the digital initiative costs were derived.

Each of these initiatives has been individually cost-estimated based on the best available inputs (as explained in our response to the question below) and reflected in the NPV model.

ICT costing methodology

Costing was approached using a combination of methods tailored to the nature and maturity of each initiative. These cost estimation methods are broadly consistent with those applied at the last reset and are fit for purpose and reasonable, given the relatively early stage of project development for most business cases (as explained in our response to question 39 above).

- *Use Case 1: For projects where detailed design or implementation has commenced in the current period, we have leveraged the associated internal investment business case estimates e.g. ADMS Phase 3*
- *Use Case 2: For enhancements to existing systems, we used vendor quotes or historical pricing or project implementation cost data to derive cost estimates e.g. SAP Mobility licenses*
- *Use Case 3: For new or longer-horizon initiatives, particularly where vendor selection certainty was low, we relied on peer benchmarks, internal estimation frameworks and historical benchmarks from similar projects*
- *Use Case 4: The most challenging estimates were for new systems without incumbent vendors or where the market offerings were still evolving. In such cases, we relied on external strategic integration partners through a series of collaborative workshops, such as [redacted], who brought relevant domain experience implementing projects in similar environments.*

Source: AusNet response to IR EMCa20, Q42(a and b)

68. The first part of AusNet response confirms our understanding that there are not calculations that underlie and lead to AusNet's cost estimates; they are hard coded because (in $2024 terms) these are the raw values that AusNet has directly estimated. This understanding is also relevant when we consider project cost allocation to AusNet Distribution in section 2.2.4.

AusNet's project costings are largely estimates produced in workshops with its vendors and System Integrators

69. At our onsite meeting, AusNet referred to workshop processes that it held with its vendors as the source of the majority of its project costings. In its response to our IR, AusNet confirms this approach, stating that '…*across all programs we utilised our implementation partners,* [redacted] *for review and input to cost forecasts. Where possible, we engaged solution providers on specific programs* [redacted] *via a series of workshops to provide input into the cost forecasts.*'[10] For specific projects, AusNet refers to specific vendors; for example, in addition to its reference to GE above, in describing development of

[10] AusNet response to IR EMCa20, Q42(d)

the proposed functionality and associated costing for its 'Customer Experience' project, AusNet refers to workshops that it held with the vendor [redacted][11]

70. AusNet also confirms that its costings do not include overheads, risk allowances or contingencies, and that it has assumed the continued use of its existing delivery partners: [redacted].

AusNet's project costing methodology is likely to have resulted in an aggregate overestimation

71. In its build-up of estimated costs, such as we illustrate in Figure 2.2, we observe that even at the 'line item' level, cost estimates are highly rounded, with nearly all presenting as values rounded to whole millions of dollars, and all lines items being costed at multiple millions of dollars.

72. We also asked AusNet for information on the level of maturity of its cost estimates. In its response, AusNet advised that some initiatives were 'low' maturity and, as we would expect, this tended to align with initiatives that it is proposing towards the end of the next period. AusNet's cost estimations seem not to be derived from, or cross checked against, bottom-up resource-based estimates or specific nominated ICT benchmark projects undertaken by AusNet or specific (even if non-identified) information on costs for similar projects undertaken by other DNSPs, except for projects continuing from the current period.

73. We consider that a bottom-up build of project costs from a menu of numerous initiatives each of which is rounded to the nearest $m almost certainly results in an over-estimate. We consider it reasonable to assume that over the course of the next regulatory period, either:

- AusNet will find that it does not warrant undertaking all initiatives that it has proposed, or
- If it does achieve all functionality that it has proposed, then it will find cost synergies, for which the opportunities will become apparent as it develops a more refined and defined program.

AusNet's reliance on vendor workshop processes is another factor introducing likely bias towards overestimation

74. We consider that AusNet's significant reliance on vendors in a 'workshop' setting, for which no commitment is required on their part, is also likely to have biased its forecast towards (a) inclusion of more speculative scope items (as described in section 2.2.2), and (b) higher cost estimation at the level of individual initiatives, and which is then compounded in summing these to project totals.

2.2.4 Cost allocation

AusNet's cost information is at a 'project' level, and had not already been allocated to AusNet Distribution

75. Given the example of rounded cost estimates provided in Figure 2.2., we interpreted AusNet's information as the cost estimations for each 'project', not the cost estimation of AusNet distribution's *allocation* of the cost of the project. It was evident to us from the nature of some projects that they would likely be applicable across other services that AusNet provides, including electricity transmission and gas. However, we interpreted the business cases that AusNet provided as being for each defined 'AusNet' project, as we considered it implausible that a business case for a project providing an enterprise solution could be prepared based only on some form of allocation of costs and benefits to electricity distribution alone.

[11] AusNet response to IR EMCa20, Q45b

76. Given the significance of this aspect, we sought clarification from AusNet, asking it to demonstrate how it had allocated project costs between AusNet Distribution and these other services. AusNet responded as follows:[12]

> *We have provided the spreadsheet 'ASD - Digital Programs SCS ACS split 250502.xlsx', which breaks down the ACS/SCS cost allocation for all programs (noting that only the Metering program has an ACS cost component). This spreadsheet also details the cost allocation across our Distribution, Transmission, and Gas networks for both capex and opex initiatives within each ICT investment program.*
>
> *In reference to Question #2, the SCS capex totals for each program shown in this spreadsheet, represent the inputs to AusNet's SCS capex model.*

77. We reviewed the information in the spreadsheet that AusNet provided and we find that in that spreadsheet AusNet identifies the cost allocation for each project at the 'individual initiative' level, with percentage allocations of each 'line item' between AusNet Distribution, Transmission and Gas. Its workbook also shows the allocation between SCS and ACS (though all except metering are 100% SCS).

78. In Table 2.3 we illustrate the information that AusNet provided, again using the Asset Management project as an example. In this case AusNet's information shows that 78% of the 'totex' cost for this project would be allocated to AusNet Distribution.

[redacted]

AusNet has, it appears erroneously, proposed project ICT expenditure that in many cases is at 'enterprise level' and has not been allocated to AusNet Distribution

79. We then reviewed this information against AusNet's regulatory proposal and, in particular, the proposed ICT capex in its SCS capex model. However we find that in every case, AusNet's regulatory proposal proposes capex and opex that represents 100% of the costs of each project. This is confirmed by AusNet's statement in its response that " …*the SCS capex totals for each program shown in this spreadsheet represent the inputs to AusNet's SCS capex model*'. We find this statement to be correct; however, it demonstrates that the ICT cost forecasts that AusNet has proposed are not those that it has allocated to distribution, but rather, represent the total costs of the proposed AusNet project.[14]

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12 IR EMCa20, Q43

13 To better illustrate the allocation information, we have hidden columns in AusNet's worksheet that showed costs year by year.

14 We considered the possibility that AusNet's cost estimates might represent costs that it has already allocated. However, it is highly implausible that costs that have already been allocated by a precise percentage (such as 49% for Skills Management in the case above) would result in an 'allocated' cost estimate of exactly $3,000,000. We consider it similarly

80. On the other hand, we find that for the one project (Metering) that has an SCS/ACS allocation, AusNet has appropriately proposed only the SCS component in its AusNet Distribution SCS capex model (and therefore, as its proposed capex requirement).

From AusNet's information, we have derived allocations that would need to be applied in determining an alternative forecast for AusNet Distribution's SCS expenditure forecasts

81. From the information that AusNet provided, we derived an allocation for each project from the line item information, such as we illustrate in Figure 2.2, and which we show in Table 2.4. In our individual project assessments (in following sections), we note this as a factor in arriving at our finding as to whether a proposed expenditure meets the required regulatory criteria, and we consider that such information needs to be taken into account in proposing an alternative ICT forecast.

Table 2.4: Derived allocations of proposed ICT projects capex and opex, to distribution SCS

	Derived allocations for Distribution:	
Project	SCS Capex	SCS Opex
Recurrent capex projects		
TAM - Applications	78.9%	64.6%
TAM - Infrastructure	62.6%	N/A
Non-recurrent (business systems excluding CER)		
Asset Management	78.6%	69.6%
Customer Experience	95.6%	100.0%
ADMS	100.0%	100.0%
Field Enablement	93.0%	97.2%
Network Model Management	84.9%	83.2%
Non-recurrent - Market Reform		
Market Systems	100.0%	N/A
Metering Systems	28.2%	0.0%
Cyber security		
Cyber security	25.0%	25.0%
CER		
DSO	100.0%	100.0%

Source: EMCa, derived from AusNet response to IR EMCa20, Q43 (workbook providing allocations)

2.2.5 Benefits realisation

82. In its regulatory submission AusNet states that its proposed ICT expenditure will:

- Contribute to achievement of the 0.5% per annum productivity saving that has been assumed in its opex proposal, and
- Will achieve an additional $3.9m opex efficiency saving, which it has included as a negative step change.

83. Where relevant in our review of each project, we consider and seek to take account of realisation of opex savings that AusNet considers will result from them.

implausible that AusNet would prepare a business case for a 'project' on the basis that all costs and benefits in the business case have already been derived from an allocation of some higher cost and wider benefit, without any mention of this being the case.

2.2.6 Deliverability

What AusNet proposes

84. In its Technology Plan, AusNet claims that it can deliver the proposed program, with the following statement:

> *The proposed investment is in line with forecast expenditure in FY2025, with AusNet's Digital and Technology organisation having established the required internal and external resources and governance to efficiently deliver this level of activity. As a result, AusNet is suitably positioned to deliver the overall EDPR FY2027-31 proposal portfolio.*[15]

85. In presentation material for our onsite meeting, AusNet similarly states that '*(o)ur proposal is in line with program deliverability established in the current period*'.[16]

Assessment

We do not consider AusNet's forecast FY25 expenditure provides sufficient evidence of its ability to deliver a step increase in its program

86. While we note AusNet's ability to draw on resources from its SI partners ([redacted]) and, to an extent, vendors, AusNet's claimed ability to lift its delivery level based on extrapolating from its FY2025 forecast is not convincing, because this forecast investment level had not been delivered. Moreover, while significant ICT expenditure can be incurred rapidly in certain stages of large projects, particular where outsourced, it is more challenging to sustain this level of delivery for multiple years, particularly where it involves multiple such projects.

AusNet's proposal represents an ambitious tightly integrated capability uplift program that will present delivery challenges

87. AusNet's proposed ICT program is ambitious and covers intended extensive uplifts in AusNet's capability across what are essentially all significant domains, ranging from customer experience, through asset management and operations. Information that AusNet provided shows significant interdependencies between initiatives within these programs, and some interdependencies between programs (e.g. between ADMS, field enablement band network model management).

88. As we discuss in our assessment of AusNet's ADMS, we consider this project to be already delayed relative the timetabled initiatives in AusNet's proposal documentation. Moreover, much of the capability uplift that AusNet seeks from its ICT investment requires or involves changes to business processes and practices and this 'change management' element is a common source of delay that can then have flow-on effects on a tightly integrated program.

AusNet's information indicates common experience with delay, but also aggregate cost under-runs

89. As part of its regulatory submission, AusNet provided Post Implementation Reviews (PIRs) for ten ICT projects, and which it summarised in response to our information request on ICT deliverability.[17] We reproduce this information in Table 2.5.

90. As we show in this table, AusNet's ICT history indicates that its projects typically take longer than scheduled, but on average came in under budget.

15 AusNet technology strategy and investment plan, page 6

16 AusNet presentation to AER and EMCa, 4 April 2025 (page 10)

17 AusNet response to IR EMCa20, Q41

Table 2.5: ICT Delivery Performance

Project Name	Totex Variance	Schedule Variance	*Realised Benefit*
SDME Major Upgrade	+$4.24M (+96%)	11 (+52%)	*Risk & Safety – realised* *Organisational Efficiencies – realised*
Customer Initiated New Connections	+$1.41M (+24%)	2 (+17%)	*Customer Outcomes – realised* *Regulatory Compliance – realised* *Organisational Efficiencies – realised*
RES Delivery Model Mobilisation ICT	-$0.38M (–8%)	17 (+189%)	*Organisational Efficiencies – realised*
Automation of Network Access	+$1.03M (+15%)	4 (+33%)	*Customer Outcomes – realised* *Organisational Efficiencies – realised* *Risk & Safety – realised*
Project Nebula Cloud Migration	+$1.92M (+12%)	8 (+31%)	*Risk & Safety – realised* *Organisational Efficiencies – realised*
AOD to AHI Consolidation	+$0.22M (+4%)	1 (+7%)	*Risk & Safety – realised* *Organisational Efficiencies – realised*
ADMS Implementation – Phase 1	+$0.61M (+14%)	0 (0%)	*Customer Outcomes – realised*
Cyber Security Program	-$5.84M (–25%)	-10 (-29%)	*Risk & Safety – realised* *Regulatory Compliance – realised*
Market Compliance Program	+$0.34M (+5%)	3 (35%)	*Regulatory Compliance – realised*
Metering Compliance Program	-$15.50M (–18%)	3 (+12%)	*Regulatory Compliance – realised* *Customer Outcomes – realised*
TOTAL	**-$11.94M**		

Source: AusNet from response to IR EMCa20, Q43 and from information in AusNet Digital Post Implementation Reviews – 310125 – PUBLIC)

Findings

We consider that AusNet is unlikely to be able to deliver a program of the scale that it proposes, but that in any case such scale is not required

91. We consider that AusNet has not provided evidence that would reasonably substantiate its claim that it can deliver an ICT program within the next regulatory period of the scale that it has proposed.

92. In our assessments in subsequent subsections of AusNet's proposed projects, we consider that most of AusNet's proposals to varying extents reflect a bias towards project scopes that are more extensive than is justified and that a prudent and efficient work program will be less extensive than what AusNet has proposed. When we consider this in conjunction with AusNet's claims regarding deliverability, we consider that AusNet will be able to deliver a targeted program of ICT that, while less extensive than it has proposed, will substantially address the uplift requirements that it has identified.

2.2.7 Summary findings on AusNet's ICT expenditure forecasting methodology

93. We consider there to be significant shortcomings in AusNet's forecasting of its proposed ICT expenditure. We consider that:

- There is a bias towards over specifying the range of initiatives that may be justified and overestimating the aggregate cost of such initiatives. We consider that this overestimation bias may be significant for some projects, and
- For projects with a wider span than just AusNet distribution, AusNet has not applied in its forecast expenditure requirements the allocation percentages that it has advised it will apply to the project expenditure when it occurs.

94. We take note of AusNet's advice that it has taken account of benefits realisation and consider this again following our consideration of the costs and benefits of its proposed ICT program.

3 REVIEW OF PROPOSED ICT EXPENDITURE

In this section, we provide our assessment of the major elements of AusNet's proposed ICT program.[18] Our assessment is based on information that AusNet provides in business cases for non-recurrent expenditure and for each non-recurrent project, supplemented by information that AusNet provided in response to a series of Information Requests.

For each project, AusNet has reasonably identified a need for a degree of uplift. Moreover recent 'platform' investment it has made can provide it with a capability to do so. However, several generic issues contribute to our finding that AusNet's ICT proposal is not a reasonable estimate of a prudent and efficient forecast. These include overstatement of a justified level of scope, high-level costings that are biased towards overestimation, unconvincing evidence of ability to deliver a program that would represent a significant increase on current and recent investment levels and a lack of allocation of forecast project costs (where required) to AusNet Distribution. For these reasons, we consider that AusNet's proposed ICT capex is significantly overstated.

We consider that the majority of AusNet's proposed ICT opex step change is not required, with the main reason being that AusNet forecasts business opex savings that will obviate the need for ICT opex step changes.

3.1 Introduction

3.1.1 Overview of this section

95. In this section, we present our assessment of AusNet's proposed ICT expenditure.

96. In section 3.2we summarise what AusNet has proposed, and the way in which we have categorised the proposed projects in our assessment.

97. In subsequent sub sections we assess AusNet's proposed projects and expenditure items, which we have grouped as follows:

- Recurrent expenditure (Technology Asset Management)
- Non-recurrent projects (core business-related systems), which we identify as comprising:
  - Asset risk management
  - Customer experience
  - Field enablement
  - ADMS (ICT and OT)
  - Network model management, and
- Market reform and metering projects:
  - Market Interface Technology Enhancement (MITE)

[18] In this section, we exclude its cyber security program, which is assessed in section 3, and CER-related ICT and repex-related ICT which are reviewed in our companion Technical report.

- Metering SCS recurrent capex.

98. For completeness, we then refer to two projects that we review in our accompanying 'technical' report, being:

- DSO Hub (reviewed as part of CER)
- Conductor clearance (3D model/LiDAR) (reviewed as part of AusNet's conductor clearance repex programme).

99. Within our ADMS ICT assessment, we also assess the associated OT investment that AusNet has proposed.

3.1.2 Review information

100. AusNet provided business cases for each project and for its proposed recurrent expenditure and we have relied on these as our primary reference material.

101. AusNet also provided a 'Digital Program NPV model' which contains its cost information for each initiative or line item within each project, and (to the extent that it has quantified project benefits) its calculation of project NPVs.

102. We found the information in AusNet's business cases to provide insufficient and, in some cases, unclear information on each project. Following our onsite meeting, we compiled an information request (designate IR EMCa20) with over 40 queries on ICT aspects of AusNet's proposal. AusNet responded progressively to these queries, with the last not provided until mid-May. Nevertheless, we appreciated AusNet's responses to these queries, which reasonably addressed our queries and provided useful information to support our assessment.

3.2 What AusNet has proposed

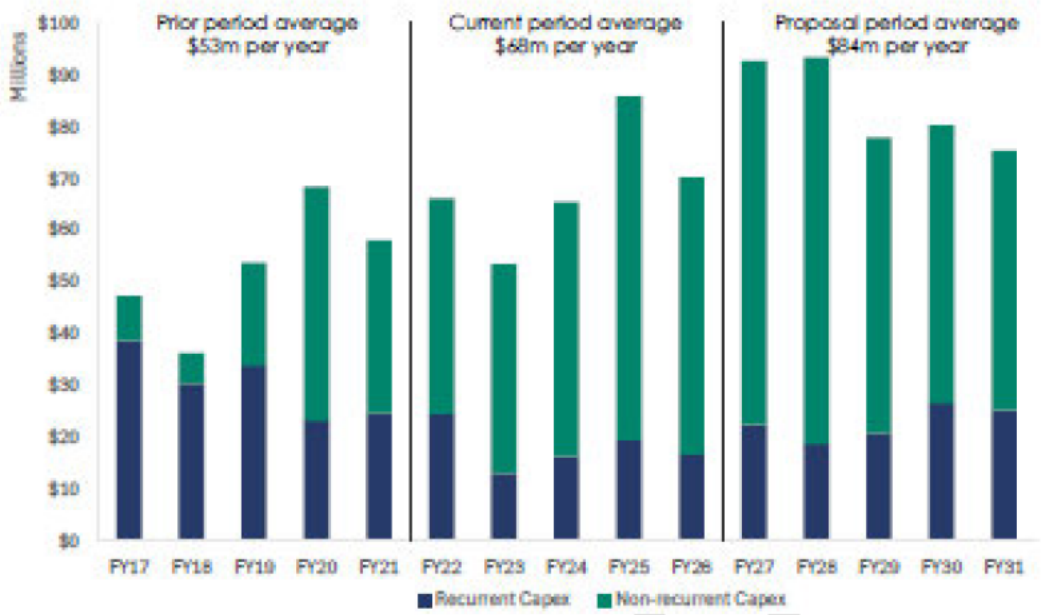
3.2.1 Background: AusNet's ICT capex expenditure trend

103. AusNet's proposed ICT capex, shown in Figure 3.1, represents an increase of $16m per year over its current period expenditure averaging $68m per year, and which was also significantly more than in the previous period.[19] In its Technology Strategy and Investment Plan, AusNet also references its forecast expenditure in 2025 as evidence that it has *'….established the required internal and external resources and governance to efficiently deliver this level of activity.'*[20]

[19] AusNet presents this information in $2024

[20] As above, page 6

Figure 3.1: Total AusNet ICT capex investment trend (recurrent and non-recurrent) ($real 2024)



Source: AusNet EDPR – Technology Strategy and Investment Plan (January 2025), figure 2 (page 6)

104. We also observe that AusNet's trend information shows a significant decline in recurrent capex from the prior period to the current period, though its forecast for the next period would lead to this increasing again.

