Gas Access Arrangement 2013-17

Cost Pass Through Application

11 August 2016

About AusNet Services

AusNet Services is a major energy network business that owns and operates key regulated electricity transmission and electricity and gas distribution assets located in Victoria, Australia. These assets include:

- A 6,574 kilometre electricity transmission network that services all electricity consumers across Victoria;
- An electricity distribution network delivering electricity to approximately 660,000 customer connection points in an area of more than 80,000 square kilometres of eastern Victoria; and
- A gas distribution network delivering gas to approximately 633,000 customer supply points in an area of more than 60,000 square kilometres in central and western Victoria.

AusNet Services' purpose is 'to provide our customers with superior network and energy solutions.'

For more information visit: www.ausnetservices.com.au

Contact

This document is the responsibility of the Regulated Energy Services Division, AusNet Services. Please contact the officer below with any inquiries.

Anh Mai
Regulated Energy Services
AusNet Services
Level 31, 2 Southbank Boulevard
Melbourne Victoria 3006
Ph: (03) 9695 6627

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1 Executive Summary

AusNet Services has an Access Arrangement in place for its gas distribution system for the five-year period ending 31 December 2017 (current access arrangement period). The Access Arrangement contains a ***Mains Replacement event***, which allows AusNet Services to apply to the AER to adjust Reference Tariffs if costs are to be incurred to complete an amount of mains replacement in excess of 415 km during the current period. The Mains Replacement event is triggered once AusNet Services completes 348 km of its planned mains replacement program in the current period.

This submission is an application for costs expected to be incurred to complete an additional 85 km of mains replacement compared to the AER's approved 415 km provided in AusNet Services' 2013-17 Access Arrangement. The replacement of low pressure mains with high pressure mains is expected to maintain safety risk and improve supply reliability. This is consistent with AusNet Services' Gas Safety Case, which sets out AusNet Services' intention to replace its low pressure distribution network with high pressure mains by 2025.

AusNet Services submits in this application:

- The Mains Replacement event was triggered on or around 30 May 2016 when AusNet Services replaced 348 km of its planned mains replacement program;
- This application has been submitted to the AER within 90 business days of the date that the Mains Replacement event occurred;
- AusNet Services intends to replace 500 km of low pressure mains during the current access arrangement period;
- The level of mains replacement is consistent with the objective of replacing all low pressure mains in the network by 2025;
- The capital expenditure meets the relevant requirements of the National Gas Rules (NGR);
- The additional capital expenditure to replace 85 km of low pressure mains amounts to $14.8 million (in real 2012 dollars) over the remainder of the 2013-17 access arrangement period; and
- AusNet Services proposes to recover these additional costs by increasing Reference Tariffs by less than 1% on 1 January 2017.

AusNet Services is satisfied that this Cost Pass Through application has been prepared in accordance with the procedures set out in Clause 8 of Part B of AusNet Services' 2013-17 Access Arrangement.

The remainder of this paper is structured as follows:

- Section 2 provides details of the Cost Pass Through mechanism.
- Section 3 provides evidence that the Cost Pass Through event occurred.
- Section 4 provides details of the required capital expenditure.
- Section 5 provides details of the required tariff variation.

The following attachments are also provided as part of this application:

- Attachment A: Details of low pressure mains replacement by suburb (2013-17)
- Attachment B: Authorised Officer Statement
- Attachment C: Advisian report
- Attachment D: Revised Capex model
- Attachment E: Adjusted AER PTRM
- Attachment F: Business case for FY18-FY19 projects.

2 Background

2.1 Mains Replacement event

The Reference Tariff Policy contained in Part B of the Victorian Access Arrangement describes how Reference Tariffs can be varied over the current Access Arrangement period. Subject to approval by the AER, one way that Reference Tariffs may be varied is if a Cost Pass Through event occurs. A ***Mains Replacement Event*** is defined in schedule 2 (Part A) of the Access Arrangement as:

