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# 3G Modem Replacement

Regulatory Investment Test for Distribution  
**Notice of Determination under clause  
5.17.4(d) of the National Electricity Rules**



22 February 2022



## ISSUE/AMENDMENT STATUS

Issue	Date	Description	Author	Approved
1	22 February 2022	First Issue	Aloysius Nainhabo	Thoai Ton

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### Contact

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Aloysius Nainhabo  
AusNet Services  
Level 31, 2 Southbank Boulevard  
Southbank, Victoria 3006  
Ph: (03) 9695 6000

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## 1 Introduction

AusNet Services is a regulated Victorian Distribution Network Service Provider (DNSP) that supplies electrical distribution services to more than 745,000 customers. Our electricity distribution network covers eastern rural Victoria and the fringe of the northern and eastern Melbourne metropolitan area.

As expected by our customers and required by the various regulatory instruments that we operate under, AusNet Services aims to maintain service levels at the lowest possible cost to our customers. To achieve this outcome, we develop forward looking plans that aim to maximise the present value of economic benefits to all those who produce, consume and transport electricity in the National Electricity Market (NEM).

Our approach is to consider network and non-network options on their merits, so that we meet our customers' needs and our compliance obligations at the lowest total cost. Where applicable, we also prepare, publish, and consult on regulatory investment tests for distribution assets (RIT-D), which further helps ensure all credible options are identified and considered, and the best option is selected.

In relation to required works for the 3G Modem Replacement Program, we have concluded that there are no credible non-network options that are capable of addressing the risks for our communications systems (see Section 5 for further details). In accordance with clause 5.17.4(d) of the National Electricity Rules (NER), therefore, this document is the notification of our determination that there are no credible non-network options in relation to the identified need. Consequently, AusNet Services will not publish a non-network options report as part of the RIT-D for the 3G Modem Replacement Program.

The next stage of the RIT-D process will be the Final Project Assessment Report (FPAR), which AusNet Services intends to publish in March 2022. No Draft Project Assessment Report (DPAR) is required as the preferred option is expected to have a capital cost of less than \$12 million.<sup>1</sup>

This notice provides contextual background and outlines the reasons for AusNet Services making its determination, along with any methodologies and assumptions used in making that determination.

## 2 Background

Communication is a key component of AusNet's business, with its importance increasing more as devices and systems become interconnected. AusNet Services uses the private TRIO radio network and Telstra's 3G wireless network for Supervisory Control and Data Acquisition (SCADA) and engineering access communication.

The 3G service is essential to ensure the link between SCADA master and remote devices located on pole tops and some zone substations of the electricity distribution network. The connection with master stations is required by the Customer & Energy Operations Team (CEOT) for remote monitoring and control of the distribution network without the need for deploying field crews.

The information from the remote devices is used by the distribution feeder automation (DFA) application to minimise Customer-Minutes-off-Supply (CMOS) and the connection enables engineering access as a backup route for zone substations.

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<sup>1</sup> Per the AER and NER rules, as the capital cost is <\$12 million a DPAR is not required: <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/cost-thresholds-review-for-the-regulatory-investment-tests-2021>

### 3 Identified need

Telstra has advised AusNet Services of the decision to discontinue 3G services in June 2024. Shutting down the 3G network will affect control and monitoring of the electricity distribution network if an alternative is not found. The current 3G modems utilised by AusNet Services across our metro and regional sites are not compatible with faster and more modern mobile services such as 4G and 5G.

The options available to replace the 3G modem include expanding the current TRIO network and/or upgrading to a new third party mobile wireless technology such as 4G or 5G.

The Asset Strategy Management <sup>2</sup>AMS20-81 recommends finding an alternative technology for the 3G network. The choice will depend on coverage and economic viability.

AusNet is setting out on a project to replace its 3G modems across metro and regional sites. There are 1,500 modems in regional sites and 1,100 in metro sites.

### 4 Regulatory Obligations

In addressing the identified need, AusNet Services must also satisfy our regulatory obligations, which we summarise below.

Clause 6.5.7 of the National Electricity Rules requires AusNet Services to only propose capital expenditure required in order to achieve each of the following:

- 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:*
  - a. *Quality, reliability, or security of supply of standard control services; or*
  - b. *The reliability or security of the distribution system through the supply of standard control services to the relevant extent;*
  - c. *Maintain the quality, reliability and security of supply of standard control services, and*
  - d. *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.*

Section 98(a) of the Electricity Safety Act requires AusNet Services to:

*design, construct, operate, maintain and decommission its supply network to minimise as far as practicable such that:*

- a) *The hazards and risks to the safety of any person arising from the supply network; and*
- b) *The hazards and risks of damage to the property of any person arising from the supply network; and*