3.2.2 Proposed expenditure for next regulatory period

105. As shown in Table 3.1, AusNet proposes expenditure of $418.8m capex on ICT in the next period, together with a $39.9m opex step change (in $2026).

106. The proposed recurrent projects and programs cover its proposed requirements for recurrent applications and infrastructure. Its proposed non-recurrent projects and programs span a range of systems that AusNet seeks to justify based on internal 'business' drivers, together with systems required to comply with NEM reform initiatives, a CER-related ICT project and its cyber security program. One ICT project is driven by a repex program (LiDAR for conductor clearance).

107. In the current section, we review AusNet's proposed recurrent and non-recurrent 'business' systems expenditure and the two systems which are required for market reforms. We review other projects and programs as follows:

- The CER-related ICT project (DSO/Future Services Hub) is reviewed in our separate 'technical' report, along with other elements of AusNet's CER program (which involve augex), and
- ICT involving LIDAR to support AusNet's proposed conductor clearance program, is also reviewed in our 'technical' report, within the repex section.

108. As part of its non-recurrent ICT program, AusNet proposes an ADMS project. This has both an ICT component (which is included in ICT expenditure shown in Table 3.1) and also an OT component (additional $3.7m capex). Together these comprise the ADMS project, and we review the project as a whole in the current section.

Table 3.1: AusNet proposed ICT projects and expenditure - $m, real 2026

ICT projects	Capex	Opex step change	Total
ICT – Recurrent (TAM)			
04 Business Systems (TAM - Systems)	67.3	4.0	71.3
05 Hardware (TAM -Infrastructure)	32.7	-	32.7
Subtotal	100.1	4.0	104.0
ICT- Non-recurrent (Business systems excl CER)			
06 Asset Risk Management	79.3	3.3	82.6
07 Customer engagement platform	45.3	1.5	46.8
10 ADMS Energy Management (IT portion)	27.9	13.7	41.6
11 Field Enablement ERP	18.8	10.7	29.5
12 Network Model Management Geospatial and asset model tools	42.7	1.3	44.0
Subtotal	214.0	30.6	244.6
ICT- Non-recurrent (Market reform and metering)			
13 Market systems (non-recurrent)	20.2	-	20.2
17 Metering systems (recurrent)	5.1	0.4	5.4
Subtotal	25.3	0.4	25.7
ICT - Cyber security (Reviewed in cyber security report)			
08 Cyber security	27.5	1.8	29.4
Subtotal	27.5	1.8	29.4
ICT – Non-recurrent CER (Reviewed in Technical report, under CER)			
14 DSO/Future Service provider hub	40.8	3.2	43.9
Subtotal	40.8	3.2	43.9
ICT – (Reviewed in Technical report, under repex)			
Conductor clearance compliance (3D Model/LiDAR)	11.2	-	11.2
Subtotal	11.2	-	11.2
TOTAL - ICT	**418.8**	**39.9**	**458.7**

Source: AusNet SCS capex model and EMCa analysis from AusNet Accumulated workbook for opex and step changes

109. In Table 3.2 we show the proposed capex year by year, by project group subtotals. For individual project expenditure year by year, please refer to each of the individual project assessments.

Table 3.2: Proposed capex year by year by project group - $m, real 2026

Project grouping	2026-27	2027-28	2028-29	2029-30	2030-31	Total
Recurrent	15.5	16.9	23.7	21.6	22.4	**100.1**
Non-recurrent (Business systems excl CER)	47.5	48.9	49.1	34.6	34.0	**214.0**
Non-recurrent - Market Reform	8.2	13.7	2.5	0.9	0.0	**25.3**
Cyber security (assessed in separate report)	5.4	5.5	5.5	5.5	5.6	**27.5**
CER	11.5	11.5	4.4	10.0	3.4	**40.8**
Repex-related (3D model/LiDAR)	3.2	2.6	2.2	1.8	1.3	**11.2**
Total ICT	**91.2**	**99.1**	**87.4**	**74.4**	**66.7**	**418.8**

Source: AusNet SCS capex model

110. In Table 3.3 we show AusNet's proposed opex for each project for which AusNet proposes an opex step change amount.

Table 3.3: AusNet's proposed ICT opex step changes - $m, real 2026

	2026-27	2027-28	2028-29	2029-30	2030-31	Total
Recurrent - TAM Apps	0.5	0.9	0.9	0.9	0.9	4.0
Non-recurrent projects (Business systems excl CER)						
ADMS	1.1	2.8	3.2	3.2	3.2	13.7
Asset management	0.0	0.0	0.5	1.4	1.4	3.3
Customer engagement	0.0	0.2	0.4	0.4	0.4	1.5
Field enablement	1.9	2.2	2.2	2.2	2.2	10.7
Network Model management	0.0	0.2	0.2	0.4	0.4	1.3
Subtotal - Non-recurrent	3.1	5.4	6.6	7.7	7.8	30.6
Non-recurrent project - Market Reform (Metering systems)	0.0	0.1	0.1	0.1	0.1	0.4
CER (DSO)	0.0	0.8	0.8	0.8	0.8	3.2
Cyber security[21]	0.0	0.2	0.4	0.6	0.7	1.8
Total ICT	**3.6**	**7.4**	**8.7**	**10.0**	**10.2**	**39.9**

source: EMCa table, derived from AusNet model: ASD – AusNet – Accumulated Workbook for Opex and Step Changes – 31 Jan 2025 - PUBLIC

3.3 Assessment: Recurrent expenditure

3.3.1 Overview of proposed ICT recurrent expenditure

111. As we show in Table 3.4, AusNet proposes $100.1m for the next RCP for recurrent ICT capex, which is comprised of both infrastructure and applications for Technology Asset Management (TAM).

112. AusNet also proposes a $4m opex step change associated with this proposed recurrent ICT capex.

[21] Assessed in separate report.

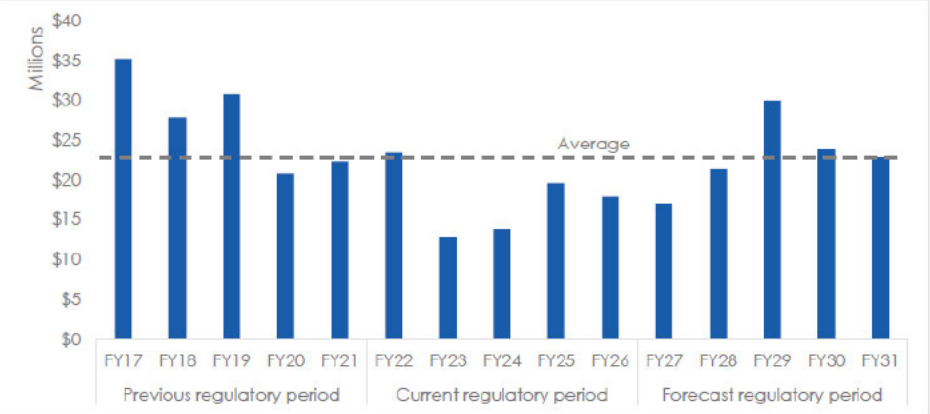
Table 3.4: AusNet proposed recurrent ICT capex - $m, real 2026

Recurrent ICT capex	2026	2027	2028	2029	2030	TOTAL
Business Systems (TAM - applications)	8.3	10.5	17.8	15.1	15.7	67.3
Hardware (TAM - infrastructure)	7.2	6.5	5.9	6.5	6.8	32.7
Total	**15.5**	**16.9**	**23.7**	**21.6**	**22.4**	**100.1**

Source: AusNet SCS capex model

113. AusNet provided data that shows the long-term trend of its recurrent ICT capex in Figure 3.2. The decrease in expenditures for the current regulatory period arises because AusNet has moved some of recurrent ICT capex to cloud-based products. The expenditures for products already migrated to the cloud are included in base year opex.

Figure 3.2: Comparison between AusNet recurrent ICT capex forecast and historical - $m, real 2026



Source: TAM Infrastructure Business Case, pg.7

114. As can be seen in the time trend graph, AusNet's proposed expenditure from 2028 would represent a material increase relative to expenditure for the five years prior.

3.3.2 Assessment of Business Systems (TAM - Applications)

What AusNet proposes

115. AusNet proposes a total of $67.3m for TAM applications. As shown in Table 3.5, AusNet's proposed expenditure is derived by summing its estimated expenditure for upgrades or refreshes of 18 specific applications.

Assessment

Trend analysis shows that AusNet's proposed expenditure represents a significant increase

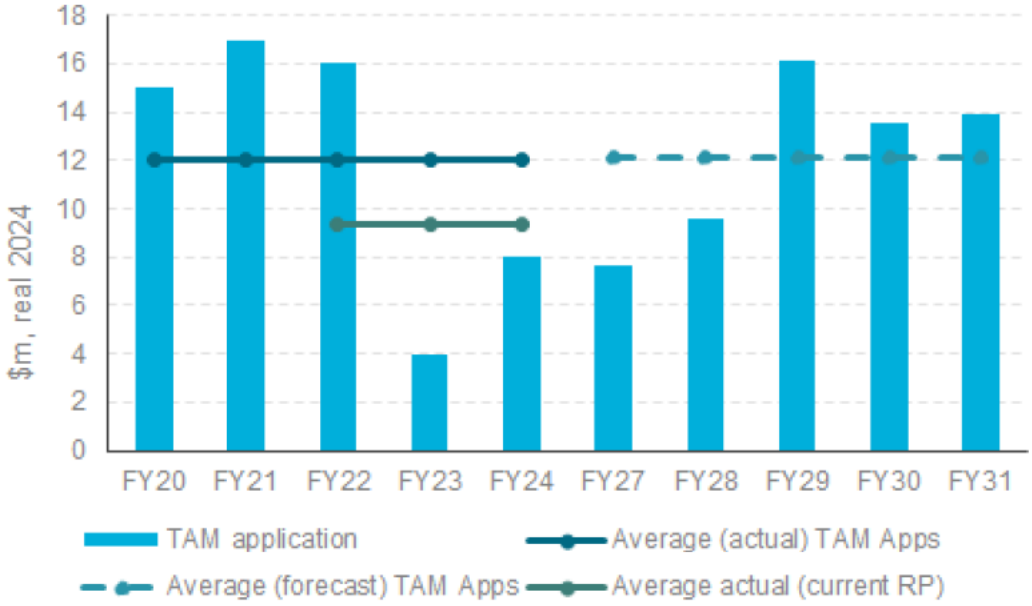
116. In its business case, AusNet provides a graph showing its long-term recurrent ICT trend expenditure. However, this figure refers to all recurrent ICT (i.e. applications and infrastructure). We therefore sought trend information for ICT applications expenditure only. AusNet provided this only in the form of a graph, in which numbers were rounded to the nearest $million.[23] We have necessarily relied on this information for historical expenditure, but for AusNet's forecast expenditure we used the more accurate data in its regulatory submission documents.

117. We show the resulting trend in Figure 3.3.

[22] Line items with asterisks (*) are applications that we have identified for which AusNet also proposes non-recurrent capex, which we assess in section 2.6.

[23] AusNet response to IR EMCa020, Q60

Figure 3.3: AusNet ICT (TAM applications), historical (actual) and forecast - $m, real 2024[24]



Source: EMCa graph derived from AusNet response to Information Request (IR#020 – Q60) and AusNet's ICT NPV model.

118. The graph shows the declining trends particularly in 2023 and 2024 because AusNet has proactively moved to cloud-based products rather than renewing on-premises solutions, meaning that a substantial proportion of those costs have moved from capex to opex. AusNet's TAM applications forecast for next RCP is 30% higher than its average of the three years for which actual expenditure is available in the current RP (2022-2024).

119. With regard to cloud migration, AusNet states:

> *'In the current period we have continued our simplification strategy by identifying areas where technology can be simplified to reduce complexity and cost by removing waste. This included further reducing data centre footprint and cloud optimisation. While no further focused cloud migration programs are planned in the coming period, we have noted a trend of some vendors to migrate their products to the cloud, requiring transition in order to maintain currency (even if not justified from a cost-benefit basis).'*[25]

120. While increased expenditure in the next period is not determinative in our assessment, the extent of the increase suggested a need for closer scrutiny given that:

- It is reasonable to expect that recurrent ICT expenditure is relatively stable over periods of around five years, given the need for refresh and version upgrades that are typically on cycles of around this timeframe, and
- As we have referred to above, absent factors to the contrary, migration to the cloud should result in decreased capex to the extent that it is subscribed as a service through opex, and consistent with AusNet's statement that it has sought to simplify its ICT suite.

AusNet's preferred option is the best of the three that it has defined, but is not a reasonable basis for its forecast

121. AusNet has provided a business case and associated model in which AusNet has assessed three options:

- Option 1 - Actively manage without vendor support.
- Option 2 – Perform updates, patches and bug fixes (recommended option), and

[24] The graph does not include FY2025 & FY2026 because both have not yet occurred.

[25] AusNet TAM – Applications business case, page 6

- Option 3 - Perform lifecycle refreshes of only critical operating systems.

122. The forecast costs associated with each option are shown in Table 3.6.

Table 3.6: Forecast expenditure for options - $m, real 2024

Cost item	Option 1	Option 2	Option 3
Capex	24.3	60.8	45.2
Opex	23.8	3.7	9.7
Total	**48.1**	**64.5**	**54.9**

Source: EMCa table derived from TAM infrastructure BC table 4 & 5

123. We consider that AusNet has made a reasonable judgment on a risk basis that option 3, as AusNet has defined it, would not be a prudent trade-off against the increased risk. Nevertheless, we consider that AusNet's reliance on vendor-driven lifecycles as the means by which it has identified its forecast requirements under option 2 also does not represent a prudent approach; we consider it likely that AusNet will at least find selective opportunities to extend lifecycles and to apply a degree of prioritisation in determining what to upgrade and when.

124. AusNet proposes $15.7m of TAM applications recurrent expenditure to be incurred in 2031. This represents 23% of its proposed expenditure for the period. We consider it likely that AusNet will find opportunities to prudently defer some of these upgrades in which case they will not occur in the next regulatory period. While we would not prefer option 3 over option 2, we nevertheless consider that option 3 does provide some indication as to how AusNet might determine opportunities for deferral, and the impact that this would have on its forecast requirement.

Linkages between recurrent upgrades and non-recurrent enhancements will also result in savings to recurrent expenditure

125. From AusNet's list of eighteen applications for recurrent upgrades, we recognise eight of these as applications for which AusNet has also proposed non-recurrent enhancements, many of which are significant.

126. In some cases, the upgrades may be required to provide a future-ready platform for the non-recurrent enhancement, but we also expect there to be instances where the upgrade and the enhancement can be bundled, providing expenditure efficiencies. There may also be instances where non-recurrent enhancements to some applications carried out in the early years may avoid the need for further recurrent expenditure on that same application, within the remainder of the regulatory period.

127. For both reasons, we consider that as AusNet prudently manages its ICT applications suite, it will find efficiency opportunities relative to what it has currently proposed.

Aggregate cost estimate is likely overstated

128. As we noted in section 2.2, AusNet's costs for each 'line item' in its TAM Applications proposal, are highly rounded. AusNet has entered these amounts in $2024 terms and has advised that it does not have underlying calculations or evidence for these values. Most cost estimates are rounded to whole millions, or half millions, and we note especially the following allowances, given their significance:

- $5.00m for ERP
- $18.00m for ADMS (including ADMS – Calltaker)
- $10.00m for DERMS, and
- $4.00m for 'other business systems.'

129. We consider that the aggregate of such estimates will overstate the requirement.

Allocation to AusNet Distribution is not accounted for

130. AusNet's proposed TAM – Applications expenditure is presented as an overall AusNet requirement. As we have noted in section 2.2.4, we sought information from AusNet on its allocation of ICT to AusNet Distribution. AusNet provided this information,[26] but we find that the expenditure that it proposes for AusNet Distribution is the same as it has costed for AusNet overall.

131. In Table 3.7, we have applied the allocation percentages that AusNet provided in response to our Information Request, and which results in capex that is 21% less than AusNet has proposed.

[redacted]

Some increase in opex is reasonable, but the amount AusNet proposes is overstated

132. AusNet has proposed two opex step change line items:

- ADMS – Calltaker ($[redacted] total over the period, in $2024), and
- Forced migration to cloud solutions ($2.6m total over the period, in $2024)

133. While AusNet's business case confirms (as we would expect) that its ADMS supports its call centre function,[27] AusNet provides no information to support its proposed opex step change for 'ADMS - Calltaker'.

134. With regard to 'forced' cloud migration, we note AusNet's statement in the quotation referred to in paragraph 119. On the basis that recurrent capex should be less than what AusNet has

[26] IR EMCa20, Q43

[27] AusNet TAMS – Applications business case, page 8

proposed, we consider it reasonable that AusNet will incur additional opex, however any allowed amount should also take account of the TAM applications allocation to distribution (as shown in Table 3.7). The net amount after taking account of this would be relatively small – of the order of less than $2.0m in total over the period.

Findings

AusNet's proposed recurrent capex for TAM - Applications is significantly overstated

135. AusNet's proposed recurrent ICT on TAM – Applications would be 30% higher than its average expenditure in the current period actual. We consider that AusNet's proposed amount is significantly overstated. Our finding is based on assessment from the following factors:

- From industry experience, we consider that AusNet will find that it has a lower requirement by adopting a prudent upgrade strategy, including prioritising which applications to upgrade and seeking opportunities for prudent risk-aware deferrals
- The aggregate of cost estimates incorporates an upward bias that is not supported by specific quoted experience or by market evidence
- Cost allocation to distribution has not been applied, and
- Non-recurrent developments and enhancements of some of the same systems, will result in some cost synergies.

AusNet's proposed recurrent opex step change for TAM - Applications is overstated

136. We consider that AusNet has not provided supporting justification for its proposed step change for ADMS – Calltaker. AusNet may require some additional opex for 'forced' migration to the cloud, however due to allocation this would be less than AusNet has proposed.

3.3.3 Assessment of ICT Hardware (TAM infrastructure)

What AusNet proposes

137. AusNet proposes a total of $32.7m for TAM infrastructure capex for the next RCP. As shown in Table 3.8 below, AusNet's forecast is the sum of forecasts for eleven line items.