> ***Mains Replacement Event*** *means the event whereby AusNet Services:*
>
> *a) completes 348 km of its planned total completion of Historical Volumes of Mains Replacement during the course of the 2013–17 access arrangement period; and*
>
> *(b) costs are incurred, or are to be incurred, by AusNet Services in the remainder of the 2013–17 access arrangement period to complete a volume of Mains Replacement in excess of the Historical Volumes*
>
> *For the purposes of the Mains Replacement Event:*
>
> ***Historical Volumes*** *means 415 km being the volume of mains replacement completed by AusNet Services for the 2008 to 2012 access arrangement period, with reference to the AER's decision to approve the 2013–17 access arrangement and its reasons as set out in its Final Decision; and*
>
> ***Mains Replacement*** *means mains replacement for low pressure to high pressure block rollout, which involves the replacement of:*
>
> *(i) low pressure distribution mains with high pressure polyethylene mains through a process of dividing a low pressure region into smaller areas (referred to as blocks) which are then subject to systematic low pressure to high pressure replacement, and*
>
> *(ii) includes the minimum amount of replacement of medium pressure supply mains necessary to undertake the proposed low pressure mains replacement in the 2013–17 access arrangement period, as specified in (i)*
>
> *Costs are to be determined in accordance with the pre-approved unit rates set out in the AER's decision to approve the 2013–17 access arrangement and its reasons as set out in its Final Decision.*

Section 8 of the Access Arrangement requires AusNet Services to:

- notify the AER within 90 business days of the Cost Pass Through event occurring of whether the Cost Pass Through event would lead to an increase or decrease in Reference Tariffs; and
- when the costs of the Cost Pass Through event are known, then those costs are to be notified to the AER (including verification that the costs are net of any insurance or other third party payment that might be received in respect of the Cost Pass Through event.

2.2 Regulatory framework

The key legislative instruments that are relevant to this application are the National Gas Rules (NGR) and the *Gas Safety Act 1997*.

Requirements of the National Gas Rules

Rule 79 sets the criteria governing the recovery of capital expenditure, which criteria provides:

> *(1) Conforming capital expenditure is capital expenditure that conforms with the following criteria:*

(a) the capital expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services;

(b) the capital expenditure must be justifiable on a ground stated in subrule (2).

The grounds stated in subrule (2) require that the capital expenditure is necessary to:

- maintain and improve the safety of services; or
- maintain the integrity of services; or
- comply with a regulatory obligation or requirement; or
- maintain the capacity to meet levels of demand for services existing at the time.

These criteria are consistent with the National Gas Objective (NGO) that is set out in Section 23 of the National Gas Law (NGL), which is to promote efficient investment in natural gas services that is in the long term interests of consumers with respect to price, quality, safety, reliability and security of supply of natural gas services. Importantly, these criteria are also consistent with the relevant requirements of the *Gas Safety Act 1997* (the Act), which requirements are discussed in the following section.

Requirements of the Gas Safety Act 1997

The purpose of the Act is to "make provision for the safe conveyance, sale, supply, measurement, control and use of gas and to generally regulate gas safety" (see Part 1, Section 1 of the Act).

Section 32 of Division 1 of the Act imposes the following obligations on AusNet Services:

32 A gas company must manage and operate each of its facilities to minimise as far as practicable —

a) the hazards and risks to the safety of the public and customers arising from gas; and

b) the hazards and risks of damage to property of the public and customers arising from gas; and

c) the hazards and risks to the safety of the public and customers arising from:

(i) interruptions to the conveyance or supply of gas; and

(ii) the reinstatement of an interrupted gas supply.

Section 9 of Part 2 of the Act sets out the objectives and functions of Energy Safe Victoria (ESV), which includes to ensure the safety of the conveyance of gas, to control safety standards and to maintain public and industry awareness of gas safety requirements. In achieving these objectives, Section 10 of Part 2 of the Act sets out the following functions of the ESV:

- to issue guidelines specifying minimum safety standards for the conveyance of gas;
- to issue guidelines in relation to the preparation of safety cases;
- to monitor compliance with accepted safety cases; and
- to audit accepted safety cases to determine the adequacy and effectiveness of those safety cases.

Division 2 of Part 3 of the Act requires AusNet Services to submit a safety case to the ESV that complies with the *Gas Safety (Safety Case) Regulations 1999* (the Regulations), which in turn requires AusNet Services to specify the safety management system being followed to ensure compliance with the Section 32 obligations (i.e. to ensure the safe and reliable supply of gas).

