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Cost Pass-Through Application: Mains Replacement Event

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1. Introduction

Multinet Gas has an Access Arrangement in place for its gas distribution system for the five-year period ending 31 December 2017. The Access Arrangement contains a "Mains Replacement Event", which allows Multinet Gas 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 255 km during the 2013 to 2017 (or current) Access Arrangement period. The Mains Replacement Event is triggered once Multinet Gas completes 207 km of its planned mains replacement program.

This submissions is an application for costs expected to be incurred to complete an additional 272km km of mains replacement compared to the AER's approved 255km provided for in Multinet's 2013–17 access arrangement. The replacement of low pressure distribution mains with high pressure polyethylene mains is expected to reduce safety risk, operating costs and improve supply reliability. This is consistent with Multinet's Gas Safety Case which sets a date of 2033 for the replacement of all low pressure distribution mains within its network.

Multinet Gas submits in this application that:

- the Mains Replacement Event was triggered on or around 13 April 2015 when Multinet Gas replaced 207 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;
- Multinet Gas intends to replace 527 km of mains during the current Access Arrangement period;
- this level of mains replacement is consistent with the objective of eliminating all low-pressure mains in the network by 2033;
- the expenditure meets the relevant requirements of the National Gas Rules (NGR);
- the additional capital expenditure to replace 272km of mains amounts to $51.6 million (in 2012 dollar terms) over the remainder of the current Access Arrangement period; and
- Multinet Gas proposes to recover these additional costs by increasing Reference Tariffs, on average, by 3.4% (excluding the CPI impact) on 1 January 2016 and 1 January 2017. This is an increase of approximately 1.4% per annum when compared to the AER's final decision.

Multinet is satisfied that this pass through application has been prepared in accordance with the procedures set out in Clause 8 of Part B of Multinet's 2013-2017 Access Arrangement.

2. Background

2.1 Economic Regulatory Regime

The Reference Tariff Policy contained in Part B of the Access Arrangement describes how Reference Tariffs can be varied over the 2013 to 2017 Access Arrangement period. Subject to the approval of the AER, one way that Reference Tariffs may be varied is if a Relevant Pass-through Event occurs. One such cost pass-through is a mains replacement event, as detailed in the AERs access arrangement final decision:

"In submitting a pass through application the AER will require that the distribution business provides:

- *evidence of completion of the 207 kilometres of LP to HP block rollout and the medium pressure supply mains replacement necessary for carrying out the LP to HP block rollout which constitutes the trigger event. The AER will require that the distribution business submit independently verifiable information which details the low pressure to high pressure block replacement mains and the integral medium pressure supply mains volume by suburb and the unit rate which applied for that volume.*
- *evidence that the proposed pass through capex meets the NGR criteria.*
- *evidence that the business has and will incur expenditure to complete historical volumes.*
- *evidence of planned expenditure to complete the pass through volumes."*

For the purposes of the mains replacement event:

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 2013-2017 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 fourth access arrangement and its reasons as set out in its Final Decision or, where unit rates have not been pre-approved, are to be determined as otherwise set out in its Final Decision."

Section 8 of the Access Arrangement requires Multinet Gas to:

- Notify the AER within 90 Business Days of a Relevant Pass-through Event occurring of whether the Pass-through Event would lead to an increase or decrease in Reference Tariffs; and
- When the costs of the 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 Pass-through Event).

The AER must notify Multinet Gas of its decision to approve or reject the proposed variations to Reference Tariffs within 90 Business Days of receiving notification from Multinet Gas of the Cost Pass-through Event. This period can however be extended by the AER under certain circumstances, including if the AER requires further information from Multinet Gas to assess the application.

2.2 Safety Regulatory regime

The requirement for Multinet Gas to provide a safe and reliable supply of natural gas underpins the regulatory framework governing the provision of gas distribution services. The mains replacement plan has a significant impact on network performance by:

- reducing the risks to both public safety and property damage associated with gas leakage from the network;
- increasing network capacity by replacing low pressure with high pressure mains;
- improving network reliability by reducing the incidence of unplanned outages on the network; and
- reducing operating and maintenance costs relative to the situation where the mains replacement program did not occur.

This section explains the compliance of the mains replacement program with the relevant regulatory framework governing the approval of capital expenditure.

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

2.2.1 Requirements of the National Gas Rules

Rule 79 sets the criteria governing the recovery of capex, 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 capex 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.