138. AusNet does not propose any opex step change requirement for TAM infrastructure.

Assessment

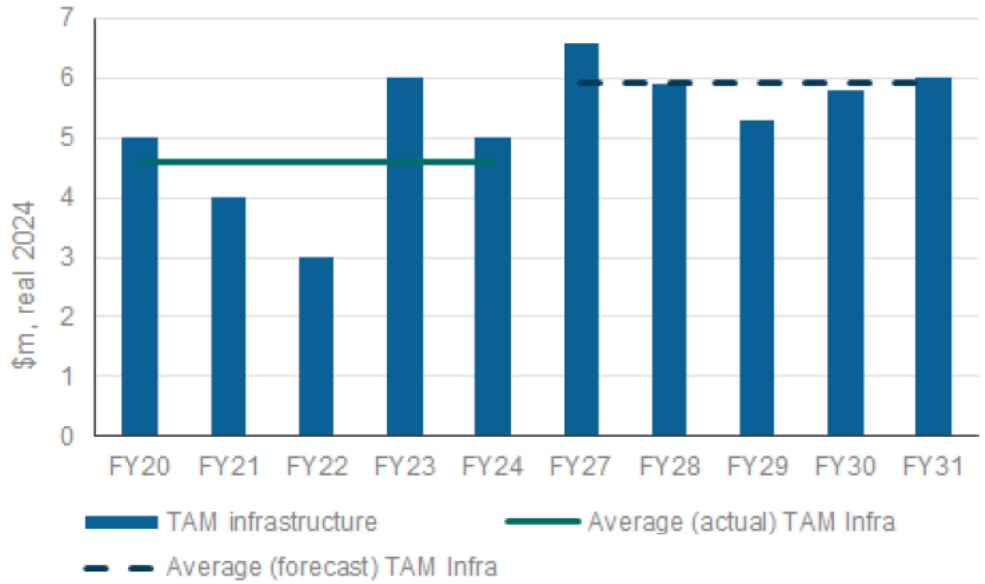
Trend analysis shows that AusNet's proposed expenditure represents a material increase

139. In its business case, AusNet provides a figure showing its long-term recurrent ICT trend expenditure. However, this figure refers to all recurrent ICT (i.e. applications and infrastructure). We therefore sought trend information for ICT infrastructure only. AusNet provided this only in the form of a graph, in which numbers were rounded to the nearest $million.[28] We have necessarily relied on this information for historical expenditure, but for AusNet's forecast expenditure we used the more accurate data in its regulatory submission documents. We show the resulting trend in Figure 3.4.

140. Based on this information, we find that on average, AusNet's proposal for recurrent ICT infrastructure is $1.3m per year (in $2024) or 29% higher than its actual expenditure in the previous five years.

[28] AusNet response to IR EMCa020, Q60

Figure 3.4: AusNet ICT (TAM) infrastructure, historical (actual) and forecast - $m, real 2024[29]



Source: EMCa graph derived from AusNet response to Information Request (IR#020 – Q60), and AusNet's ICT NPV model.

141. While the recurrent ICT graph in AusNet's business case reflects different data to what it provided for infrastructure only, as above, AusNet provides a useful descriptive trend summary that does appear to relate to ICT infrastructure, as follows:[30]

> *In the FY2022 to 2026 regulatory period we completed a program to proactively move to cloud-based products, rather than renewing on premises, where this was assessed as prudent after taking into consideration system criticality and security, and the costs of migration and ongoing opex. Our proposal reflects this revised footprint, with associated lower recurring capex.*
>
> *However, in the current period we have also implemented a number of significant new services such as Advanced Distribution Management System (ADMS) and Distributed Energy Resources Management System (DERMS). This increased demand in services, with associated infrastructure, will see increase in recurrent capex as currency of these systems is maintained.*

142. While AusNet's explanation suggests an expectation of a need for increased expenditure in the next period, this does not in itself validate the quantum of its proposal and we investigate other aspects of AusNet's proposal in our assessment below.

AusNet's preferred option is the better of the two that it has defined, but is not a reasonable basis for its forecast

143. AusNet has provided a business case and associated model in which AusNet has assessed two options:

- Option 1 - actively manage risks by operating infrastructure beyond vendor support or end of life, and AusNet will take the risk of managing systems.
- Option 2 - to refresh infrastructure at the end of vendor support or end of life in line with vendor recommendations (recommended).

[29] Data that AusNet provided for FY25 and FY26 is not shown on this graph and not included in our analysis, as it is not actual expenditure, and neither is it AusNet's forecast for the next period. We also noted that the forecast data that AusNet provided in this trend data series does not match exactly with the data in its business case (for example, table 5) or associated NPV model.

[30] AusNet business case for TAM – Infrastructure (page 7)

144. The forecast costs associated with both options are shown in Table 3.9 below.

Table 3.9: Forecast expenditure for option 1 & 2 - $m, real 2024

Cost item	Option 1	Option 2
Capex	11.8	29.6
Opex	9.8	
Total	**21.6**	**29.6**

Source: EMCa table derived from TAM infrastructure BC table 4 & 5

145. AusNet states that it has recently transformed its ICT infrastructure and that its assumed replacement cycle is vendor-driven:

> *'We are on course to progress this transformation in the current FY2022-26 period, having managed, modernised and evolved our ICT capability in line with established practices over the last 20 years.'*[31]
>
> *Costs …represent forecast capex for upgrades and replacements of infrastructure at time-intervals consistent with vendor recommendations.'*[32]

146. Given the two options that AusNet has defined, we consider that it is preferrable to err towards an approach similar to Option 2. However, as with our assessment of AusNet's proposal for TAM Applications, and given the recent transformation of its infrastructure, we consider that AusNet will find opportunities, following more granular risk assessment, to prioritise upgrades and replacements on a case-by-case basis and from this, to prudently extend the lifecycle of certain infrastructure.

Aggregate cost estimation is likely slightly overstated

147. AusNet provides minimal information as to how it has estimated the costs of upgrades. In its business case AusNet states:

> *'Our capital expenditure forecasts for the 2027-31 period are based on operating experience-based assessment of replacement cycles and costs for our existing infrastructure.'*[33]

148. As we noted in section 2.2, AusNet's costs for each 'line item' in its TAM Infrastructure proposal, tend to be rounded, though not to the extent that we observe in other AusNet non-recurrent ICT business cases. Notable amounts which give the appearance of 'placeholders' in this instance [redacted].

149. On balance, we consider that AusNet is likely to have a reasonable understanding of infrastructure upgrade and replacement costs, due to the ongoing nature of such work and the more significant uncertainties are likely to lie in the scale and timing of such work.

Allocation to AusNet Distribution is not accounted for

150. In its business case, AusNet states that its on-premises data centres in Richmond and Rowville are used to support the operating technology applications and systems for AusNet's transmission and distribution electricity networks. However, AusNet Distribution's SCS capex model, which is consistent with its distribution SCS proposal, includes 100% of its forecast TAM infrastructure expenditure.[34]

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31 AusNet business case for TAM infrastructure, page 6. The text comes below a table 'ICT infrastructure journey'

32 AusNet business case for TAM Infrastructure, page 11

33 AusNet business case for TAM – Infrastructure, page 8

34 ASD – AusNet EDPR 2026-31 – SCS Capex Model 310125 – PUBLIC, tab Calcl Project Cost Row 159BZ

151. In response to our Information Request, AusNet provided information as to how its ICT infrastructure costs will be allocated to AusNet Distribution. As shown in Table 3.10 below, if we apply AusNet's allocation percentages to its business case forecast, the AusNet distribution component of its ICT infrastructure forecast for the next RCP would be $20.5m, which is 37% less than the $32.7m that it has proposed.

Findings

AusNet's proposed recurrent capex for TAM – Infrastructure is significantly overstated

152. We consider that AusNet's forecast requirement is not a reasonable forecast of the prudent and efficient requirements of its distribution business.

153. We consider that AusNet's forecast is not based on a prudent option, which would allow it to extend lifecycles for some infrastructure on a risk basis. However, our main concern is that AusNet's information now indicates that 37% of its forecast expenditure is not required for its distribution business.

154. A lesser concern is that AusNet's forecast includes several significant assumed hardware upgrades and replacements that are for relatively new systems, and it may find that these upgrades are smaller in scope.

155. In combination, for these reasons we consider that AusNet's proposal is significantly overstated.

3.4 Assessment: Non-recurrent projects (Business systems excluding CER)

3.4.1 Overview of proposed ICT non-recurrent expenditure

156. In this subsection we provide our assessment of the five proposed non-recurrent projects that we consider represent the core 'business systems' within AusNet's proposal. Of the total non-recurrent projects proposed, this excludes two Market Reform projects, which we

assess in section 3.5, also a CER ICT project (DSO hub) and a repex-driven ICT project (LIDAR for conductor clearance compliance) both of which we review in our separate technical report.

Proposed capex

157. In Table 3.11 we present the proposed ICT capex for the five projects reviewed in this section. In addition to the ICT capex shown in this table, the ADMS project includes an OT component at a proposed cost of $40.3m, and which we assess as an integral part of that project.

158. We further assess AusNet's proposed opex step changes associated with each of these projects in the current section, and which sums to $29.0m for these projects.

Table 3.11: AusNet proposed non-recurrent ICT capex for 'business' related systems - $m, real 2026

Non-recurrent ICT capex	2026	2027	2028	2029	2030	TOTAL
Asset Risk Management	3.4	18.8	17.2	22.2	17.7	79.3
Customer engagement platform	9.8	9.9	9.9	4.5	11.2	45.3
ADMS Energy Management (IT portion)	7.9	9.3	8.3	1.7	0.7	27.9
Field Enablement ERP	10.5	3.3	1.7	3.3	0.0	18.8
Network Model Management Geospatial & asset model tools	15.9	7.7	12.0	2.9	4.3	42.7
Total	**47.5**	**48.9**	**49.1**	**34.6**	**34.0**	**214.0**

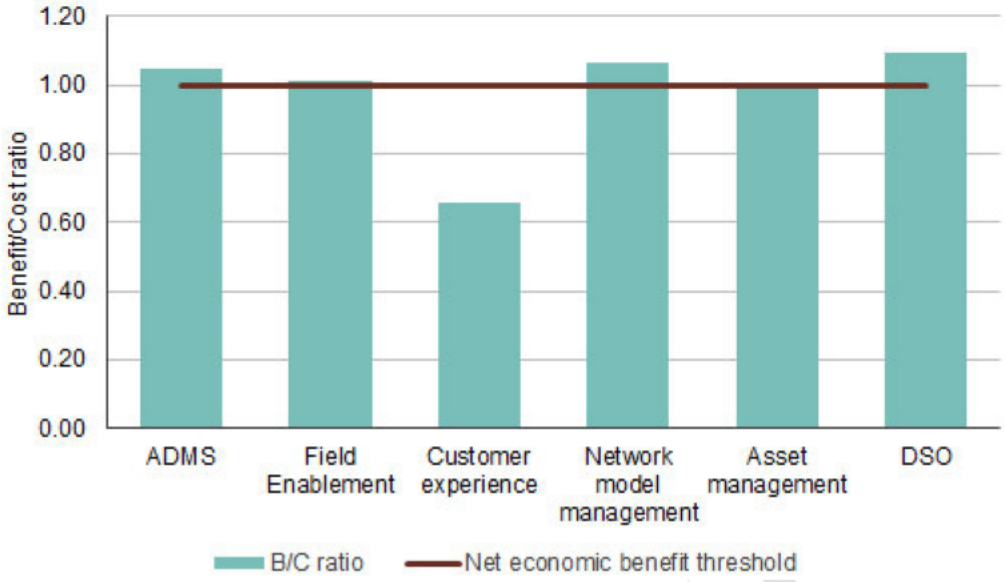
Source: AusNet SCS capex model

AusNet's economic analysis

159. In Figure 3.5 we show the Benefit:Cost ratios for the non-recurrent projects that AusNet has proposed.

160. As can be seen here, one project has a negative NPV (B:C ratio<1.0) and for the remainder, the ratio is only marginally positive. This led us to consider, in assessing each project, the extent to which the project was realistically likely to provide a net benefit. It also led us to consider the extent to which the economic assessments may be burdened by the inclusion of low maturity elements of scope, that were adding to cost but without clear articulation and inclusion of sufficient economic benefits and whether, therefore, a project comprised only of more mature scope elements might provide a more compelling economic outcome.

Figure 3.5: Project Benefit/cost ratios



Source: EMCa analysis from AusNet's NPV model. Ratios are PV Benefits / PV costs

3.4.2 Asset Risk Management project

What AusNet has proposed

Project objective and drivers

161. AusNet proposes a significant ICT project to uplift its asset management capability, which it claims to be required to be consistent with peer DNSPs. [35]

162. AusNet presents the drivers of this investment as resulting from:

- Ageing network infrastructure
- Limitations of its current tools
- Escalating risks, and
- Customer expectations of reliability and resilience.

163. AusNet explains that in the current period it has been investing in asset management systems and processes utilising in-house risk modelling tools and systems, but that the SAP S4/HANA upgrade currently being implemented will provide the foundational platform to enhance AusNet's asset management processes.

Proposed expenditure

164. AusNet proposes the forecast capex and forecast opex step changes shown in Table 3.12 for this project.

[35] AusNet business case for Asset Management Systems, January 2025. Page 3

Table 3.12: AusNet's proposed expenditure for ICT AsseIt Management project - $m, real 2026

	2026	2027	2028	2029	2030	TOTAL
Capex	3.4	18.8	17.2	22.2	17.7	79.3
Opex step change	0.0	0.0	0.5	1.4	1.4	3.3
Total	**3.4**	**18.8**	**17.7**	**23.6**	**19.2**	**82.6**

Source: ASD EDPR 2026-31 – SCS Capex Model – 310125 and EMCa derived from AusNet model: ASD – AusNet – Accumulated Workbook for Opex and Step Changes – 31 Jan 2025

Summary of AusNet's main supporting information

165. AusNet provides a current state/future state gap analysis in which it identifies four focus areas:

- Asset data
- Maintenance management
- Risk framework, modelling and investment planning, and
- Knowledge and skills.

166. It proposes eleven initiatives that are designed to address these four focus areas.[36] In Table 3.13, we set out the eleven initiatives and AusNet's associated buildup of its forecast capex while in Table 3.14 we show AusNet's line item buildup of its forecast opex.[37]

[redacted]

[36] AusNet's business case describes 10 initiatives (Table 7 of its business case). Its costing indicates eleven initiatives, but this is because it separates 'Enhance Maintenance Planning' and 'ERP Improvements' as two initiatives in its costing, though they are presented as one initiative in its business case.

[37] Note that the cost estimates in this table are in $2024, which is as provided by AusNet in its NPV model.

Assessment

The extent of current state deficiencies that AusNet claims for this ICT project is not consistent with its claims in proposing asset management expenditures

167. AusNet states that the proposed project will address a range of deficiencies in its ability to manage its assets. We include a selection of statements from its assessment in Figure 3.6.

Figure 3.6: AusNet's assessment of asset management deficiencies

Examples from AusNet's assessment of its asset management deficiencies

[current state involves] '*fixed cycle maintenance activities for all assets. This is largely a combination of time-based activities…based on manufacturer recommendations, or based on a fixed number of operations….without considering actual condition.*'

[required future state is to] '*…develop specific asset strategies and plans for each individual asset type to ensure they are usable and functional.*'

[Current state] '*…condition data is non-structured data, unclear on accuracy, currency and validity.*'

[current state utilises] '*…a range of inconsistent and uncontrolled asset risk models that were custom made in house.*'

[current state] '*…manual process to ensure that appropriately skill [sic] and qualified staff are deployed in the field for each job.*'

Source: Extracts from AusNet's business case for ICT Asset Management project, table 3

168. AusNet also refers to external reviews that identified '*…deficiencies in (its) asset management and practices that lead to poor performance during major events…*'.

169. While we consider that AusNet's gap analysis is a useful starting point for it to consider enhancements that it can make, we are also informed by our assessment of significant elements of AusNet's forecast repex and augex requirements.[38] Our assessment of these technical-based forecasts requires us to consider AusNet's asset management processes, practices and information and, while we do observe some shortcomings, we also find significant elements of AusNet's asset management that practices that are not dissimilar to those of its peers.

170. From our technical assessment, we are of the view that AusNet will benefit by undertaking targeted enhancements in asset management and that this will need to be supported by an

[38] We review these in our separate Technical report to AER

ICT program. However, based on industry experience, we consider that AusNet will find that some elements of its proposed scope for its ICT asset management project are not adequately justified in their own right, and that it will decide to defer or not proceed with all initiatives that it has based its proposal on or, at least, not to such an extensive level.

AusNet's CBA result is marginal

171. Non-recurrent projects that are driven by enhancements are required to show a positive economic case.

172. AusNet's presents an NPV for this project of $0.1m. This is extremely marginal for a project with an investment of over $70m and, given inevitable forecasting uncertainties, we consider that this is not sufficient in itself to justify the project. However, we consider that this is also an indicator that AusNet is likely to find that a more targeted project would deliver a more robust economic value, achieving a significant proportion of the benefits from a smaller investment.

173. For example, nearly $43m capex is proposed for the final two years of the regulatory period, and this includes three initiatives (Digital Asset Monitoring, Automation and Integration of ARM Decisions and Advanced Knowledge Management) that AusNet describes as being 'low maturity'.[39] These three low-maturity end-of-period initiatives alone contribute $20m (in $2024 terms) to the proposed investment.

AusNet's options analysis is rudimentary

174. As we describe in section 2.2, we consider that AusNet's options analysis contributes little by way of justification for what it has proposed. AusNet has approached its options analysis from the perspective that each of the two 'investment' options must provide essentially the same comprehensive outcomes. As referred to above, AusNet has not considered options involving prioritisation or targeted achievement of certain outcomes, in which inevitably some initiatives will have a greater payoff than others.

175. Having said this, we consider that AusNet conclusion that it is preferrable to build off its existing platform (its option 2) than to move to an entirely new platform (its option 3) appears preferrable.

AusNet's costing is likely overstated

176. For the generic reasons that we refer to in section 2.2, we consider that AusNet's cost estimate for this project is overstated, even if the specific initiatives are taken as a given. When we also consider overstated scope (in terms of initiatives, as above) then we consider its cost estimate to be significantly overstated.

Proposed opex step change is not justified, once benefits realisation is taken into account

177. In AusNet's CBA, the majority of the benefits are either direct opex improvements, or opex reductions from improved employee productivity. AusNet estimates $16m (in $2024 terms) of such improvements over 2027-31.

178. Given this, we consider it unnecessary to allow for AusNet's proposed opex step change of $3.5m (as shown in Table 3.14).

Allocation to AusNet Distribution is not accounted for

179. As described in section 2.2 the information that AusNet has provided shows no evidence of it having applied an allocation of the project cost to AusNet Distribution. From the information that AusNet provided in response to our Information Request, as shown in 2.2.4 in the current report is that the AusNet Distribution allocation of this will be for 78.6% for capex.

180. As above, we consider that an opex step change is not justified, therefore allocation is not relevant for this component.

[39] AusNet response to IR EMCa20, Q48a

Findings

181. We consider that a project to enhance AusNet's asset management capability is justified. However, we consider that AusNet has not justified a project with the breadth of scope that it has proposed, and we consider that AusNet will find that a considerably more targeted project will rectify the most significant of the deficiencies that it identifies.

182. We also consider that AusNet's cost estimate is overstated, and we find that the expenditure proposed in its EDPR proposal does not reflect an allocated cost for the project.

183. We consider that AusNet's proposed capex is significantly overstated, and that its proposed opex step change is not justified.