Regulation 17 states that:

17 The safety management system for a facility must specify the means used or to be used by the gas company to ensure that the design, construction, installation, operation and maintenance of the facility and any modification of the facility —

a) *are adequate for the safety and safe operation of the facility; and*

b) *provide adequate means of achieving isolation of the facility or any part of the facility and pressure control in the event of an emergency; and*

c) *provide adequate means of gaining access for servicing and maintenance of the facility and machinery and other equipment; and*

d) *provide adequate means of maintaining the structure and operation of the facility; and*

e) *take into account the results of the formal safety assessment for the facility.*

Pursuant to Section 40(2), Division 2 of Part 3 of the Act, the ESV "must accept a safety case submitted under this Division if it is satisfied that the safety case is appropriate for the facility to which it applies and complies with this Act."

2.3 Cost Pass Through mechanism

In the AER's Final Decision for the 2013-17 period low pressure mains replacement volume was set at AusNet Services' ***historical volume*** completed (415 km). The Decision also included a pass through mechanism to provide the business with the opportunity to recover the cost of meeting its safety and regulatory obligations through efficient investment in gas infrastructure.

The mains replacement pass through event has the following features:

- only one pass through application can be submitted during the 2013-17 access arrangement period;
- no volume and/or materiality threshold for the mains replacement pass through event will apply, reflecting that costs are to be incurred for safety and reliability reasons;
- the pass through is triggered once AusNet Services demonstrates it has completed 348 km of mains replacement in the current period;
- the unit rates used to develop and assess the application are those set by the AER in the 2013 Final Decision (and where they are not set will be subject to further review at the time of the application);
- the proposed volumes need to comply with the relevant requirements of the NGR; and
- AusNet Services is to be no better or worse off by implementing a different mains replacement program than that set by the AER in its Final Decision.

The AER has set out the information that is required in support of the Main Replacement Cost Pass Through application. This includes details of the actual and forecast mains replacement program by year and suburb, and comparing this to what was assumed by the AER in the Final Decision. The pass through amount will consist of:

- the expenditure incurred or to be incurred in order to undertake the required volume of replacement; and
- an adjustment for the difference between the time value of money allowed for the expenditure approved in the AER's Final Decision relative to the actual delivery of the mains replacement program.

The time value of money adjustment ensures that AusNet Services is financially no better or worse off regardless of the timing of the replacement capex approval.

2.4 AusNet Services' mains replacement program

The replacement of the low pressure mains network had its origins in the 2003-07 Access Arrangement review process. In this review process the Essential Services Commission of Victoria (ESC) noted in its Final Decision that:

> *While the distributors have not experienced any major incidents due to gas leaks, the commission accepts that it is prudent for the distributor to develop and implement a long-term program to progressively replace the cast iron parts of the network and thereby minimise the possibility of any major incidents (page 117).*

AusNet Services' program to replace the higher risk mains on its network commenced in 2003. The low pressure mains, made up of cast iron and unprotected steel mains, present the highest risk on AusNet Services' network. The low pressure mains replacement program is designed to fulfil AusNet Services' Gas Safety Case obligations by appropriately mitigating the existing risk to the public and employees. The program is also required in order to ensure that AusNet Services' assets comply with the safety aspects of the National Gas Objective.

AusNet Services' mains replacement program, captured within its Gas Safety Case, was accepted by the ESV as being an appropriate plan to minimise, as far as practicable, the risk of both the safety to the public and property damage arising from gas supply. The ESV accepted AusNet Services' Gas Safety Case on the basis that the low pressure mains replacement program is to be completed by 2025. AusNet Services has demonstrated over the past decade, a strong commitment to completing the low pressure mains replacement and maintain network safety.

Further details on the status and outcomes of AusNet Services' low pressure mains replacement program are provided in Section 3.

3 Cost pass through event

This section sets out the required information relating to the occurrence of the Mains Replacement event including:

- evidence of completion of the 348 km of LP to HP block rollout, which constitutes the trigger event;
- evidence that AusNet Services has and will incur expenditure to complete historical volumes; and
- as required by section 8 of AusNet Services' Access Arrangement, a statement by an authorised officer verifying that the costs of this pass through event are not offset by any payments made by an insurer or other third party.

3.1 Evidence of pass through event

The Mains Replacement event is triggered once AusNet Services has completed 348 km of mains replacement in the current regulatory period. AusNet Services completed the required 348 km of mains replacement during May 2016.

Due to the importance of the mains replacement program, the volume of low pressure mains replaced is reported to AusNet Services' management on a monthly basis. This enables the management team to determine if the program is on target. Further, AusNet Services provides details of the progress of the mains replacement program to the ESV on a monthly basis.

The AER has approved 415 km of low pressure mains replacement in the current period. The AER also set 348 km as the pass through application threshold.