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<sup>2</sup> *The purpose of this document is to provide an overview of the systems, policies, strategies, plans, standards, processes and procedures that have been integrated in an asset management system by which AusNet Services manages the performance of its gas and electricity networks and the assets forming of those networks.*

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c) *The bushfire danger arising from the supply network.*

The Electricity Safety act defines ‘practicable’ to mean having regard to:

- a) *Severity of the hazard or risk in question; and*
- b) *State of knowledge about the hazard or risk and any ways of removing or mitigating the*
- c) *Hazard or risk; and*
- d) *Availability and suitability of ways to remove or mitigate the hazard or risk; and*
- e) *Cost of removing or mitigating the hazard or risk.*

Clause 3.1 of the Electricity Distribution Code requires AusNet Services to:

- a) *Assess and record the nature, location, condition and performance of its distribution system assets.*
- b) *Develop and implement plans for the acquisition, creation, maintenance, operation, refurbishment, repair and disposal of its distribution system assets and plans for the establishment and augmentation of transmission connections:*
  - i. *To comply with the laws and other performance obligations which apply to the provision of distribution services including those contained in this Code;*
  - ii. *To minimise the risks associated with the failure or reduced performance of assets; and*
  - iii. *In a way which minimises costs to customers taking into account distribution losses.*
- c) *Develop, test or simulate and implement contingency plans (including where relevant plans to strengthen the security of supply) to deal with events that have a low probability of occurring, but are realistic and have a substantial impact on customers.*

Under clause 5.2 of the Electricity Distribution Code, AusNet Services:

*Must use best endeavours to meet targets required by the Price Determination and targets published under clause 5.1 and otherwise meet reasonable customer expectations of reliability of supply.*

## 5 Screening for Non-network Options

In applying the RIT-D, the relevant distributor is required to publish a non-network options report, to screen for potential non-network options, unless it reasonably determines that there are no credible non-network options. Where a distributor makes such a determination, it must publish a notice setting out the reasons for its determination, and any methodologies and assumptions applied in making that determination.

In accordance with clause 5.17.4(c) of the NER AusNet Services has determined that there are no credible non-network options in relation to the 3G Modem Replacement Program. Our reasoning for concluding that there are no feasible non-network solutions are:

- The communications assets provide a function which relates to system management and control, but they do not function with respect to moving load across our network. Thus, there is by definition no non-network option available to AusNet.

In accordance with the NER requirements, we note that these reasons are not dependent on any particular assumptions or methodologies.

## 6 Required Works

At each site, communications works will include but is not limited to the design, procurement, and installation/modification of the following (including cabling):

- 1) Modem installation and commissioning (at each 3G Modem site)
  - a) Remove existing antenna
  - b) Remove existing modem
  - c) Install new antenna and modem at regional sites (1,500 3G modems and 100 TRIO modems located in Central with third party wireless mobile)
  - d) Install new antenna and modem at metro sites (1,000 3G modems and 100 TRIO modems located in Central with third party wireless mobile)
  - e) Test and commission new modem
- 2) Update applicable asset management databases
- 3) Confirm modem location details and update SAP
- 4) Head-end Servers
  - a) Reconfigure Victorian Network Switching Centre (VNSC) head-end servers if necessary
  - b) Reconfigure Rowville Control Centre (ROCC) head-end servers if necessary

## 7 Next Steps

In this Section, we detail the steps we have taken to date and the processes we will follow under the NER to progress the RIT-D for this project.

For the reasons set out in Section 1, AusNet Services has determined that there will not be a non-network option that is a credible option, or a non-network component that forms a significant part of a potential credible option, in respect of the 3G Modem Replacement Program. In accordance with clause 5.17.4(c) of the NER, therefore, AusNet Services will not be publishing a non-network options report as part of the RIT-D for this project.

With the submission of this Notice of Determination under clause 5.17.4(n), we are not required to submit a Draft Project Assessment Report, but rather proceed to clauses 5.17.4 (o) and (p), which states that AusNet Services must now submit our Final Project Assessment Report (FPAR) as soon as reasonably practical.

The scope of the FPAR per clauses 5.17.4(r) and (j) states we must provide:

- A description of the identified need for investment.
- The assumptions used in identifying the need for investment.
- A description of each credible option assessed, their costs, and where possible market benefits that AusNet Services considers could potentially address the identified need.
- The results of our net present value analysis and accompanying explanatory statements regarding the results.
- Identification of the proposed preferred option that meets the identified need and the RIT-D requirements.
- The contact details for a suitably qualified staff member to whom queries on the report may be directed.

AusNet Services intends to publish the FPAR in March 2022.

Any questions or feedback on this determination notice should be submitted by email to [ritdconsultations@ausnetservices.com.au](mailto:ritdconsultations@ausnetservices.com.au).