3.4.3 Customer Engagement Platform project

What AusNet has proposed

Project objective and drivers

184. AusNet states that it currently utilises a range of systems to communicate with customers, including outage trackers, customer relationship manager, and connection portals. AusNet's proposed Customer Experience project is intended to provide a step change in enhancing its customer interactions.

Context and background

185. In the current period, AusNet states that it has invested around $25m (nominal dollars), as against an investment of $7.7m ($real 2019) that it had proposed for this period. AusNet states that it has actively prioritised delivery of the highest priority initiatives encompassing both new requirements and across the five focus areas that it had originally identified. In summary, AusNet states that in the current period it has delivered against four of the five focus areas as follows:

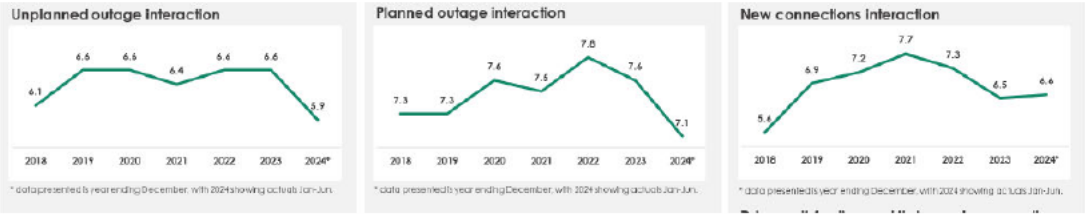
- Subscription-based CRM, providing core capabilities on which it has expanded to include outage management and connections
- Service management: building foundational capability for improving the customer connection experience, providing for the Solar Emergency Backstop and a range of improved unplanned outage communications
- Case management systems with improved call logging and history, and
- Customer communications: foundational platforms for Digital Customer Experience and Customer Self-service.

186. AusNet deprioritised a fifth focus area (Engagement management) but, in addition to the above, made improvements to unplanned outage communications and regulatory compliance systems.

Identified need

187. Despite the investments made in the current period, AusNet states that customer experience has deteriorated. AusNet provides information on three customer satisfaction metrics which we reproduce in Figure 3.7 as evidence of this claimed deterioration.

Figure 3.7: Summary of customer satisfaction research

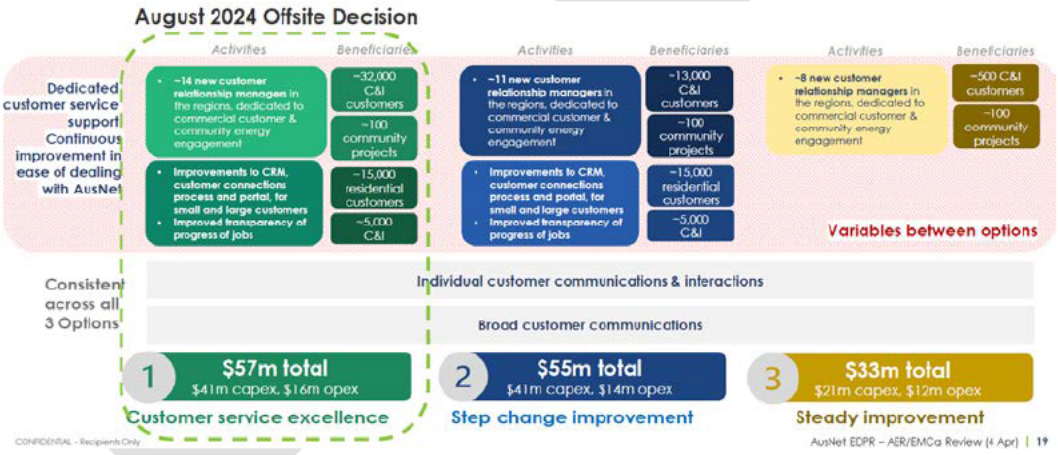


Source: AusNet business case for Customer Experience project, figure 1

188. AusNet claims that its customers support the need for significant further investment in the next period. and that its customers expect AusNet to improve its performance, particularly in the areas of *'…improved customer access to information, first call resolution of issues or requests, and online tools to enhance and speed up standard requests such as connections*.'[40]

189. AusNet provided us with a graphic showing three options that it put to its customer engagement panel workshop, as shown in Figure 3.8. As shown in this graphic, AusNet advises that customers at this workshop indicated a preference for the 'Customer Service Excellence' option.

Figure 3.8: Customer Experience options presented by AusNet to its customer engagement panel



Source: AusNet presentation to EMCa and AER, 4 April 2025 (page 19)

Proposed expenditure

190. AusNet proposes the forecast capex and the forecast opex step changes shown in Table 3.15 for this project.

Table 3.15: AusNet's proposed expenditure for customer experience - $m, real 2026

	2026	2027	2028	2029	2030	TOTAL
Capex	9.8	9.9	9.9	4.5	11.2	45.3
Opex step change	-	0.2	0.5	0.5	0.5	1.5
Total	**9.8**	**10.1**	**10.4**	**4.9**	**11.7**	**46.8**

Source: ASD EDPR 2026-31 – SCS Capex Model – 310125 and EMCa derived from AusNet model: ASD – AusNet – Accumulated Workbook for Opex and Step Changes – 31 Jan 2025

40 AusNet business case for Customer Experience project, page 3

Proposed initiatives

191. AusNet's business case includes what is headlined as a gap analysis, which lists six 'limitations' that it has identified, and the functionality needed to address these. Its business case then names twelve initiatives that are assumed to provide this functionality, and which are mapped back to the identified limitations. These are grouped into five initiative groupings, which align with groupings (ID1 to ID5) that we show in Table 3.16. [41, 42]

[redacted]

Assessment

AusNet has not justified the inclusion of all initiatives that it has proposed nor has it provided evidence to support the assumed scale and scope of each initiative

192. It is difficult to reconcile AusNet's description of the investments that it has undertaken in the current period, and which include apparent significant enhancement of its core use cases, being customer connections and outages, with the claimed level of current deficiencies and therefore the level of its claimed investment requirements for the next regulatory period. We therefore sought further information on the level of maturity of the initiatives that AusNet proposes as comprising this program of work.

41 In its response to our Information Request (IR EMCA20, Q45) AusNet refers to the groupings ID1 to ID5 as 'projects', and which by implication suggests a characterisation of 'Customer Experience' as a 'programme' involving these five 'projects'. Nevertheless, for the purpose of this report, we revert to referring to Customer Experience as a 'project', consistent with terminology in AusNet's regulatory submission documentation.

42 Note that the cost estimates in this table are in $2024, which is as provided by AusNet in its NPV model.

193. AusNet responded with advice in which it ranked the maturity of each of the twelve initiatives. It ranked the two initiatives under ID3: Advanced Customer experience as 'low maturity' and we note also that it proposes these in the final two years of the regulatory period. In $2024 terms, these comprise $8m of the proposed program.

194. The initiatives that AusNet ranks as being high maturity are:

- Unplanned outage communications improvements
- Customer notification accuracy
- Uplift planned outage communications
- Major connections portal, and
- Outage claims process improvements.

195. Unsurprisingly, these are initiatives that AusNet plans for the first two years of the period and, given their focus on outage communications and connections processes, we take these to be further uplifts on what AusNet has already undertaken in the current period. They comprise $11m ($2024) of the proposed program.

196. AusNet describes the proposed Customer Portal Consolidation initiative as medium maturity. However, AusNet also states that *'(w)hile some variability exists in the quantity and detail of customer applications targeted for consolidation, adjustments will be made to align with the allocated budget'*. As shown in Table 3.13, AusNet has estimated this initiative at $10m. However, our interpretation of this statement is that it has not determined the applications that it would consolidate, and that it would do so based on the budget it has available. This is a reversal of the process by which AusNet should determine the applications for which there is a net benefit in consolidating them. This component of cost therefore presents essentially as a placeholder rather than a justified initiative or justified expenditure requirement.

197. From the information that AusNet provides, we consider that the 'high maturity' initiatives are likely justified, and these align with the needs expressed by its customers. At the other end of the spectrum, we consider that the two initiatives that AusNet rates as 'low maturity' are essentially speculative, and AusNet has made no compelling case for their inclusion as reasonable elements of its forecast.

198. Between these is a range of initiatives but AusNet provides insufficient information to determine which are justified and whether (as is the case for Customer Portal Consolidation) the assumed scope within each initiative also is justified.

AusNet's options analysis is rudimentary and does not assist in validating the scope of the project that it proposes

199. In its business case, AusNet considers three options:

- Option 1: Maintain existing systems and augment with task-specific systems
- Option 2: Maximise use of existing systems with vendor upgrades where required (preferred), and
- Option 3: Implement a new platform that addresses all needs.

200. As with other ICT projects, and as we describe in section 2.2, we consider that AusNet's options analysis for this project contributes little by way of justification for what it has proposed. AusNet has approached its options analysis from the perspective that each of the two 'investment' options must provide essentially the same comprehensive outcomes. As referred to above, AusNet has not considered options involving targeted achievement of certain outcomes, in which inevitably some initiatives will have a greater payoff than others.

201. Within this framework, AusNet's conclusion is that it is preferrable to build off its existing platform (its option 2) than to move to an entirely new platform (its option 3), or to build yet more 'bespoke' systems (option 1). Option 2 is also the lowest cost. This is an unsurprising conclusion, especially given the investments that AusNet has already made in the current period.

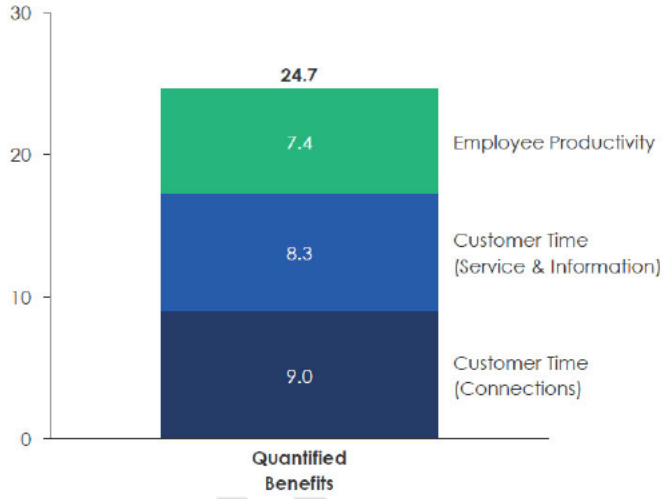
202. The three options in AusNet's business case differ from those that it presented to customers, though there is some logic to this as its business case options are essentially about how it will deliver a certain customer outcome, whereas its customer consultation was concerned with differing outcomes. Referring to Figure 3.8, we observe that the way AusNet has presented these suggests minimal difference between the options 2 and 3 in that presentation, and, given the minimal cost difference, it is not surprising to us that customers chose the (slightly) higher cost option. It is questionable, however, whether this feedback can be interpreted as customers being willing to bear the cost that AusNet has proposed.

AusNet's CBA is negative

203. Non-recurrent projects that are driven by enhancements, are required to show a positive economic case.

204. In its business case, AusNet undertakes a CBA in which it values customers' time and employee productivity benefits, as shown in Figure 3.9.

Figure 3.9: Customer experience business case benefits ($m, NPV, real 2024)



Source: AusNet presentation to AER and EMCa, 2 April 2025 (page 20)

205. Despite its assessment of significant benefits, AusNet presents an NPV for this project of negative $12.8m.

206. In order to consider the possibility that a subset of initiatives may be economically justified, we sought information from AusNet to map benefits against each of the initiatives. In its response, AusNet presented a mapping at the 'five projects' level, and which we summarise in Table 3.17.

Table 3.17: AusNet's disaggregated assessment of NPV of project costs and benefits ($m, real 2024)

Project ID	Project	NPV Benefits (FY27-35)	NPV costs
1	Customer Portals (includes Customer Portal Consolidation and Major Connections Portal)	$12.1m	$12.0m
2	Customer Relationship Management integration and Data Consolidation	$2.4m	$9.0m
3	Advanced Customer Experience	$4.8M	$8.0m
4	Communication Channel of Choice and Improved Outage Communications	$3.4m	$10.0m
5	Outage Claims Process Improvements	$2.0m	$2.0m
TOTAL		**$24.7m**	**$41.0m**

Source: AusNet response to IR EMCa20, Q46

207. In its response, AusNet effectively cautions against selective inclusion of projects based solely on these indicated economics, since some projects are foundational and precursors to others. Also, noting that each 'project' as defined above includes several initiatives. Nevertheless, we consider it instructive, and also expected, that some aspects of AusNet's proposed program are likely to have greater net economic value than others and that there could be a 'core' program that could be net beneficial.

AusNet's costing is likely overstated

208. For the generic reasons that we refer to in section 2.2.3, we consider that AusNet's cost estimate for this project is overstated, even if the specific initiatives are taken as a given. When we also consider overstated scope (in terms of initiatives, as above) then we consider its cost estimate to be significantly overstated.

AusNet's proposed opex step change is not justified, once benefits realisation is taken into account

209. In AusNet's CBA it estimates opex productivity benefits of $4.0m (in $2024) over the next regulatory period.

210. On the basis that AusNet proposes these to be realisable opex savings, we consider it unnecessary to allow for AusNet's proposed opex step change of $1.6m ($2026 terms) that is shown in Table 3.15.

Allocation to AusNet distribution is not accounted for

211. As described in section 2.2.4, the information that AusNet has provided shows no evidence of it having applied an allocation of the project cost to AusNet Distribution. From the information that AusNet provided in response to our Information Request, as shown in Table 2.4. in the current report, the AusNet Distribution allocation of the total capex for this project should be 95.6%.

212. As above, we consider that an opex step change is not justified, therefore allocation is not relevant for this component.

Findings

213. We consider that a project to uplift AusNet's customer experience is justified. However, taking account of the considerable investment that AusNet has commenced in the current period, we consider that AusNet will find that a considerably more targeted project will appropriately address those areas where further uplift is warranted.

214. We also consider that AusNet's cost estimate is overstated. While we find that the capex proposed in its EDPR proposal does not reflect an allocated cost for the project, in this instance the overstatement is relatively small as the project is largely focused on AusNet's distribution customers.

215. We consider that AusNet's proposed capex is significantly overstated, and that its proposed opex step change is not justified.

3.4.4 Field Enablement project

What AusNet has proposed

Project objective and drivers

216. The objective of AusNet's field enablement project is to provide improved management of its field operations through improving field crews' access to information and improving communications with crews. Through this, AusNet considers that it will be able to improve customer reliability and improve field crew productivity.

Context and background

217. AusNet's field crew and fault location visibility solutions are largely outsourced. Its communications with them have been through a dedicated API; however, AusNet has recently appointed a new service provider (Zinfra). AusNet advises that under 'Project Switch' it plans to commence the transition to the new provider in August 2025[43] and has commenced work within the current period to upgrade field crew management systems and practices, including:

- Commencing work on mobile switching software that will provide the platform for developing further capabilities in the next period, and
- As part of its SAP upgrade, implementing the SAP Mobility Solution to enable non-energy field work.[44]

218. These systems will provide more effective and efficient communications and information exchange with the new service provider and would also more readily allow for a further switch or addition of new service providers in future.

Project need

219. AusNet has recently assessed its field crew management systems and practices following experience in dealing with the impact of major storms, in 2024. It identifies the following issues:

- Real time communications with and visibility to controllers, resulting in potential safety hazards
- Field crew inefficiencies due to lack of integration between systems and inefficient communications processes, and
- Increased incidence of communication and reporting errors and inefficiencies resulting in delayed customer supply restoration.

220. In Figure 3.10 we list the current capability gaps that AusNet has identified.

43 AusNet response to IR EMCa20, Q56

44 AusNet business case for Field Enablement, page 7

Figure 3.10: AusNet's identification of current field engagement capability gaps

Field engagement capability gaps

- *Multiple different systems and process used to manage different FSPs.*
- *Inefficient system for making changes so that new data can be collected by field crew.*
- *Low degree of 'data richness'.*
- *Lack of visibility in relation to field crew location, fatigue limits (hours worked), capability or progress on task.*
- *Reliance on manual process by the controllers due to lack of system integration.*
- *Inefficient process for prioritisation and reprioritisation of work orders, particularly between different FSPs.*
- *Difficult to engage additional FSPs for short duration surge capacity support during major events.*
- *Field crew lack of real-time access to the same information as the Control Room at all times, and vice versa giving rise to the potential for miscommunication between field crews and controllers.*

AusNet business case for Field Enablement, page 9

221. AusNet states that these capability gaps will result in deteriorating service outcomes, create business inefficiencies and reduce its capability to provide timely information to customers on events on its network.

Proposed expenditure

222. AusNet proposes the forecast capex and the forecast opex step changes shown in Table 3.18 for this project.

Table 3.18: AusNet's proposed expenditure for Field Enablement project - $m, real 2026

	2026	2027	2028	2029	2030	TOTAL
Capex	10.5	3.3	1.7	3.3	0.0	**18.8**
Opex step change	1.9	2.2	2.2	2.2	2.2	**10.7**
Total	**12.5**	**5.4**	**3.8**	**5.5**	**2.2**	**29.5**

Source: ASD EDPR 2026-31 – SCS Capex Model – 310125 and EMCa derived from AusNet model: ASD – AusNet – Accumulated Workbook for Opex and Step Changes – 31 Jan 2025

Proposed initiatives

223. AusNet's Field Enablement project comprises four capex initiatives, as shown in Table 3.19, along with AusNet's costing for each initiative.[45]

[45] Consistent with other such tables, we present these in the form presented by AusNet, which is in $2024.

224. AusNet describes the four initiatives as follows:

- **Field crew mobile solutions** addressing **energy** and **non-energy** requirements. The energy-related solutions provide for real-time fault management, while the non-energy solutions provide for management activities for works that are not related to unplanned outages, including vegetation management and switching for work orders related to asset management
- **Field crew and fault visibility** is to provide management-level visualisation of faults/worksites and field crews to enable improved management of how crews are deployed.
- **Delegated switching** provides delegation to field crews for switching in emergency scenarios enabling more rapid commencement of field work and reduced restoration times.

Assessment

The project is justified

225. As a continuation from 'platform' work that AusNet has commenced in the current period, we consider that AusNet has appropriately framed the need for this project and the initiatives that will address that need.

While there are some flaws in AusNet's CBA, it is reasonable to assume a positive net benefit with greater productivity gains

226. AusNet presents a CBA for this project, and we summarise the results in Table 3.20. This shows the main quantified benefit as a reduction in the loss to customers arising from outages. As can be seen, the NPV that AusNet presents is only marginally positive.

Table 3.20: AusNet's CBA for Field Enablement project $m, real 2024

Costs and benefits	PV
Benefits:	
Customer value of outages (AST)	24.3
Improved employee productivity - Standard	1.0
Improved productivity - outage response	4.0
Safety incident avoidance	0.9
Benefits total	**30.2**
Capex	-15.5
opex	-14.3
NPV	**0.4**

Source: EMCa, derived from AusNet EDPR 2027-31 Digital Program NPV model (confidential) 17970751

227. We consider that a flaw in the modelling would, if corrected, result in a negative NPV. Specifically, the model assumes constant annual benefits commencing in FY2028, whereas (as can be seen in Table 3.19) only one initiative will have been deployed before that time, with other initiatives being delivered in FY28, FY29 and FY30. For example, we find that AusNet has ascribed an annual benefit of $470,000 to 'delegated switching' starting from FY28, whereas its program suggests this would be deployed only from FY31, following development of the capability in FY30.