Attachment D (capex model) details the volume of mains replacement by suburb that is the subject of this application. This shows the volume of mains replaced to date and the mains scheduled to be replaced over the remainder of the access arrangement period. The difference between the total approved as part of the 2013-17 Access Arrangement review process and the total volume to be completed is the subject of this application.

Table 1: Low pressure mains replacement volumes, 2013 to 2017

Mains replacement volumes	2013	2014	2015	2016	2017	Total
Approved in 2013-17 Final Decision	90	90	90	90	55	415
Actual / Planned volumes	108	123	98	88	83	500
Volume for which approval is sought	**18**	**33**	**8**	**(2)**	**28**	**85**

Note: May not add due to rounding

The table above outlines the volume by which AusNet Services' actual replacement program differs in timing compared to the AER's Final Decision. The AER in its Final Decision recognised that

> *..the timing of low pressure mains replacement is somewhat discretionary and potentially subject to the changing risk profile of the network and resource availability.*[1]

Attachment C is an independent expert report prepared by Advisian in accordance with the Federal Court Guidelines for Expert Witnesses. Advisian have been engaged to independently assess and verify the low pressure mains replacement completed by 30 May 2016. This report is provided as evidence that the proposed pass through capital expenditure meets the relevant criteria set out in the NGR.

[1] Australian Energy Regulator, *Gas Access Arrangement Final Decision*, SPI Networks (Gas) Pty Ltd 2013–17, Part 2, page 62.

Advisian has:

- verified the completion of the low pressure mains replacement Trigger Event volume (348km);
- assessed whether AusNet Services' low pressure mains replacement expenditure for proposed pass through capex conforms with Rule 79 of the NGR;
- assessed whether AusNet Services has and will incur expenditure to complete the historical volume of the low pressure mains replacement program (415km);
- assessed whether the expenditure to complete the pass through volume (85km) is planned to be incurred within the Access Arrangement period; and
- reviewed the calculation details of unit rates in new suburbs.

Advisian is satisfied that the pass through capital expenditure for the 2013-17 Access Arrangement period satisfies the capex criteria, set out in rule 79 of the NGR. In Advisian's opinion, the expenditure is that of a prudent operator based on performance and generally meeting levels of service targets.

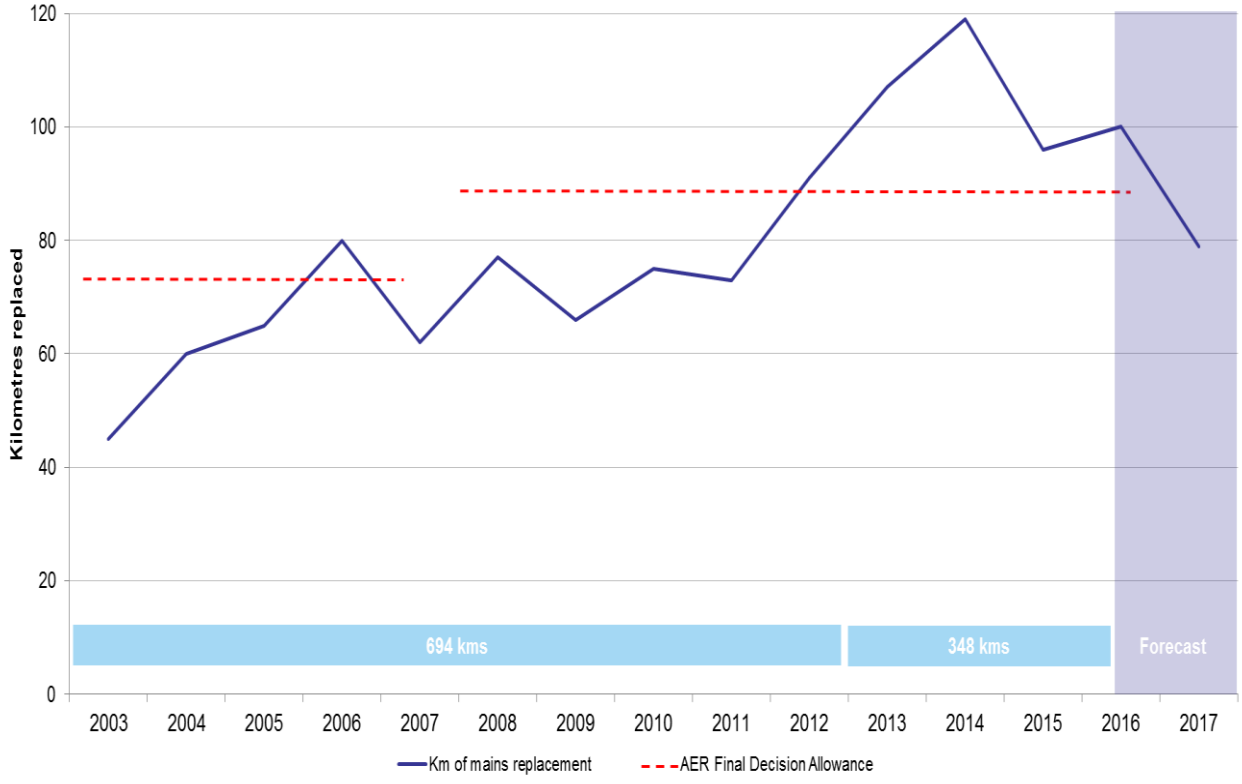
A statement by an authorised officer verifying that the costs of this pass through event are not offset by any payments made by an insurer or other third party is provided in Attachment B.