Rule 74 of the NGR requires a forecast or estimate to be arrived at on a reasonable basis and to represent the best forecast or estimate possible in the circumstances.

2.2.2 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 *Gas Safety Act 1997* imposes the following obligations on Multinet Gas:

"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 Multinet Gas to submit a safety case to the ESV that complies with the *Gas Safety (Safety Case) Regulations 1999* (the Regulations), which in turn requires Multinet Gas 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:

"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 Mains Replacement Event

Multinet Gas has been undertaking a 30 year program to replace low pressure pipes which commenced in 2003. In the 2003 to 2008 Access Arrangement period Multinet Gas replaced approximately 540km of low pressure pipe consistent with the 30 year program. In the 2008 to 2012 period, the replacement program was reduced due to impacts associated with the Global Financial Crisis. The AER in its Final Decision for Multinet Gas's Access Arrangement decided to set mains replacement at around the "Historical Volume" completed over the 2008 to 2012 period (240 km). The AER however also included a pass-through mechanism to allow Multinet Gas to undertake the higher level of mains replacement. The pass-through

mechanism, referred to as the Mains Replacement Event (as described in the previous section), has the following features:

- only one pass-through application can be submitted during the 2013 to 2017 Access Arrangement period;
- no volume and/or materiality threshold for the mains replacement pass-through will apply, reflecting that costs are to be incurred for safety and reliability reasons;
- the pass-through is triggered once Multinet Gas demonstrates it has completed 207 km of mains replacement, which trigger was put in place to facilitate the efficient delivery of the mains replacement program;
- the unit rates used to assess the application are set by the AER in the 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
- Multinet Gas is to be no better or worse off by implementing a different mains replacement program to that set by the AER in its Final Decision.

The AER has set out the information that it requires in support of a mains replacement event pass-through application. This includes breaking down 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 higher 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 Multinet Gas is financially no better or worse off if the volume of mains replacement was approved by the AER upfront (i.e. in its Final Decision) or via a combination of upfront funding plus the pass-through.

3. Mains Replacement Proposal

This section sets out all relevant information required for a Mains Replacement Event pass-through application, including:

- as required by section 8 of Multinet Gas's access arrangement, a statement by an authorised officer of Multinet Gas verifying that the costs of this Pass Through Event are not offset by any payments made by an insurer or third party.
- evidence that the proposed pass-through capex meets the relevant criteria set out in the NGR;
- evidence that the business has incurred and will incur expenditure to complete the "Historical Volume";
- detail of plans to complete the pass-through volume (which would bring the total volume allowed for by the AER to 527 km); and
- details of the calculation of the additional capital expenditure and required adjustment to Reference Tariffs in response to the Mains Replacement Event.

3.1 Evidence of Pass-through Event

The Mains Replacement Event is triggered once Multinet Gas demonstrates that it has completed 207 km of mains replacement. Multinet completed the required 207 km of mains replacement on or around 13 April 2015.

The requirement for Multinet Gas to provide a safe and reliable supply of gas is a central part of the regulatory framework governing the provision of gas distribution services. The replacement of the old cast iron and unprotected steel mains is a fundamental element of managing the safety risk associated with the gas distribution network. Multinet Gas closely monitors progress with the mains replacement plan and the outcomes of that plan with a view to mitigating operational risk.

One of the key tools for monitoring the mains replacement program is through Multinet Gas's monthly management reporting system. Due to the importance of the mains replacement program, the volume of mains replaced is an important performance indicator that is reported to Multinet Gas management on a monthly basis. This enables Multinet Gas' management and Board to determine if the program is on target and when the Mains Replacement Event has been triggered. Attachment A is a signed statement by Andrew Schille, General Manager Regulation and Corporate Affairs of Multinet Gas verifying that the costs of this Pass Through Event are not offset not offset by any payments made by an insurer or third party.

Attachment B is a report prepared by Advisian. Advisian have been engaged by Multinet to independently assess and verify projects completed or forecast to be completed to March 2015. This report is provided as evidence that the proposed pass through capex meets the relevant criteria set out in the NGR. Their report concludes

- Advisian have independently examined all information received and confirm the lengths and costs summarised in the Executive Summary of the report to be a true and accurate assessment of the works undertaken from 1 January 2013 to 30 April 2015. Advisian also advise that based on current market knowledge, construction costs associated with these projects are within industry expectations.
- Advisian is satisfied that the Capital Expenditure for the current Regulatory period from 1 January 2013 to 31December 2017 satisfy the new Capex criteria, set out in rule 79 of the NGR which permit expenditure to be included in the opening capital base and subsequently recovered from their customers through tariffs. The expenditure is that of a prudent operator based on performance and generally meeting Levels of Service targets.