228. On the other hand, AusNet quantifies minimal benefit (of $0.35m per year) to productivity improvements. We consider this to be inconsistent with its narrative regarding current inefficiencies and the ability of these systems to provide productivity uplift. We sought further information on this through in Information Request and in its response, AusNet states the following:

> *'AusNet anticipates material general field crew efficiencies from these initiatives. Our current field workforce productivity trails industry benchmarks, with AusNet crews averaging c.1,250-1,300 productive hours per year relative to benchmark of c.1,400 – 1,500 hours per year. Field force coordination and mobility capabilities are a significant driver of this gap. Improving workforce productivity by 8-20% over AusNet's works program would realise material benefit.'*[46]

229. AusNet points out that there is a link between the benefits arising from its Asset Management program and the Field Enablement program, and we are conscious of the need not to conflate benefits. Nevertheless, we consider it likely that the efficiency benefits from its Field Enablement project will be greater than it has quantified in its business case.

230. In its response, AusNet also states that SAP undertook a 'Proof of Value' study in which it assessed potential 12% works program efficiencies from implementing S/4HANA capabilities as is proposed. We consider that this provides further support to there being greater efficiency benefits from field enablement than AusNet has quantified.

231. On balance, we consider that it is reasonable to assume that a CBA for Field Enablement will deliver a net positive economic outcome.

AusNet has chosen an appropriate option

232. In its business case, AusNet considers three options:

- Option 1: Maintain existing systems and augment with task-specific applications
- Option 2: Fully leverage and augment existing systems (preferred), and
- Option 3: Deploy a new platform / system architecture.

[46] AusNet response to IR EMCa20, Q53

233. Given AusNet's characterisation of current deficiencies as arising in part from having a suite of disparate systems, it is reasonable to accept that Option 1 would not rectify this.

234. Equally, having embarked on an SAP upgrade that provides a foundation on which it can build the better-integrated field mobility initiatives that it proposes, it is reasonable to accept that it would be unwise to essentially abandon this in favour deploying a new platform.

235. AusNet also estimates that Options 1 and 3 would be more costly. We are surprised that the differences are as narrow as AusNet estimates (essentially $2m higher for option 1 and $3m higher capex for option 3), but nevertheless a combination of reasons, also including risk considerations, indicate that the proposed option is reasonable.

AusNet's basis for estimating the required capex for this project is reasonable

236. We sought information on AusNet's cost estimation in an Information Request.

237. AusNet advised that its cost estimates for the energy and non-energy initiatives are based on negotiations with vendors, including [redacted] (for the energy component) and [redacted] (for the non-energy component). AusNet states that it achieved discounts in both cases, leveraging from the ability to bundle work and that these discounts are reflected in its cost estimates.[47]

238. We consider that this provides a reasonable basis for its capex forecast.

AusNet's ICT opex estimate is reasonable but its proposed opex step change is not justified, once benefits realisation is taken into account

239. AusNet's proposed additional ICT opex costs also are based on its discussions and negotiations with vendors. As can be seen in Table 3.19, the dominant opex component is $1.83m per year (in $2024) for the 'Field crews mobility solution'. In response to our Information Request, AusNet advises that this is a 2024 cost advised by its vendor ([redacted] mobile licensing and support, for the required number of users.[48]

240. We consider this to be a reasonable basis for AusNet's estimate of its ICT opex costs. Moreover, AusNet has confirmed that such costs were not incurred in 2024, therefore the proposed costs will be incremental to its base year opex. However, as stated above, we consider that the CBA for this project is only robustly positive if reasonable allowance is made for productivity gains leading to improved efficiency. AusNet has included productivity gains amounting to $0.35m per year in its CBA but gains of the order that we reference in discussing its CBA above, would be somewhat larger than this.

241. In order to accept its CBA as positive, we consider it reasonable to assume that AusNet will realise efficiency gains at least sufficient to offset increased ICT licensing costs from deploying the enhanced mobility solution. This then obviates the need for an opex step change.[49]

Allocation to AusNet distribution is not accounted for

242. As described in section 2.2, the information that AusNet has provided shows no evidence of it having applied an allocation of the project cost to AusNet Distribution. From the information that AusNet provided in response to our Information Request, as shown in Table 2.4 in the current report, the AusNet Distribution allocation of the total capex for this project should be 93.0%.

243. As above, we consider that an opex step change is not justified, therefore allocation is not relevant in this case.

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47 AusNet response to IR EMCa20, Q52

48 AusNet response to IR EMCa20, Q51

49 For clarity, in applying this reasoning, we are not suggesting that regulatory allowances should seek to recover all anticipated efficiency gains within the regulatory period, and which would destroy efficiency incentives inherent in the regime. However, where an opex step change is proposed, we consider that there is a positive onus of proof on the business to demonstrate that it has taken all reasonable steps to account for offsetting opex reductions before proposing a net increase. In the current case, we do not see evidence of this.

Findings

244. We consider that a project to uplift AusNet's Field Enablement capability is justified and that the initiatives that it proposes are reasonable. We also consider that AusNet's overall project capex estimate is reasonable, though the project cost allowance needs to be reduced to allow for allocation to distribution.

245. We consider that AusNet's proposed opex step change is not justified.

3.4.5 ADMS project (IT and OT components)

What AusNet has proposed

246. The proposal for the next RCP covers part of Phase 3 and Phase 4, with Phases 1 and 2 undertaken in the current RCP:[50]

247. Phase 1 has been completed and was a high-level design and vendor engagement project to scope, design and cost the introduction of 'foundational' or 'core' ADMS capabilities in Phase 2. Phase 1 identified the product and platform that AusNet considers best suits its needs, electing to transition from [redacted]

248. Phase 3 is described by AusNet as enhancing operations by building on the foundational capabilities established in Phase 2 by transferring, upgrading, or deploying new functionalities.

249. Phase 4 is designed to '*…complete the transition* [redacted] *implement additional functionality and capabilities required to manage the network as it becomes increasingly more complex.*'[51]

Proposed expenditure

250. AusNet proposes investment of $68.2 million capex (IT and OT) and $12.9 million opex (step change) in the next RCP to implement new ADMS capabilities and functionality.

251. AusNet proposes the forecast capex and forecast opex step changes shown in Table 3.21 for this project, noting that it comprises an IT and an OT component.

Table 3.21: AusNet's proposed expenditure for ADMS - $m, real 2026

	2026	2027	2028	2029	2030	TOTAL
Capex (IT)	7.9	9.3	8.3	1.7	0.7	**27.9**
Capex (OT)	8.0	8.0	8.0	8.1	8.2	**40.3**
Opex step change	1.1	2.8	3.2	3.2	3.2	**13.7**
Total	**17.0**	**20.1**	**19.6**	**13.0**	**12.1**	**81.8**

Source: ASD EDPR 2026-31 – SCS Capex Model – 310125 and EMCa derived from AusNet model: ASD – AusNet – Accumulated Workbook for Opex and Step Changes – 31 Jan 2025

Assessment

The AER's decision for the current RCP included provision for an ADMS

252. AusNet advises that '*[in] its final determination, the AER approved $30 million ($ real 2019) for the initial phases of implementation of ADMS.*'[52]

253. AusNet advises that it will, by the end of the current RCP materially exceed this allowance, primarily due to addressing (i) under-costed elements of the original scope, (ii) to fund roll-

50 Phase 1 was the scoping/planning/tender process and Phase 2 focused on implementation of core ADMS capabilities

51 ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, page 10

52 ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, page 5

out of FLISR[53] and DPF,[54] and (iii) address AMI integration defects, and resolve asset data quality issues. The current Phase 1, 2 and 3 approved budget for the current RCP is $42.5 million.[55]

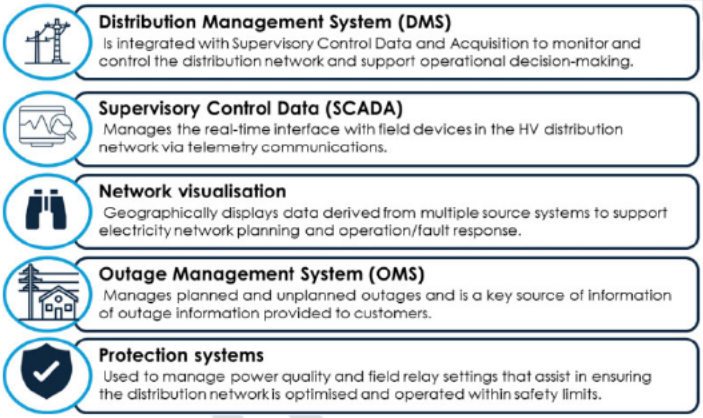
AusNet has (or will have) established the necessary foundational capability in the current period

254. AusNet commenced its development of an ADMS in 2020 with the foundational or core functionalities illustrated in Figure 3.11. As AusNet states:[56]

> *ADMS provides an integrated set of tools to remotely monitor and control the network, manage system outages, improve planned and emergency event management, optimise power-flow management, fault location analysis, and fault isolation and restoration capabilities. It also enables integration of distributed energy resources and network optimisation capabilities.*

255. Importantly, our understanding is that AusNet has or will have implemented the core ADMS systems in the current RCP and that it proposes extending the core functionality in the next RCP.

Figure 3.11: Overview of AusNet's core ADMS systems



Source: ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, extract from Figure 1

256. An ADMS is a fundamentally important system for managing distribution networks. We are satisfied that the foundational capability that AusNet has implemented in the current RCP is necessary. We assess AusNet's proposed expenditure in the next RCP from this base.

257. AusNet advises in its business case that it expects to expend $70.0 million (nominal) on the ADMS in the current RCP, split between Phases 1, 2 and 3. From a combination of the timing of the roadmap and the annual expenditure, we understand the split of expenditure between the phases as follows:[57]

- Phase 1: $0.2 million (nominal) capex, no opex
- Phase 2: $33.9 million (nominal) capex, no opex
- Phase 3 (part): $35.9 million capex, no opex.

258. Figure 3.12 shows the proposed timing, scope and qualitative benefits of and from Phases 3 and 4 of AusNet's ADMS program, noting that three aspects of Phase 2 have been deferred

53 Fault Location Isolation and Service Restoration on 6HV feeders as a pilot

54 Distribution Power Flow

55 AusNet response to EMCaIR020, Q62, Q64

56 ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, page 5

57 ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, Table 4 and Figure 2, assuming the roadmap is based on calendar years

to Phase 3: HV data in GIS; Geospatial views, and Wide area restoration pilot.[58] Our understanding from this figure is that Phase 4 initiatives are scheduled to kick-off in FY30.

Actual Phase 3 spend indicates a two-year deferral to the schedule in the business case

259. In order to understand the expenditure and scope of work undertaken in the current RCP, we asked AusNet for a breakdown of the annual expenditure for each phase of the ADMS program. The response is presented in Table 3.22 and shows a significantly different expenditure total and pattern than indicated in the business case:

- Instead of spending $70.0 million capex (no opex) in the current RCP, the projection is for $42.5 million to be spent
- Phase 1 was completed in FY2023 not CY2021, for $4.3 million
- Phase 2 is ongoing through to FY26 due to an increase in scope (FLISR and DPF functionality),[59] and instead of spending $33.9 million, the forecast is now $31.5 million, noting that the budget for Phase 2 was increased to $40.4 million via two change control requests
  - we also note that three aspects of the Phase 2 scope were moved/deferred to Phase 3 scope, and[60]
- Instead of spending an estimated $35.9 million on Phase 3 scope in CY25 and CY26, $6.7 million capex is now expected to be spent.

260. In response to an information request, AusNet advised that:

- Seed funding of $3.8 million was approved in July 2024 for Phase 3 (design and planning, including business requirement confirmation, solution architecture, and cost estimation)
- Preliminary cost estimates indicate total capex for Phase 3 of $205 million, and

58 ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, Table 2

59 Fault Location, Isolation, and Service Restoration (FLISR), Distribution Power Flow (DPF)

60 Noting AusNet's response to IR020 question 62

- As of early May 2025, no full implementation business case or funding has been approved, with business cases for delivery of Phase 3 initiatives under development.[61]

261. The main conclusion we draw from this is that AusNet's Phase 3 schedule enunciated in its business case seems to have slipped by about two years representing about two years work, into the next RCP.[62] We discuss the implications for AusNet's proposed spend profile in the next RCP, below.

Table 3.22: ADMS program expenditure in the current RCP ($m nominal)

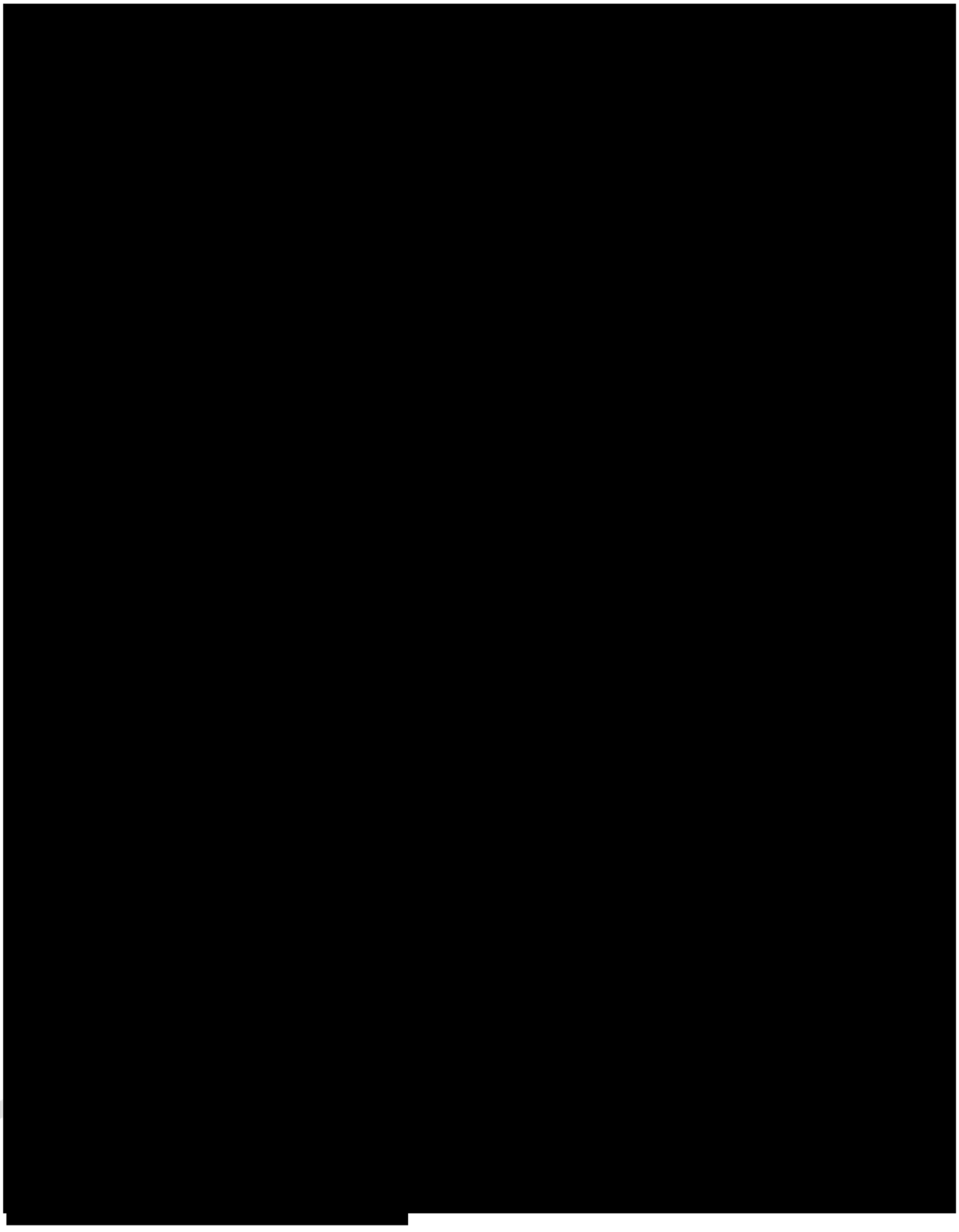
Roadmap project phases	FY22 actual	FY23 actual	FY24 actual	FY25 Act/Fcst	FY26 Forecast	Total
Phase 1	1.1	3.3				**4.3**
Phase 2		11.3	11.8	6.7	1.7	**31.5**
Phase 3 seed funding				3.0	0.8	**3.8**
Phase 3 implementation					2.9	**2.9**
Total	**1.1**	**14.5**	**11.8**	**9.7**	**5.4**	**42.5**

Source: AusNet response to IR020, question 64

61 AusNet response to IR020, question 62

62 It is not clear from the responses to our IR020 questions 64 or 72

AusNet's proposed Phase 3 functionality has not yet been implemented in their entirety by any DNSP but the various GE 'modules' are mostly proven



262. AusNet has provided a map of the progress and intentions of all the other Australian DNSPs (based on a 2024 scan) regarding what it categorises as Phase 3 scope and which it has in turn divided into eight functions or modules. The map does indicate that *at that time*:[64]

63 In AusNet's response to our information request (IR12), AusNet advised that it was absorbing this. Therefore, it has not included this amount in its proposed opex step change

64 ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, Figure 3

- No other DNSP with [redacted] ADMS planned to implement the eight functions AusNet identifies as Phase 3 scope
- Peer utilities utilising [redacted] products have implemented up to four of the eight functions as of 2024 and three of the five DNSPs plan to implement more functions by 2027
- No other DNSP with [redacted] ADMS plans to implement all Phase 3 functions, and
- All but two of the [redacted] ADMS functions had been implemented by at least one DNSP, indicating that [redacted] had delivered the functionality (i.e. rather than it being 'in development'), adding confidence to the availability and cost:
  - the two functions not implemented in an Australian DNSP in 2024 are: [redacted]

263. The conclusion we draw from this is that AusNet's Phase 3 (let alone its proposed Phase 4) functionality seems to stretch beyond what peer utilities planned to implement when the scan was undertaken. It is possible that since AusNet's research, plans have changed, particularly from other Victorian DNSPs in response to recommendations from the reviews of the February 2024 storm that AusNet cite. Nonetheless, this leads us to carefully consider not only the need for all the Phase 3 functionality/scope, but the Phase 4 functionality/scope also.

264. As we discussed in section 2.2, we find that ambitious scope elements with minimal justification feature in most other AusNet ICT proposals.

The identified need for planned new ADMS functionality is grounded in responses to the energy transition and reviews of a major Victorian outage event

265. AusNet states in its business case that:[66]

> *Each of the planned functionalities have been designed to directly address or support issues and capability gaps that … [are] related to the energy transition, customer feedback, actual performance during major events and independent Victorian government reviews.*

266. More specifically, the following issues are identified:[67]

- Increasing renewables penetration, increased frequency of extreme weather events, reduced base load generation, and other matters are driving operational complexity
- Lack of integration between its ADMS and SCADA (and operational complexity):
  - is reducing responsiveness of the control room
  - may lead to more human errors (HEI)
  - is causing greater workload and stress on controllers, and
- Management of major outage events needs to improve, with a number of reviews concluding (in summary) that AusNet had:
  - Insufficient system capacity
  - Inadequate system functionality
  - Processes limited by system capability
  - Lack of clarity of information provided to field crews.