The Annual Regulatory Information Notices (RIN) from 2013 to 2015 are provided to the AER as part of the annual RIN process. These provide evidence that AusNet Services has incurred the capital expenditure in 2013-15 in completing the replacement volumes reported in those years. These notices have been independently audited by KPMG. The audit opinion is provided to the AER as part of the annual RIN process.

3.2 Outcomes of low pressure mains replacement

AusNet Services' replacement program for low pressure mains commenced in 2003. During the first decade of the program (to 31 December 2012), over 694kms were replaced. The figure below shows actual and forecast mains replacement volumes since 2003, and the AER's Final Decision allowance.

Figure 1: Low pressure mains replacement program (2003 to 2017)



It is accepted industry practice to progressively replace high risk mains in a prioritised manner. AusNet Services' Asset Management Plan stipulates a completion date of 2025 for the replacement of the entire low pressure network. All low pressure replacement programs in Victoria are based on similar rationale, namely:

- Reduce the risks to both public safety and property damage associated with gas leakage from the network:
    - Cast iron pipe joint leaks and bare steel corrosion leaks are endemic and number in the thousands per year;
    - More severe failure modes such as pipe fracture or substantial through-wall pipe failure can release significant volume of gas resulting in high risk of fire or explosion;
    - Low pressure gas leaks can infiltrate drains, sewers, conduits, pits and buildings;
- Ensure network capacity meets customer requirements by replacing low pressure mains with high pressure mains;
- Reduce operating and maintenance costs relative to the situation where the mains replacement program did not occur;
- Improve network reliability by reducing the incidence of unplanned outages on the network; and
- Reduce greenhouse gas emissions.

AusNet Services' commitment to completing the mains replacement program by 2025 reflects the serious consequences that major gas leaks can have for public safety. The end date is a critical factor in considering what is an efficient and prudent volume under rule 79(1) of the NGR.

3.3 Summary

The ESV has accepted AusNet Services' low pressure mains replacement program as a prudent way of minimising, as far as practicable, both hazards and risks to the safety of the public and the risk of property damage arising from the supply of gas.

AusNet Services submits that the completion of the low pressure mains replacement program is therefore consistent with a prudent service provider, acting efficiently, and in accordance with good industry practice to achieve the lowest sustainable cost of providing services. AusNet Services further submits that the additional capital expenditure associated with the low pressure mains replacement program is necessary to comply with:

- **NGR 79(2)(c)(i)** – the additional capital expenditure is required to maintain and improve safety by reducing the incidence of gas leaks, to the extent practicable, thereby mitigating both the hazards and risks to the safety of the public and the risk of property damage associated with gas supply;
- **NGR 79(2)(c)(ii)** – the additional capital expenditure is required to maintain the integrity of services by:
    - eliminating outages due to water ingress;
    - eliminating supply loss arising from leak repair works; and
    - eliminating poor pressure (or loss of supply) at the customer connection point due to peak loading on low pressure mains.
- **NGR 79(2)(c)(iii)** – the additional capital expenditure is required to comply with the ESV accepted Gas Safety Case (as per section 44(2) of the Act), which requires AusNet Services to minimise as far as practicable the hazards and risks to the safety of the public and customers of gas supply, including the risk of property damage; and

- **NGR 79(2)(c)(iv)** – the additional capital expenditure is required to maintain AusNet Services' capacity to meet levels of demand in those areas where low pressure mains are unable to satisfy peak demand and/or allow for the connection of new customers.