267. Addressing the third issue is a feature of (i) the proposed ADMS functionality to be introduced in the next RCP, (ii) the proposed Field Enablement program (refer to our assessment in section 3.4.4), and (iii) the proposed Network Model Management program (refer to our assessment in section 3.4.6).

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65 However, two DNSPs have or had plans to implement them (one each) in 2025 or 2026

66 ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, page 12

67 ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, pages 12-15

268. AusNet presents a qualitative risk analysis,[68] which also identifies that sub-optimal performance of the ADMS during major outage events as its highest risk – risk rating 'B' (major impact and likely to occur).[69]

269. Given the government-driven reviews and the recommendations proceeding from them, this appears to be a reasonable assessment. Therefore, despite the limitations of qualitative risk analysis, we consider that AusNet presents a compelling case for it to evaluate options for further investment in its ADMS in the next RCP.

The proposed ADMS enhancements do not readily align with identified capability needs

270. With respect to the ADMS enhancements, AusNet provides a list of ten capabilities/ functionalities to respond to these challenges.[70] Whilst two of the ten outcomes are attributed to costs included in one or other of the Field Enablement or Network Model Management projects, the remaining eight elements in the list do not readily align to either the eight Phase 3 capabilities/functionalities referred to above, nor to the cost estimate breakdown, nor to the Roadmap, making it difficult to differentiate between Phase 3 and Phase 4 work.

271. From discussion at the onsite and from responses to our information requests that there is a blurred line between Phase 3 and Phase 4 initiatives, despite the demarcation evident in the roadmap (Figure 3.12).

AusNet presents three options, two of which are not helpful in confirming or otherwise the prudency of AusNet's preferred option

272. There is no 'do nothing' option referenced in the options analysis, but it appears the benefits evaluation for the three options in the business case is based on a 'do nothing' counterfactual. The three options presented are:

1. Maintain the existing ADMS foundation, augment with task-specific applications at a total cost of $84.6 million (capex and opex, $2024) with an NPV of -$15.2 million ($2024)
2. Fully leverage ADMS foundation with upgrades and augmentation (recommended option) at a total cost of $76.3 million (capex and opex, $2024), with an NPV of +$3.7 million ($2024), and
3. Implement a new ADMS platform that addresses all needs at a total cost of $128.5 million (capex and opex, $2024) with an NPV of -$53.6 million.

273. As with AusNet's options analysis for other ICT projects, Options 1, 2 and 3 are designed and costed on the basis that they will each similarly address AusNet's identified functionality and capability gaps by the end of the next RCP.[71] Option 1 would add new functionality (i.e. beyond in-flight activities) via new software packages or systems (i.e. not necessarily [redacted] and could be described as a 'best of breed' approach. Option 3 is based on abandoning the [redacted] platform and introducing a new ADMS platform. Option 2 is to implement enhancements using the [redacted] product line.

274. Comparison of the pros and cons of Options 1 and 2 enunciated in the business case leads us to conclude that the options are very similar with a *possible* 10% cost advantage to Option 2 with *likely* less integration risk. Option 3 is clearly not competitive.

275. The difference is not explained in the business case,[72] but regardless, the net benefit claimed for Option 2 of $3.7 million ($2024) would be negative for even a 5% reduction in

[68] ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, pages 15-16

[69] The other risk scenarios are (i) degrading customer experience as network complexity increases ('C' level risk rating), and (ii) outage, configuration issue or defect in different ADMS platform modules impacts system performance, impairing real time control and resulting in extended customer outages ('C' level risk rating)

[70] ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, page 15

[71] ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, page 4

[72] We note that the NPVs for Option 1 and 3 also differ between the model and the business case, with the model producing lower results in each case, and in each case much lower than the preferred option.

benefits. Based on our assessment of the benefits we consider they are likely to be overstated by 20% or more, as discussed below.

276. Given the marginal benefit (and likely negative net benefit), we consider that AusNet should have considered a further option, being de-scoping the program for the next RCP. This could be from deferral into the following RCP or simply not undertaking some initiatives because they are found not to be necessary. The reasons for deferral/de-scoping may include:

- AusNet is not able to complete all the scope in the next RCP, noting that it appears to be two years behind in implementing Phase 3, and/or
- The benefit to cost ratio may be improved by selectively delaying some work into the next RCP – this would require that at least in part some of the costs/benefits are separable from the 'whole' package that AusNet proposes.

AusNet has provided a detailed cost breakdown but some high-cost components are clearly preliminary

277. AusNet provided a seventeen-line cost breakdown for Option 2.[73] Unfortunately, it does not identify the Phase 3 and Phase 4 initiatives, and our understanding is that it does not account for the delay to implementing Phase 3 work in the current RCP. Using the Roadmap as a guide, Phase 4 work was scheduled to commence in the last two years of the next RCP, however the description of scope in the Roadmap does not align well with the descriptions of the line items with expenditure in FY30 and FY31.

278. It is however apparent, and not unexpected, that a number of the estimates in FY29-FY31 appear to be very preliminary, noting that they are rounded to the nearest $1.0 million or $0.5 million. In total, seven annual costs in aggregate $20.5 million fall into this 'category'. As we discuss in section 2.2., this lack of cost estimate maturity is common to almost all ICT projects that AusNet proposes. We accept that this is likely a function of the lifecycle of the project, but it does point to an accuracy range for the program that will be subject to perhaps significant refinement as the program progresses.

AusNet has provided a breakdown of its assumed benefits which we consider to be overstated and which do not clearly link to Phase 3 and Phase 4 initiatives

279. AusNet has identified 30 individual sources of benefit from the program of work with reasonable descriptions of the assumptions underpinning them both in the NPV model[74] and in the business case. We observe the following from the NPV model (10-year study period):

- The five highest benefits account for 60% ($47 million) of the total benefits of $79.5 million:
  - $17.5 million from improved field management capabilities which reduce the length of extreme outages (300k NMIs) by 30 minutes for half of the affected customers; assumes extreme storm events occur every 2 years
  - $8.1 million from 5% lower annual emergency outage costs from greater ability to predict and prepare for outages (again, assuming an extreme storm and outage event occurs every two years)
  - $8.1 million from deferral of network augmentation in FY28 and FY29
  - $7.4 million from more rapid and consistent detection of issues on network assets - assume avoid increase of 5% of asset failure, noting that a separate line item with the same benefit description (except 2% rather than 5% reduction) is attributed a $3.0 million benefit, which appears to be a duplication
  - $5.7 million from a 2% reduction in field response costs from providing near real-time issues that need to be actioned, and

[73] AusNet EDPR 2027-31 Digital Program NPV model (Submission)CONFIDENTIAL(17970751.1), tab NPV.ADMS

[74] AusNet EDPR 2027-31 Digital Program NPV model (Submission)CONFIDENTIAL(17970751.1), tab CALC.ADMS

- Opex benefits of $13.5 million, the majority being derived from assumed reductions in FTEs required due to productivity improvements (less controllers, SCADA people, and schedulers).

280. Based on the comments in the NPV model, the benefits appear to have been derived with input from [redacted], to supplement the workshops with operational teams referred to in the business case. Whilst the breadth of consideration of the benefit sources is wide, we are of the view that:

- The capex benefits appear to be quite speculative, for example:
  - evidence of realised savings from other instances where the phase 3 and/or phase 4 functionality has been implemented would help convince us that the benefits are realisable in practice
  - the assumption that a storm of the magnitude of the February 2024 event will occur every 2 years is not supported by any analysis, noting that that event was variously described as extreme and catastrophic,[75] and
- The opex benefits appear to be more soundly based than the capex benefits, but again it would have been helpful to see evidence of the savings from other instances which we expect [redacted] may have or AusNet may have sought from peers.

281. We also note that deferment of network augmentation is attributed to a 'CER management and optimisation' initiative, with no further information provided to clarify, but we assume it relates to LV network augmentation. We have looked for evidence of this proposed offset in AusNet's LV augmentation program discussed in a separate EMCa report but it is not evident.

282. The business case does not include a sensitivity analysis, however in our view a more reasonable estimate of benefits is likely to be lower by at least 20%.

Not all the costs appear to have been taken into account in deriving the NPV

283. A further issue is that the benefits appear to have been based on Phase 3 and Phase 4 initiatives all being implemented, but the cost in the business case does not include the Phase 3 expenditure in the current RCP, which, as discussed above we understand to have been about $36 million (capex only). If this is included, the NPV for AusNet's preferred option would be at least -$32 million.

Interdependency of benefits with the Field Enablement and Network Management Model programs is unclear

284. Whilst it is clear that the Network Model management project and ADMS are closely linked, this is apparent only from the Network Model Management business case, which we assess in section 3.4.6. It is not possible from the information provided to discern what the interdependencies are with respect to benefit realisation.

285. There does not appear to be any direct overlap between the benefits claimed for the investment in Field enablement, although realising the benefits is dependent on certain initiatives within the Phase 3 ADMS suite of initiatives. The extent of the dependency is not clear from the information provided by AusNet.

Opex step changes are not adequately justified

286. The NPV model includes seven line-items describing new recurrent opex costs, as shown in Table 3.23. There is limited information in the ADMS business case to support the opex costs, nor any helpful information in the NPV model other than a comment that the Dx SCADA and eFEPs costs were for licensing and were provided by [redacted]

[75] The 13 February 2024 storm is described as catastrophic event that damaged 12,000 km of power lines and poles across Victoria, causing power outages that impacted more than 500,000 customers (Media release, Victorian State Government, 20 February 2024)

287. AusNet's response to IR012 provided some additional information on aspects of the opex, including:

- What opex increases (i) it had not included in its proposal (but may add in its Revised Proposal), and (ii) it will incur as a step increase but for which it has not submitted a step change,
- Opex included in other programs (e.g. for DERMS licensing and support expansion, which it has included in its Emergency Backstop Mechanism opex step change)
- Differences between the opex in its Technology Plan and the NPV Model.

288. Overall, however, there is insufficient justification of the opex step changes proposed. The issues we raise in section 2.2 are applicable to ADMS in that:

- The costs appear to arise from input from its proposed vendor [redacted], and which at best appear to be very preliminary estimates, and
- There is little information provided about the base year costs.

289. Given our concerns about the scope of work for the next RCP, there is likely to be a reduction in opex required in the next RCP through a combination of descoping due to some aspects of work not being required or deferment of initiatives in part or in full until the following RCP.

Findings

290. In summary, we consider that AusNet's proposed capex and opex step-change for the next RCP for the ADMS project are significantly overstated.

291. We consider that AusNet has provided a sufficiently compelling case for considering building on the foundational ADMS capability to be established in the current RCP. However, the issues that we expound upon in section 2.2 are evident in the ADMS project, undermine our confidence in the expenditure forecast. Among other things, key determinants of our finding are:

- The project appears to be two years behind an already ambitious and preliminary scope and schedule, and
- A more realistic assessment of benefits would likely lead to a negative NPV, wherein a positive NPV is a requisite under the AER's assessment guideline for ICT projects that expand capability
- The cost estimates are evidently very preliminary, which follows from the immature definition of the scope which is currently being worked on with Phase 3 seed funding in the current RCP, and
- Benefits are optimistic and regardless, not sufficiently supported.

292. The scope of work for the next RCP is ambitious and a more focused, prioritised and deliverable scope is likely to be determined as AusNet defines its admittedly immature plan for ADMS enhancement through the current planning and design work it is currently engaged in for Phase 3.

293. We consider that a reasonable and prudent forecast would assume focussing on the highest value parts of the work, noting interdependencies with other proposed programs (such as Network Model management and Field Enablement and CER Integration), and that this will lead to an efficiently delivered Phase 3 suite of initiatives at significantly reduced cost in the next RCP.

3.4.6 Network Model Management project

What AusNet has proposed

Proposed expenditure

294. AusNet proposes investment of $42.7 million capex and $1.2 million opex (step change) in the next RCP to update, enhance capability, and improve connectivity of its distribution network models.

295. The Network Model Management program is linked to the ADMS program (see section 3.4.5).

296. AusNet proposes the forecast capex and forecast opex step changes shown in Table 3.24 for this project

Table 3.24: AusNet's proposed expenditure for Network model management - $m, real 2026

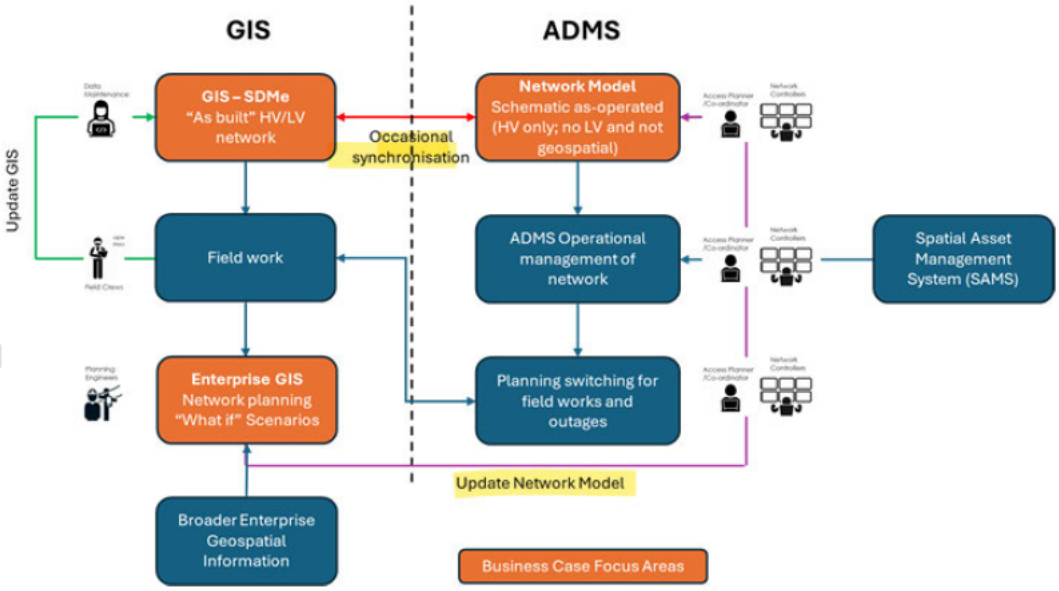
	2026	2027	2028	2029	2030	TOTAL
Capex	15.9	7.7	12.0	2.9	4.3	**42.7**
Opex step change	0.0	0.2	0.2	0.4	0.4	**1.3**
Total	**15.9**	**7.9**	**12.2**	**3.3**	**4.7**	**44.0**

Source: ASD EDPR 2026-31 – SCS Capex Model – 310125 and EMCa derived from AusNet model: ASD – AusNet – Accumulated Workbook for Opex and Step Changes – 31 Jan 2025

Overview of AusNet's distribution model current state

297. As shown in Figure 3.13, AusNet has three core systems relevant to network model management: ADMS network model, GIS platform ([redacted]), and the [redacted] GIS for network planning, risk management, forecasting and maintenance management. AusNet uses an in-house (SAMS) to provide controllers with a geospatial representation of the network.

Figure 3.13: GIS and ADMS network models and interaction



Source: ASD - AusNet - Digital Business Case - Network Model Management - 310125 – CONF, Figure 1

Assessment

Identified need and risk analysis seems to overstate the overall risk, but AusNet needs to respond adequately to recommendations from the reviews of the February 24 storm

298. In Table 3.25 we summarise AusNet's gap analysis and qualitative risk assessment. It has assessed the overall risk rating to be 'Level B' (second highest); the third risk dimension's risk rating is one step lower, 'Level C'.

299. We discuss briefly in section 3.4.5 the outcomes of government and AusNet reviews into the performance of Victorian DNSPs to the catastrophic weather event that occurred in February 2024 in Victoria. Of relevance to Network Model Management, AusNet concludes that it needs to resolve (i) inaccurate and unreliable data and lack of a geospatial view of the network, and (ii) increase the visibility of restoration work.[76]

300. AusNet's risk 'R1.1' and 'R1.3' address the risk of not responding to these issues. AusNet's risk R1.2 is based on the opportunity cost (from sub-optimal network planning decision making). It is the risk rating of risk R1.2 that we consider to be overstated, but nonetheless we consider there is a reasonable case for AusNet to evaluate options to adequately address risks R1.1 and R1.3 and to test the net benefit of the improvement opportunity.

301. In Table 3.25 we add our comments on AusNet's six gaps and its associated risk assessment. In summary, whilst we acknowledge that the qualitative risk assessments are likely to have merit, little or no quantitative evidence is provided.

[76] ASD - AusNet - Digital Business Case - Network Model Management - 310125 – CONF, page 10

Table 3.25: AusNet's summary of capability gaps

Identified gaps	AusNet risk assessment	*EMCa comment*
ADMS does not source its network model from the master GIS system which results in a risk of differences between the GIS and ADMS's network models	Model inaccuracies arise from the manual processes compromising network reliability and safety.	*AusNet provides no evidence of these issues arising*
No geospatial view of the network model available in ADMS	Can increase outage response time because controllers cannot accurately direct field crews to the precise location	*This is a reasonable conclusion based on our experience*
The LV network is not incorporated into the network model used by the ADMS	Lack of real-time representation of the LV model to controllers can result in slower outage responses and can lead to HEI (switching errors)	*Whilst no evidence is provided by AusNet of the HEI, based on our experience the conclusion is reasonable*
AusNet's geospatial systems have limited integration and capabilities, and do not enable single-view consolidation of network and broader geospatial information (e.g. bushfire or planning overlays, or 3D information such as LiDAR)	Hampers asset management, outage management, and emergency response planning	*No evidence is provided of these issues arising in practice*
The current GIS network model information is not fully compliant with the current industry standard (GDA2020)	Can result in data inconsistencies between AusNet and proponents requiring manual correction	*No evidence is provided about the impact of the lack of full compliance with the standard*
Current network models and geospatial capabilities do not enable detailed demand forecasting, with AusNet currently utilising spreadsheets for top-down demand forecasting	Additional information will also provide AusNet the ability to complete detailed bottom-up forecasting, as required by the growing network complexity, and undertake scenario and sensitivity analysis for specific emerging trends.	*This is presented as an improvement opportunity rather than a risk*

Source: Based on ASD - AusNet - Digital Business Case - Network Model Management - 310125 – CONF, Table 3

AusNet presents three options, two of which are not helpful in confirming or otherwise the prudency of AusNet's preferred option

302. There is no 'do nothing' option referenced in the options analysis, but it appears the benefits evaluation for the three options in the business case is based on a 'do nothing' counterfactual. The three options presented are:

1. Maintain the existing systems, augment with task-specific applications at a total cost of $44.9 million (capex and opex, $2024)
2. Maximise use of existing systems with updates and upgrades (recommended option) at a total cost of $40.4 million (capex and opex, $2024), and
3. Replace existing systems with a new platform that addresses all needs at a total cost of $45.3 million (capex and opex, $2024).

303. As with AusNet's ICT business cases generally, Options 1, 2 and 3 are designed and costed on the basis that they will each similarly address AusNet's identified functionality and capability gaps by the end of the next RCP.[77] Option 1 would retain multiple geospatial

[77] ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, page 15

systems via a 'best of breed' approach. Option 3 is based on implementing a new GIS to provide consolidated geospatial and network model capabilities, likely to be [redacted]

Table 3.26: AusNet's assessment of NPV for each option ($m, real 2024)

Option	NPV
Option 1	-$6.8m
Option 2 (preferred)	$2.3m
Option 3	-$1.4m

Source: AusNet business case (table 2)

304. Comparison of the pros and cons of Options 1, 2 and 3 enunciated in the business case leads us to conclude that the options are likely to achieve similar outcomes. The NPV for Option 2 is estimated to be $2.3 million, with a PV benefit to PV cost ratio of a slim 1.06. As shown in Table 3.26, the NPVs for Options 1 and 3 are negative. On the basis of the cost, NPV, and delivery advantages, Option 2 (which is recommended by AusNet) is the prudent choice from the three options presented.

305. Given the marginal benefit (and likely negative net benefit, referring to our assessment of claimed benefits, below), we consider that AusNet should have considered a further option, being deferral of some of the work to the next RCP, focussing on the highest value-adding components.

AusNet has provided a breakdown of capital and operating costs

306. AusNet provides a breakdown of capital costs into seven initiatives, with 50% of the [redacted] capex ($2024) attributable to establishing a HV/LV Network Model.[78] Two initiatives are planned to be undertaken in FY31: 'Preparedness (bushfire risk)' for [redacted] and 'Hazard, Environment, Access, Easements Overlays' for [redacted].

78 AusNet EDPR 2027-31 Digital Program NPV model (Submission) CONFIDENTIAL (17970751.1)

[redacted]

307. AusNet advises that the cost estimates were derived as follows:[80]

> *HV/LV network model estimate developed by project team with [redacted] engagement. Further costing provided by incumbent system integrator ([redacted], benchmarked to recent projects, and supported by vendor engagement (e.g. scoping workshops).*

308. At this relatively early stage of project development, this can be viewed as a pragmatic approach to forecasting the cost, however as we state in section 2, we consider that:

- The estimate resulting from such a process to tend to be biased upwards, and
- As with most large ICT programs there exists the material risk that the proposed scope will not be delivered to schedule.

309. The proposed opex is $1.8 million ($2024), with a step change of $1.2 million ($2026). The $1.8 million relates to 'licensing and support' for new product or modules services, specifically for:

- 3D Network, LiDAR, and Topographic visualisation: [redacted] commencing in FY30
- Network model (HV/LV): [redacted] commencing in FY28
- Multi-view demand forecasting: [redacted] commencing in FY30.

310. We consider these to be reasonably incurred costs for new functionality on the basis that the costs were developed with input from relevant vendors and provided that the relevant capex projects proceed.

311. However, given that the claimed benefits in the next RCP amount to more than $23 million,[81] many of which are derived from realisable efficiency gains, we consider that the step change is not warranted.

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79 While AusNet includes this in its NPV model, in its 'Accumulated workbook for opex and step changes' it states that this amount is 'absorbed'. For this reason, the opex step change shown in Table 2.26 is less than the Total Opex shown in the current table

80 AusNet EDPR Onsite Workshop - Day 3 Pack CONF, slide 30

81 AusNet EDPR 2027-31 Digital Program NPV model (Submission)CONFIDENTIAL(17970751.1)

Allocation to AusNet Distribution is not accounted for

312. As described in section 2.2.4, the information that AusNet has provided shows no evidence of it having applied an allocation of the project cost to AusNet Distribution. From the information that AusNet provided in response to our Information Request, as shown in Table 2.4 in the current report is that the AusNet Distribution allocation of this will be 84.9% for capex and 83.2% for opex.

313. As above, we consider that an opex step change is not justified, therefore allocation is not relevant for this component.

AusNet's quantum of benefits appears to be overstated

314. Table 3.28 summarises AusNet's benefit assessment for its preferred Option 2.

Table 3.28: Summary of AusNet's benefit assessment for Option 2

Benefit driver	Benefit category	Benefit in next RCP	9-year benefit	PV	*AusNet's elaboration*
Improved productivity:					
Outage response	Opex[82]	0.19	1.70	1.15	*Geospatial data improvements - reduction in emergency opex from improved breadth, integration, and accuracy*
Employee	Opex	7.09	15.16	11.24	*15 x Access coordinator and operational roles*
Controllers	Opex	0.31	0.70	0.52	*0.6 x scaling to 0.8 x Controller*
Other direct opex improvement	Opex	2.28	4.56	3.41	*Avoidance of 15 GSL related penalties per annum*
Improved reliability	Reliability[83]	1.12	3.37	2.38	*1.5% improvement on vegetation related outages*
Compliance penalty avoidance	Compliance	3.46	6.92	5.18	*Avoided breach of ESV General Duties (once every 2 years)*
Safety incident avoidance	Safety	0.08	0.68	0.46	*Hazard, Environment, Access, Easements Overlays – avoidance of 2 x safety incidents per year*
Other direct capex improvement	Capex	6.88	17.20	12.47	*10% improvement in LV Demand driven augex*
Total		**21.41**	**50.29**	**36.82**	

Source: Based on AusNet EDPR 2027-31 Digital Program NPV model (Submission)CONFIDENTIAL(17970751.1), tab NPV.Network Model Mgmt

315. Our observations on AusNet's benefits assessment are as follows:[84]

- The commencement of annual benefits is staggered, which gives some confidence that the commencement of the benefit streams is aligned to the completion of the respective initiative(s)
- Improved productivity - the outage response improvement is assumed to be a modest 1% in FY31 increasing to 2% from FY32 – the end of the study period, FY35. This seems reasonable; the FTE reductions appear to be reasonable and combine to present the largest benefit stream
- Other direct opex improvement – no supporting information is provided in the business case to justify this assumption, but it is likely associated with overall improvement in network geospatial visibility

82 AusNet categorises this as a risk reduction benefit but we consider it to be an opex benefit

83 AusNet categorises this as VCR, but it is derived from reduced outages, using the VCR to value the customer benefit

84 ASD - AusNet - Digital Business Case - ADMS - 310125 – CONF, Table 4

- Improved reliability – from reduced vegetation-related outages through improved fault location and visibility of vegetation on the network (from LiDAR and 3D modelling functionality) enabling quicker response by field crews; the basis for the 1.5% improvement is not explained
- Compliance penalty avoidance - Compliance penalty of $1.73 million per incident (Energy Safe Victoria)
- Safety incident avoidance - from consolidation of geospatial capability and implementing hazard, environment, access and easements layers; the basis for the assumed avoidance of 2 p.a. is not explained, and
- Other direct capex improvement:
  - There is no evidence provided to support the 10% assumption other than references to improved modelling and demand forecasting
  - the $17.28 million ($2024) benefit over the nine-year study period is based on 10% reduction in LV demand-driven augex equating to $3.44 million p.a. (i.e. from an assumed $34.4 million p.a. spend, $2024)
  - AusNet proposes annual average capex of $27.7 million ($2026) in the next RCP, which equates to $25.8 million ($2024); we see no evidence in the LV Augmentation business case or companion economic model of the reduction in capex from the Network model management project;[85] although we note that there is a cost reduction attributed to flexible services (DSS deferral); however, the 'benefit profile' does not match either the quantum or timing of the augex deferral claimed here.

316. Overall, we consider that the sources of benefits are reasonably identified, however:

- The direct capex improvement of $17.2 million claimed appears to be overstated by at least $4.2 million using AusNet's own data, leading to a negative program NPV (approximately -$1 million), and
- Given the importance of the benefit evaluation to the justification of the proposed significant expenditure, we expected:
  - More information to support the assumptions
  - A sensitivity analysis, not to confirm whether the right option from those presented was selected but to demonstrate the robustness of the proposed expenditure given the guidance from the AER regarding justification of non-recurrent ICT expenditure (which AusNet acknowledges); for example, a reduction of benefits by 20% would lead to an NPV of -$5.6 million (or $7.9 million lower than the claimed NPV for Option 2 of +$2.3 million[86]) which would require a response from AusNet.

Interaction with other proposed programs and processes

317. AusNet advises that: [87]

- There is a key linkage between this project and the ADMS project, the ADMS can be implemented with the existing network models, *although with more limited functionality, and*
- The enhanced network models are used in other AusNet business processes, *such as network planning, network safety, and 3D visualisation (e.g. LiDAR).*

318. No other independencies are described other than the link to AusNet's proposed step change reduction due to improved productivity from a number of sources, including Network Model Management:[88]

85 ASD - AusNet - Demand driven augex (LV augmentation) BC - 31012025 – PUBLIC, ASD - AusNet - Demand driven augex (LV augmentation) economic model - 31012025 - CONF

86 ASD - AusNet - Demand driven augex (LV augmentation) BC - 31012025 – PUBLIC, Table 2

87 ASD - AusNet - Demand driven augex (LV augmentation) BC - 31012025 – PUBLIC, page 3

88 ASD - AusNet - EDPR 2026 - 2031 Regulatory Proposal -31 Jan 2025 – CONF, page 249

Importantly, should our proposed Digital capital and operating expenditure not be approved by the AER, we will reduce these estimated efficiencies in our Revised Proposal.

Findings

319. This program is designed to enhance situational awareness for controllers, improves outage management, and to support compliance with regulatory recommendations.

320. AusNet's options analysis is limited. We consider that AusNet has adopted an appropriate option (Option 2: maximise use of existing systems with updates and upgrades), but the scope and timing of the proposed work is not justified by AusNet's analysis.

321. There is no evidence of AusNet having correctly applied an allocation of the project cost to AusNet Distribution, which should be 84.9% of the proposed capex.

322. We further consider that:

- AusNet's very preliminary capex forecasts for the work in the final two years of the program may be biased towards overstatement, and
- As with most large ICT programs there is a material risk of failure to complete the proposed work within the allocated project duration, leading to a 'roll-out' of expenditure into the following RCP.

323. As above, we consider that an opex step change is not justified, therefore allocation is not relevant for this component.

324. The benefits are likely to be overstated and are not adequately justified given the marginal benefit to cost ratio.

325. A reduction in scope may also reduce:

- Benefits realisation from this program, and
- Benefits realisation from the ADMS program (refer to section 3.4.1).

3.5 Assessment: Market reform and metering projects

3.5.1 Market Systems project

What AusNet has proposed

Project objective

326. Along with all DNSPs in the NEM, AusNet is required to undertake a program to deliver updated and consolidated interfaces to market systems, under a project defined as Market Interface Technology Enhancement (MITE).

Summary of requirements

327. MITE will deliver market systems interface capability enhancements involving:

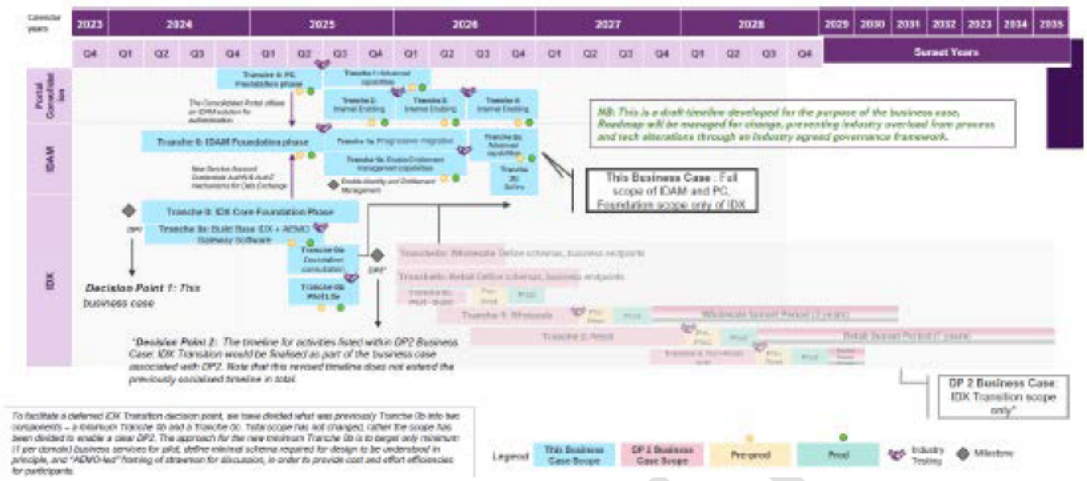
- Identity and Access Management (IDAM)
- Industry Data Exchange (IDX), and
- Portal Consolidation.

328. AusNet is required to deliver these interface enhancements as licence obligations and compliance obligations under the NER, including forthcoming changes to B2B procedures. The requirements across all DNSPs are being coordinated by AEMO, which has published a draft timetable as shown in Figure 3.14.

329. For AusNet the timetable overlaps the current and next regulatory periods. AusNet has commenced work in the current period, however the detailed design requirements for

migrating to IDX are not expected until the end of 2025 and AusNet expects that the majority of the implementation will occur in the next regulatory period.

Figure 3.14: AEMO's Draft Phase Investment delivery timeline for MITE



Source: AusNet business case for Market systems, figure 1 (page 3)

Proposed expenditure

330. AusNet proposes the capex shown in Table 3.29 for this project. AusNet does not propose any opex step change requirement.

Table 3.29: AusNet's proposed expenditure for Market Interface project - $m, real 2026

	2026	2027	2028	2029	2030	TOTAL
Capex	8.2	12.1	0.0	0.0	0.0	20.2
Total	**8.2**	**12.1**	**0.0**	**0.0**	**0.0**	**20.2**

Source: ASD EDPR 2026-31 – SCS Capex Model – 310125 and EMCa derived from AusNet model: ASD – AusNet – Accumulated Workbook for Opex and Step Changes – 31 Jan 2025

Assessment

The project is needed

331. AusNet has a regulatory obligation to undertake this project and to do so within required timeframes.

AusNet has chosen an appropriate option

332. AusNet considers two options:

- Option 1: Upgrade existing systems to comply with obligations (preferred), and
- Option 2: Replace systems with new systems to comply with obligations.

333. Both options would leverage AusNet's existing [redacted] architecture. For the IDX component, under option1 AusNet would retain [redacted] and update the required transformations. AusNet considers this a low-risk option as it retains much of its existing logic and connections to its back-end systems.

334. Under Option 2, AusNet states that it would replace [redacted] with a new platform, most likely [redacted]. This would require redesign of connections between the gateway and AusNet's back-end systems and AusNet consequently estimates a higher cost for this option.

335. Based on this information, we consider that choosing Option 1 for regulatory cost estimate purposes, is reasonable.

AusNet's basis for estimating the cost of this project is reasonable

336. As with all DNSPs, AusNet is awaiting final specifications from AEMO. In the meantime, AusNet states that it determined its cost estimate by:

- Adopting a published AEMO industry-wide cost estimate, and
- Calculating its apportionment based on its number of NMIs relative to the total number in the NEM.

337. We consider this to be a reasonable approach, although we note that:

- In its business case, AusNet refers to its NPV model with the implication that the costing calculation referred to above is shown in this model. However we are unable to see such calculation, and the costs are hard coded in that model.
- While AusNet states that it has commenced work in the current period, its project total capital cost is aligned solely with the next regulatory period. We are aware that AusNet has had cost pass through discussions with AER with regard to the current period therefore, to the extent that expenditure is incurred and allowed to be passed through in the current period, we assume that this will reduce the amount proposed for the next period.

338. Costing and the timing of expenditure on this project appear to be still in flux, and AusNet advised in our onsite meeting that it expects to provide the AER with a more robust update on these aspects in a Revised Regulatory Proposal, following the Draft Determination. Noting this, we have not further pursued matters regarding cost assumptions and what period they may fall into.

339. We have, however, compared the costs proposed by each of the five DNSPs in their current submission, as shown in Figure 3.15, using customer numbers to normalise the comparison. As shown there, AusNet's proposed capex/customer is less than the Victorian average, and similar to Powercor's – which we would expect given their broadly comparable size.

Figure 3.15: Comparison of proposed capex for MITE - $m, 2026

Project	CP	PAL	UE	JEN	ASD	TOTAL / AVERAGE
Market interface technology enhancements (MITE)	10.3	24.0	35.8	17.5	20.2	107.9
Customer number (000)	351	937	718	384	823	3,213
$/customer	**29.3**	**25.6**	**49.9**	**45.7**	**24.6**	**33.6**

Source: EMCa, derived from capex models provided by each of the DNSP for the EDPR 2027-31 and AER RIN source information for customer numbers

Findings

340. AusNet's proposed capex for this project is reasonable, based on information currently available, but is expected to be superseded over the coming months.

3.5.2 Metering Systems project - Recurrent capex

What AusNet has proposed

Project objective

341. AusNet states that it has three objectives:

- Its existing systems will require a vendor upgrade during the period, in order to maintain currency
- AusNet needs to upgrade its meter data management to manage data from the increasing number of meters subject to 5-minute settlement provisions, and

- AusNet needs to invest to be able to meet new Flexible Trading Arrangement provisions in the NER.

342. AusNet has categorised its investment to meet the first of these objectives as 'recurrent capex' and which it proposes to allocate 50:50 between SCS and ACS. It has categorised its second and third objectives as requiring non-recurrent capex, which it has allocated 100% to ACS.

343. In our assessment, we are reviewing the proposed SCS expenditure, therefore this is only the proposed recurrent component of its project.

Summary of requirements

344. In Figure 3.16 we provide an overview of AusNet's metering suite and its functionality.

Figure 3.16:Overview of AusNet's metering suite

AusNet's metering suite functionality

- *Communication of information on energy consumption and demand that enable customers to be billed accurately and in a timely manner.*
- *Provision of information to AEMO to settle the market.*
- *Consolidation of information to monitor and detect issues with our network infrastructure that enable accurate effective and risk-based planning to ensure a reliable and safe service for our customers.*
- *Improved response to outages and other incidents including more precise detection of location of outages and quicker restoration.*
- *Enabler of customer energy resources by facilitating timely and accurate data.*

AusNet's systems providing metering functionality

- *Itron UtilityIQ (UIQ, EnergyIP and EAI) collate remote reads on advanced meters*
- *MV90 and MVRS collate the data on accumulation meters*
- *Itron SIQ enables real time monitoring of voltage (Power Quality)*

Source: AusNet Metering Systems business case, page 4 and 5

345. AusNet states that it has identified the need for upgrades. Where possible it has sought to do so based on vendor information but where upgrade cycles are not yet known over the period to 2031, it has made a default assumption that upgrades will be required every 5 years. In Table 3.30 we show the capex that AusNet proposes for the two recurrent expenditure line items, as allocated to SCS. As can be seen in this table, AusNet proposes the expenditure in FY28/FY29 for metering systems and in FY29/FY30 for the power quality systems.

[redacted]

Proposed expenditure

346. AusNet proposes the forecast capex and opex step change amounts shown in Table 3.31 for this project (in $2026).

Table 3.31: AusNet's proposed expenditure for Metering SCS recurrent capex - $m, real 2026

	2026	2027	2028	2029	2030	TOTAL
Capex	-	1.6	2.5	0.9	-	5.1
Opex step change	0.0	0.1	0.1	0.1	0.1	0.4
Total	**-**	**1.7**	**2.6**	**1.0**	**0.1**	**5.5**

Source: ASD EDPR 2026-31 – SCS Capex Model 310125 and EMCa derived from AusNet model: ASD – AusNet – Accumulated Workbook for Opex and Step Changes – 31 Jan 2025

Assessment

It is reasonable to assume that the upgrades will be needed within the next regulatory period

347. We consider it reasonable to assume that upgrades are required on a cycle of approximately 5 years. While AusNet may be able to extend these cycles to some extent, we consider it reasonable to assume that an upgrade will be required within the regulatory period.

AusNet has chosen an appropriate option

348. AusNet states that it has considered two options:

- Option 1: Actively manage without vendor support, and
- Option 2: Perform lifecycle refreshes (preferred).