While the focus is on public safety, the mains replacement program is necessary because the cast iron and unprotected steel mains are limited to operating at low pressures. This limits gas supply during peak periods, which is of increasing concern given the ongoing shift towards instantaneous gas hot water appliances. In some cases, the low operating pressure (and consequently low line-pack and low capacity) means that new connections cannot be made. The new mains do not have these constraints.

Mains replacement capital expenditure is justified on the basis that it conforms with rule 79(1)(a) and 79(2)(i) and (ii). A prudent service provider acting efficiently, in accordance with good industry practice, to achieve the lowest sustainable cost of providing services, would seek to manage its risk through mitigating the safety exposure associated with deteriorating assets.

Given the above, the mains replacement program being undertaken over the current access arrangement period is consistent with the National Gas Objective, particularly in that it promotes efficient investment in natural gas services that is in the long term interests of consumers in respect to price, quality, safety, reliability and security of supply of natural gas services.

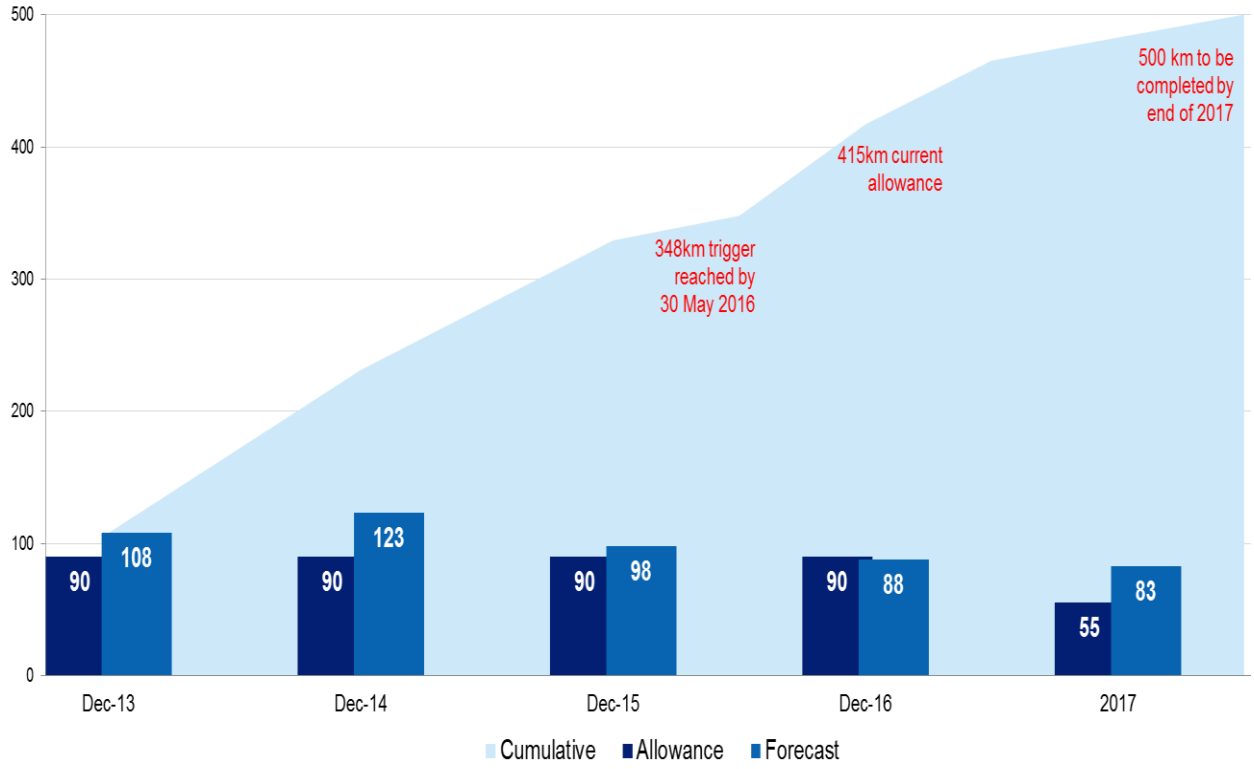
4 Required capital expenditure

As part of the AER's Final Decision, the required capital expenditure amount is determined by multiplying the approved unit rates by the volume of mains replacement per suburb.