349. For the costs to be (partly) allocated to SCS, AusNet ascribes the same cost to both options. AusNet ranks Option 1 as higher risk, and we consider this a reasonable assessment. While it makes no difference to the SCS capex proposal, we nevertheless concur with its selection of option 2.

AusNet's basis for estimating upgrade costs is likely to be reasonable

350. AusNet does not describe how it has estimated the required upgrade costs but on the basis that it involves what AusNet refers to in its business case as existing systems that are well understood, we consider that the estimates are reasonable.

AusNet has applied cost allocation to AusNet Distribution SCS capex but not to its proposed opex step change

351. While this project is entirely for AusNet distribution, AusNet has transparently allocated a substantial portion of the overall cost of this project, to ACS. This includes:

- 50% of the two recurrent capex line items reviewed here, and
- 100% of other recurrent capex, also the non-recurrent capex to implement Flexible Trading Arrangements.

352. Given the functionality provided by the AMI metering and PQ systems, as described in Figure 3.16, we consider this to be a reasonable allocation for capex.

353. While AusNet has included the opex step change shown in Table 3.31 in its proposed 'digital' opex step change as SCS opex, in its response to our information request AusNet specifies this as 100% ACS. Therefore, this step change is not justified as part of its proposed SCS opex.

Findings

354. AusNet's proposed recurrent capex for this requirement is reasonable, but its proposed opex step change is not justified.

3.6 Summary of findings on ICT projects assessed in other reports

3.6.1 DSO/Future Service Provider Hub

What AusNet has proposed

355. AusNet proposes the forecast capex and forecast opex step changes shown in Table 3.32 for this project.

Table 3.32: AusNet's proposed expenditure for DSO/Future Service Provider hub - $m, real 2026

	2026	2027	2028	2029	2030	TOTAL
Capex	11.5	11.5	4.4	10.0	3.4	40.8
Opex step change	0.0	0.8	0.8	0.8	0.8	3.2
Total	**11.5**	**12.3**	**5.2**	**10.8**	**4.2**	**43.9**

Source: ASD EDPR 2026-31 – SCS Capex Model – 310125 and EMCa derived from AusNet model: ASD – AusNet – Accumulated Workbook for Opex and Step Changes – 31 Jan 2025

Assessment

356. We have reviewed this project in our separate (technical) report as part of our review of AusNet's proposed CER program.

Findings

357. In our assessment, we find that AusNet's proposed capex for a DSO / future services hub, is significantly overstated. However, we find that its proposed opex is a reasonable estimate of additional opex.

3.6.2 Conductor Clearance Compliance (3D Model/LiDAR)

What AusNet has proposed

358. AusNet proposes the forecast capex and forecast opex step changes shown in Table 3.33 for this project.

Table 3.33: AusNet's proposed expenditure for Conductor clearance compliance (3D model/LiDAR) - $m, real 2026

	2026	2027	2028	2029	2030	TOTAL
Capex	3.2	2.6	2.2	1.8	1.3	11.2
Total	**3.2**	**2.6**	**2.2**	**1.8**	**1.3**	**11.2**

Source: ASD EDPR 2026-31 – SCS Capex Model – 310125 and EMCa derived from AusNet model: ASD – AusNet – Accumulated Workbook for Opex and Step Changes – 31 Jan 2025

Assessment

359. We have reviewed this project in our separate (technical) report as part of our review of AusNet's proposed repex program (and which includes AusNet's proposed line clearance compliance expenditure).

Findings

360. In our assessment, we find that AusNet's proposed capex for this project is reasonable.

3.6.3 Cyber security

361. AusNet proposes ICT capex totalling $27.5m for cyber security. We assess this in a separate report. Our finding is that its proposed expenditure is justified.

4 FINDINGS AND IMPLICATIONS FOR PROPOSED ICT EXPENDITURE

Our principal finding is that AusNet's proposed ICT capex and ICT opex are overstated.

We consider that reasonable alternative forecasts would be as follows:

- For AusNet's proposed ICT capex, totalling $418.8m, we consider that a reasonable alternative forecast is 25% to 35% less than AusNet has proposed,
- For AusNet's proposed ICT opex step change, we consider that a reasonable estimate of the additional opex that AusNet will incur would be 50% to 60% less than AusNet has proposed.

4.1 Summary of our findings

4.1.1 Findings on AusNet's business cases

Shortcomings in AusNet's business cases detract from the claim that it has proposed prudent and efficient ICT expenditure

362. For the most part, AusNet's business cases represent a structured commencement to the process of identifying ICT requirements for the next period. This assessment is typically based on a traditional current state/future state/gap analysis approach, with initiatives then developed with a view to addressing the identified gaps. However, AusNet's assessments then fail to identify which of these initiatives would provide a net benefit and any resulting filtering or prioritisation of initiatives based on their relative merits.

363. We consider that AusNet's options analysis tends to be rudimentary and of little assistance in determining an appropriate program of work. Options such as 'do nothing' or 'replace all applications' are readily dismissible and, after doing so, AusNet then does little or nothing to explore and consider genuine options that might involve different combinations of the multiple 'initiatives' that tend to make up each 'project'.

364. AusNet's CBA also appears not to have provided it with much guidance. Several projects have either highly marginal NPVs that cannot be considered to be robust, or negative NPVs. We consider that this too is indicative of a tendency to include in its proposal initiatives and associated costs that may not be net beneficial, and AusNet does not provide information that would show that it has considered its proposed projects from this perspective.

365. We consider it likely that, building on its business case foundations, AusNet has the foundational material from which it could develop a prudent and efficient ICT program over the period, but its proposal currently does not meet these criteria.

4.1.2 Findings on AusNet's proposed expenditure

AusNet's proposed ICT capex is overstated

366. For a number of reasons, we consider that AusNet's proposes ICT expenditure overstates its requirements. We consider that:

- For a number of significant projects, AusNet has included initiatives that are low maturity and, in some cases, speculative allowances for functionality that vendors are yet to develop and for which AusNet does provide a compelling case that would justify them. AusNet has included material cost estimates for low maturity and speculative initiatives.

For such initiatives, we consider that a reasonable assumption is that AusNet either does not proceed with them or that they are de-prioritised and could be undertaken in the subsequent regulatory period.

- Even for what it describes as medium and some higher maturity initiatives, AusNet's cost estimates are the aggregation of a number of high-level, highly rounded estimates, developed on a basis that is likely to result in aggregate overestimation. We also consider that AusNet will find opportunities to refine the scope of individual initiatives and to achieve efficiencies by bundling the work required to develop them.
- For recurrent expenditure, and to the extent that AusNet has relied on vendor-driven upgrade cycles, we consider that AusNet will find opportunities to prudently defer some upgrades through extended support and an 'N-1' versioning approach.
- AusNet does not provide convincing evidence that it could deliver a program of the scale that it proposes; however, a more targeted program such as is indicated through deeper consideration of the justification for all initiatives, will result in a program that is more robustly justified, will achieve the majority of needs that AusNet has identified and will be able to be efficiently delivered.
- Despite providing metrics for allocating capex and opex between AusNet distribution, Transmission and Gas and between SCS and ACS at the individual line item/initiative level for each project, AusNet has not applied these metrics and has in each case but one proposed its estimate of the full project cost, to AusNet Distribution's regulatory proposal.
  - For one project (metering), AusNet has correctly applied the allocation metric for SCS that it supplied to us (and has therefore not included any ACS costs in its SCS proposal).

367. These considerations lead us to the finding that AusNet's proposed ICT capex is not a reasonable estimate of AusNet's prudent and efficient requirements. We consider that it is significantly overstated.

The majority of AusNet's proposed ICT opex step changes are not required

368. With the exception of Cyber Security (which we assess in a separate report), we consider that AusNet's proposed ICT opex step changes either are not required or that it requires less than it has proposed. We form this view on examining the aggregate realisation of business benefits that AusNet includes in its CBAs.

4.2 Implications for proposed capex and for proposed opex step change allowances

4.2.1 Qualitative overview

369. In Table 4.1 we provide a summarised indication of the implications of our findings for each of the ICT projects proposed (including those assessed in our other reports).

Table 4.1: Summary qualitative assessment of implications - $m, real 2024

ICT projects	Proposed Capex	Proposed Opex	Summary of assessment implications
ICT – Recurrent (TAM)			
04 Business Systems (TAM - Systems)	67.3	4.0	*Capex overstated (extend cycles to upgrades)* *Opex overstated (allocation not applied)*
05 Hardware (TAM -Infrastructure)	32.7	-	*Capex overstated (extend cycles to upgrades)*
Subtotal	**100.1**	**4.0**	
ICT- Non-recurrent (Business systems excl CER)			
06 Asset Risk Management	79.3	3.3	*Capex significantly overstated (over-scoped, cost estimate bias, allocation of 78.6% not applied)* *Opex step change not justified*
07 Customer engagement platform	45.3	1.5	*Capex significantly overstated (over-scoped, cost estimate bias, allocation of 95.6% not applied)* *Opex step change not justified*
10 ADMS Energy Management (IT portion)	27.9	13.7	*Capex significantly overstated (over-scoped, project delayed, cost estimate bias)* *Opex step change overstated*
11 Field Enablement ERP	18.8	10.7	*Capex overstated (allocation of 93% not applied)* *Opex step change not justified*
12 Network Model Management Geospatial and asset model tools	42.7	1.3	*Capex overstated (degree of over-scope, cost estimate bias) allocation of 84.9% not applied)* *Opex step change not justified*
Subtotal	**214.0**	**30.6**	
ICT- Non-recurrent (Market reform and metering)			
13 Market systems (non-recurrent)	20.2	-	*Proposed capex is reasonable*
17 Metering systems (recurrent)	5.1	0.4	*Proposed capex is reasonable.* *Opex step change not justified (ASD advises 100% allocated to ACS)*
Subtotal	**25.3**	**0.4**	
ICT- Cyber security (Assessed in cyber security report)			
08 Cyber security	27.5	1.8	*Proposed expenditure is reasonable*
ICT – CER (Assessed in Technical report, CER section)			
14 DSO/Future Service provider hub	40.8	3.2	*Capex overstated (over-scoped, cost estimation bias).* *Opex is reasonable estimate*
ICT – Repex (Assessed in Technical report, repex section)			
Conductor clearance LIDAR	11.2	-	*Capex is justified*
TOTAL - ICT	**418.8**	**39.9**	**Capex and opex significantly overstated**

Source: EMCa

4.2.2 Alternative forecast – ICT capex

Alternative forecast methodology for recurrent ICT capex

370. Our proposed alternative forecasts involve one or more of the following adjustments, to the extent that it formed the basis of AusNet's forecast and which we consider to be not justified:

- Adjustment to allocate a proportion of project costs based on allocation factors advised by AusNet
- Adjustment to allow for deferral of a proportion of upgrades into the subsequent RCP through extended support and/or critical need-based prioritisation
- Adjustment to account for cost over-estimation bias.

Alternative forecast methodology for non-recurrent ICT capex (excluding cyber security)

371. We consider that AusNet's proposed capex for three projects (Market Systems, Metering Systems and LIDAR) are justified.

372. For the other six non-recurrent ICT projects (Asset risk management, Customer engagement platform, ADMS energy management, Field enablement ERP, Network model management geospatial and LIDAR) our proposed alternative forecast involves one or more of the following adjustments, to the extent that it formed the basis of AusNet's forecast and which we consider to be not justified:

- Adjustment to allocate a proportion of project costs based on allocation factors advised by AusNet
- Adjustment to allow for a proportion of scope initiatives/line items included within some projects to be deferred beyond the next RCP or otherwise to not proceed, including those identified as low maturity and/or as a result of project delays already evident
- Adjustment to account for cost over-estimation bias.

Alternative forecast methodology for cyber security ICT capex

373. No alternative forecast is required for AusNet's proposed cyber security capex.

Alternative forecast – ICT capex

374. We have assessed a capex range that we consider is indicative of a reasonable alternative forecast for ICT, as shown in Table 4.2.

Table 4.2: Alternative forecast range for proposed ICT capex ($m, real 2026)

ICT category	Proposed capex	Adjustment for alternative forecast
Recurrent	100.1	-40% to -45%
Non-recurrent projects (other than CER and cyber security)[89]	250.5	-25% to -35%
Non-recurrent project - CER	40.8	-30% to -40%
Cyber security	27.5	0%
Total	**418.8**	**-25% to -35%**

Source: EMCa

[89] Includes LIDAR, reviewed in Technical report under 'repex'

4.2.3 Alternative forecast – Additional ICT opex

ICT incremental opex forecast methodology

375. We have assessed an alternative estimate that we consider would be indicative of a reasonable forecast, taking account of the factors described in our review of each project and as was summarised above, in Table 4.1. These can be summarised as involving one or more of the following adjustments, to the extent that it formed the basis of AusNet's forecast and which we consider to be not justified:

- Adjustment to allocate a proportion of project costs based on allocation factors advised by AusNet (including allocation to ACS and/or allocation to services other than ASD)
- Adjustment to take account of opex efficiencies described by AusNet,
- Adjustment to account for likely deferral of some projects or project modules.

ICT incremental opex - alternative forecast

376. Our indicative alternative forecast is shown in Table 4.3.

Table 4.3: Indicative alternative forecast for ICT additional opex ($m, real 2026)

ICT	2027	2028	2029	2030	2031	TOTAL
Proposed	**3.6**	**7.4**	**8.7**	**10.0**	**10.2**	**39.9**
less adjustments:						
ADMS	0.0	0.0	-1.2	-1.2	-1.2	-3.6
Field enablement	-1.9	-2.2	-2.2	-2.2	-2.2	-10.7
Network Model management	0.0	-0.2	-0.2	-0.4	-0.4	-1.3
DSO	0.0	0.0	0.0	0.0	0.0	0.0
Metering systems	0.0	-0.1	-0.1	-0.1	-0.1	-0.4
Asset management	0.0	0.0	-0.5	-1.4	-1.4	-3.3
Customer engagement	0.0	-0.2	-0.4	-0.4	-0.4	-1.5
TAM - Apps	-0.3	-0.6	-0.6	-0.6	-0.6	-2.6
Cyber security	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal - Adjustments	-2.2	-3.3	-5.2	-6.4	-6.4	-23.5
Alternative forecast	**1.4**	**4.1**	**3.5**	**3.7**	**3.8**	**16.4**

Source: EMCa

377. We have presented our calculation of an indicative alternative opex forecast project by project and year by year, in order to provide transparency on the assumptions that underly it. Taking account of range assumptions inherent in the individual calculations, we consider that a reasonable alternative estimate for prudent and efficient additional opex, would be between 50% and 60% less than AusNet has proposed.

Observations on AusNet's proposed Digital Efficiencies negative step change

378. AusNet has proposed a 'Digital Efficiencies' step change offset of negative $3.9m, which it states as being the difference between

- opex efficiency improvements that it forecasts from the five non-recurrent ICT projects and
- effects that it calculates from the 0.5% p.a. productivity improvement that is included in its overall base-step-trend opex forecast.[90]

[90] AusNet regulatory proposal, section 7.9.4

379. We have not assessed this negative step change, but it is relevant to consider whether or to what extent it might account for the same net impacts as we are considering an alternative forecast for the ICT opex step changes above.

380. We make the following observations on AusNet's proposed Digital Efficiencies negative step change, namely that:

- It commences from the first year of the next regulatory period. This would be consistent with it arising from investments already made, rather than its proposed ICT investments which will release efficiencies only as they are deployed in the next period.
- The proposed amount is much less than the opex efficiency benefits that AusNet includes in its NPV analyses, and which we consider are also understated.
- By offsetting its estimate of ICT-driven productivity improvements by its estimate of the impact of the 0.5% per annum general opex productivity trend factor, it effectively assumes that such productivity gains arise only from ICT investments, and it largely negates the net impact of this factor.

APPENDIX A AER GUIDELINES FOR NON-NETWORK ICT ASSESSMENT

A.1.1 Assessment of non-network ICT capex

381. The scope of our assessment includes ex ante assessment of proposed non-network ICT.

382. The AER's 2019 non-network ICT capex assessment approach guideline ('ICT assessment guideline') is relevant to AusNet's ICT expenditure proposal.

383. The AER requires DNSPs to allocate their non-recurrent ICT expenditures into the three subcategories for which it applies different assessment approaches, as described below:[91]

Maintaining existing services, functionalities, capability and/or market benefits

384. The AER states that:

> *Given that these expenditures are related to maintaining existing service, we note that it will not always be the case that the investment will have a positive NPV. As such, it is reasonable to choose the least negative NPV option from a range of feasible options including the counterfactual.'* [92] *We consider that such investments should be justified on the basis of a business case, where the business case considers possible multiple timing and scope options of the investments (to demonstrate prudency) and options for alternative systems and service providers (to demonstrate efficiency). The assessment methodology would also give regard to the past expenditure in this subcategory.*[93]

Complying with new / altered regulatory obligations / requirements

385. The AER states that:

> *It is likely that for such investments, the costs will exceed the measurable benefits and as such, the least cost option will likely be reasonably acceptable in regard to the NER expenditure criteria. Therefore the assessment of these expenditures is similar to subcategory one. Should there be options to achieve compliance through the use of external service provides [sic], the costs and merits of these should be compared.'*[94]

New or expanded ICT capability, functions and services

386. The AER states that:

> *We consider that these expenditures require justification through demonstrating benefits exceed costs (positive NPV). We will make our assessment therefore through assessing the cost-benefit analysis. Where benefits exceed costs consideration should also be given to self-funding of the investment.*
>
> *For each subcategory of non-recurrent expenditure, we note that there may be cases where the highest NPV option is not chosen. In these cases, where either the chosen option achieves benefits that are qualitative or intangible, we would expect evidence to support the qualitative assumptions. We consider the evidence provided must be commensurate with the cost difference between the chosen and highest NPV option.*

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91 In cases where programs/projects cover multiple categories of expenditure, the distributor is expected to apportion costs from individual components across multiple categories to reflect the nature of the work undertaken.

92 The only exception will be where the business can demonstrate that any unquantified/intangible benefits of an option can support the decision to not choose the highest NPV option.

93 AER, Non-network ICT capex assessment approach, November 2019. Page 11.

94 AER, Non-network ICT capex assessment approach, November 2019. Page 11.

We also note that where non-recurrent projects either lead to or become recurrent expenditures in the future, this needs to be identified in the supporting business case and accounted for in any financial analysis undertaken to support the investment.[95]

A.1.2 Assessment of opex step changes

387. Our scope includes assessment of AusNet's proposed cyber security opex step changes. Section 2.2 of the AER's Expenditure Forecast Assessment Guideline for Electricity Distribution outlines its general approach for assessing opex step changes and which we have followed. In summary:

- The AER separately assesses the prudency and efficiency of forecast cost increases or decreases from new regulatory obligations and capex/opex trade-offs
- For capex/opex trade-off step changes, the emphasis is on establishing whether it is prudent and efficient to substitute opex for capex, and
- For step changes arising from new regulatory obligations, the emphasis is on:
  - whether there is a binding change in regulatory obligations that affects the efficient forecast opex and when the change occurred, and
  - what options were considered and whether the selected option is an efficient option.[96]

[95] AER, Non-network ICT capex assessment approach, November 2019. Page 12.

[96] AER, Expenditure Forecast Assessment Guideline for Electricity Distribution. Page 11.