4.1 Delivery of pass through event

AusNet Services' Asset Management Plan, approved by the AusNet Services Board, commits to the low pressure mains replacement program. The Board has approved the additional volume required to complete the 500 km low pressure mains replacement program by 31 December 2017. Figure 2 illustrates the historic volumes replaced (and to be replaced in 2017) by year.

Figure 2: Low pressure mains replacement program (Km per year)



A Business Case (provided as Attachment F), signed by AusNet Services' Managing Director, Nino Ficca, provides evidence that the required expenditure for the continuation of the low pressure mains replacement program has been approved.

As part of AusNet Services' Gas Safety Case, a formal safety assessment has been carried out consistent with the *Gas Safety Act 1997* and the *Gas Safety (Safety Case) Regulations 2009* in order to assess risks associated with the upstream network outlined in the Facilities Description and Safety Management System Overview. In line with the formal safety assessment, the low pressure mains replacement program is considered an effective control mechanism in regard to the identified risks on distribution mains.

AusNet Services' safety assessment model prioritises areas based on highest incidence of leaks, and therefore safety risk. Currently, the projects focus on replacement in the inner metropolitan suburbs of Footscray, Yarraville, Moonee Ponds, Kensington and Coburg; as well as Geelong CBD and Greater Geelong suburbs including Belmont and Hamlyn Heights.

AusNet Services believes that this submission and supporting documentation provides the AER with sufficient evidence that the pass-through volume will be completed.

4.2 Competitive tender unit rates

The Cost Pass Through amount has been forecast using the unit rates determined by the AER in its 2013-17 Final Decision where the projects (or postcodes in this case) align. AusNet Services is required to apply the AER-approved unit rates for those suburbs where unit rates were set in the Final Decision. That is, AusNet Services is not permitted to re-open the (approved) unit rates that are used to determine to benchmark capital expenditure amount.

Where volumes are undertaken in suburbs where unit rates have not been addressed in the Final Decision, the AER will assess the efficiency of the proposed rates.[2] In its Final Decision, the AER stated that it will assess the efficiency of the proposed unit rates based on whether the unit rate is an awarded tender rate through a competitive tender process.

Competitive tender process

AusNet Services has established an Installation Service Provider (ISP) agreement with five service providers for the construction of capital works on the gas distribution network. ISP Panel members have been selected based on an assessment process where their safety, competiveness, quality, delivery record and financial viability are assessed, and their performance against these variables determine whether their term on the panel is extended.

Individual projects are periodically released to the panel members, who are invited to bid competitively. Following an appraisal and approval process, the works are awarded to the successful panel member. Projects are typically negotiated to be delivered within a set timeframe and are subject to fixed price agreements to transfer price risk to the service provider.

AusNet Services' contracting approach is prudent and efficient as it:

- appropriately balances the use of internal and external resources;
- utilises market expertise and intellectual property;
- secures lower prices by requiring panel members to compete for work;
- obtains economies of scale by ensuring that panel members expect to deliver appropriate volumes of work; and
- ensures high quality and timely project delivery through effective monitoring of performance.

New postcodes

There are five projects (or postcodes in this case) that are included in this pass through application where approved unit rates were not provided in the Final Decision. This change has been driven by an increase in leaks, and subsequently an increase of the risk profile of these postcodes. Table 2 provides the unit rates proposed for these postcodes.

Table 2: New projects unit rates by suburb

Suburb	Postcode	Unit rate (per metre)
Williamstown (including Williamstown North)	3016	[C-I-C]
Fawkner	3060	[C-I-C]
Castlemaine	3450	[C-I-C]
Geelong (including South Geelong and Newtown)	3220	[C-I-C]
Ballarat	3350	[C-I-C]

[2] Australian Energy Regulator, *Gas Access Arrangement Final Decision*, SPI Networks (Gas) Pty Ltd 2013–17, Part 2, page 65.

These new projects have an average unit rate of $[C-I-C] per metre which is lower than the average rate of $[C-I-C] per metre approved by the AER in its Final Decision. Table 3 provides details of the volumes of low pressure mains replacement by the above suburbs since 2013.

Table 3: New project volumes by suburb

Suburb	Postcode	Metres per annum					
		2013	2014	2015	2016	2017	Total
Williamstown	3016						[C-I-C]
Fawkner	3060						[C-I-C]
Castlemaine	3450						[C-I-C]
Geelong	3220						[C-I-C]
Ballarat	3350						[C-I-C]

The first three postcodes are for low pressure mains replacement works that were completed in 2013 in Williamstown, Fawkner and Castlemaine. Works in Geelong and Ballarat are discussed separately below.

Works completed in 2013 – Williamstown, Fawkner and Castlemaine

Projects in Williamstown, Fawkner and Castlemaine are a continuation of work from the previous access arrangement period (2008-12). These projects lead to the completion of the low pressure mains replacement program in these postcodes in 2013.

The unit rates are based on actual market-based rates to complete this work. These projects were competitively tendered in line with AusNet Services' ISP Agreement at the time.

Geelong

[C-I-C]

Ballarat

[C-I-C]

4.3 Summary

AusNet Services has updated the capital expenditure forecast by adjusting the AER's capital expenditure model used in making the Final Decision (the adjusted capital expenditure model is provided as Attachment D). Specifically, AusNet Services has adjusted the model to reflect the actual kilometres of low pressure mains replaced through to 30 May 2016 and the forecast kilometres for the remainder of the access arrangement period.

The revised capital expenditure allowance resulting from this update is $503.6 million (2012 dollar terms), reflecting an increase of $14.8 million relative to the amount included in the AER Final Decision. This is shown in Table 4 below.

Table 4: Determination of the revised net capital expenditure benchmark

$M (real 2012)	2013	2014	2015	2016	2017	Total
AER Final Decision	104.1	106.1	102.9	92.3	83.5	488.8
Revised capex benchmark	106.6	110.4	103.1	92.4	91.1	503.6
Variance	**2.5**	**4.3**	**0.3**	**0.2**	**7.6**	**14.8**

Note: May not add due to rounding

5 Tariff variation

As outlined in Section 3, AusNet Services has determined the revised capital expenditure benchmark by adjusting the AER's capital expenditure model that was used by the AER in making its Final Decision (the adjusted AER capital expenditure model is provided as Attachment D). The above changes flow through to the PTRM classification sheet of the capital expenditure model, where the resultant capital expenditure amount is recalculated. This is the source of the capital expenditure information used for the AER PTRM set out in Attachment E).

The revised capital expenditure benchmark resulting from this calculation is $14.8 million (real 2012$). AusNet Services has used the AER's Final Decision PTRM to determine the required changes to Reference Tariffs stemming from the mains replacement pass-through event. Specifically, AusNet Services has:

- updated the AER Final Decision PTRM to reflect the revised capital expenditure allowance;
- held the X factors fixed for 2013 to 2016, reflecting that the change in Reference Tariffs will take effect from 1 January 2017; and
- varied the X-factor for 2017 in order to equate the net present value of the building block and Reference Tariffs revenue.

Table 5: 2013-17 price movement

Real price movement	2013	2014	2015	2016	2017
GAAR Final Decision	17.4%	6.0%	-1.0%	-2.0%	-3.0%
Mains replacement pass through	17.4%	6.0%	-1.0%	-2.0%	-3.68%

The time value of money adjustment arising from the variance of the different profiles between actual and forecast mains replacement volumes compared to the AER's allowance for the 2013-17 period is captured by the PTRM. In this case, the combination of including relatively higher actual capital expenditure, while holding the X-factors in these years fixed (step 2) will result in a time value of money adjustment when equating the net present value of building block and Reference Tariff revenue (step 3).

Overall, and consistent with the intent of the Mains Replacement event, the modelling approach has ensured that the time value of money adjustment has been made in respect of both a difference in actual timing, and composition of the mains replacement program, relative to that set out in the Final Decision. When combined with applying the AER approved unit rates, AusNet Services is no better or worse off from including the full 500 km of mains replacement in the Final Decision or through the pass through mechanism in relation to timing.

The above approach has ensured compliance with all requirements of the Mains Replacement event set out in the AER Final Decision. In particular:

- AusNet Services will be submitting only one pass through application for the 2013-17 access arrangement period;
- the benchmark unit rates set by the AER Final Decision have been applied to all suburbs where possible; and
- AusNet Services is no better or worse off from implementing a different mains replacement program from that set out in the AER Final Decision.

List of Attachments

Attachment A: Details of low pressure mains replacement by suburb [Commercial in Confidence]

Attachment B: Authorised Officer Statement [Commercial in Confidence]

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