Attachment C.1 and attachment C.2 being the 2013 and 2014 Annual Regulatory Information Notice are included as part of this pass through submission. These are provided as evidence that Multinet has incurred the capital expenditure in 2013 and 2014 to complete the volumes reported in those years. These notices

have been independently audited by Ernst & Young. The audit opinion will be provide as part annual RIN process.

3.2 Details of pass through

The AER has approved 255km of mains replacement in the current period. The AER also set 207km as the pass through application threshold. In setting this allowance the AER has had regard to (amongst other things) historical volumes in the 2008 to 2012 period and future safety requirements. The AER also provided Multinet with a list of projects supporting the 255km allowance. The table below provides a summary of Multinet's actual and forecast performance against the AER's allowance together with a forecast of new projects.

Table 1. Proposed replacement profile

	Actual / Forecast	AER Allowance
FD projects	240	255
New projects	287	Pass through
Total	527	n/a

Further details of individual projects are provided in attachment D.

The table shows that there is variance of 15km (shortfall) compared to the AER supporting detail. In relation to that variance Multinet offers the following explanation:

- (5) km - two smaller projects have been deferred to the 2018 to 2022 period
- 5km – additional mains replaced as part actual project completion
- (15) km – projects that are forecast to start in 2017 and will completed in 2018

The table below shows the annual mains replacement program

Further details of individual projects are provided in attachment D.

Table 2. Year on year summary

Year on Year summary (km)	2013	2014	2015	2016	2017	Total
AER approved	69,326	3,000	45,480	121,118	16,076	**255,000**
AER approved to be completed	0	27,880	55,915	81,531	75,073	**240,399**
New Projects	55,651	82,430	99,422	9,850	39,175	**286,528**
Total km for 2013-2017	**55,651**	**110,310**	**155,337**	**91,381**	**114,248**	**526,927**

The table above highlights that Multinet's actual program to date differs in timing compared to the AER's final decision. Importantly the AER's final decision – Part 2 acknowledged that (page 32)

> *"New information or conditions may arise which could lead to a change in the optimal mix of programs employed to address the safety risks associated with mains."*

On page 38 the AER went on to say:

> *"The AER recognises 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."*

Multinet's circumstances have changed and it is pleasing that the AER recognises that circumstances change at the time of actual delivery. Importantly for Multinet and its customers the company has already replaced 207km of mains replacement and committed to a program of 527km in the 2013 to 2017 period.

A unit rate comparison is provided in the table below

Table 3. Unit Cost

	First 255 km	Pass through amount	Total Act / forecast
Expenditure	$49.3m	$51.6m	$100.9m
Km's	255,000	271,927	526,927
Unit Rate (p/m)	$193.33	$189.78	$191.50

The first column in the table above simply represents the first 255kms forecast to be completed by Multinet. It shows that forecast capital and unit rate of those projects only. The reaming 272km represent the pass through amount sought in this proposal. The pass through amount has been forecast using the unit rates determined by the AER in its 2013 to 2017 final decision where the projects align. There are four other projects that are included in the pass through application where the AER does not publish approved rates. These projects have been forecast at an average unit rate of $183.84 per metre which is lower than the work achieved to date on average. Although these unit rates are lower than the unit rates incurred to date we are of the view that the pass through forecast represents the best possible forecast for the mix of projects to be delivered.

Section 12.4.3 (page 207) of Multinet's Final Decision, the AER states:

> *"Where volumes are undertaken in suburbs where unit rates have not been approved in the AER's final decision, the distribution business will be required to submit a proposal to the AER for those unit rates as part of its pass through application. The evidence that the AER will consider in assessing the efficiency of the proposed unit rates may include but shall not be limited to:*
> - *whether the unit rate is an awarded tender rate and whether the rates were determined through a competitive tender process. "*

Multinet Gas is required to apply the AER approved unit rates for those suburbs where unit rates were set in the AER Final Decision. That is, Multinet Gas is not permitted to re-open the (approved) unit rates by suburbs that are used to determine the revised benchmark capital expenditure amount. As such, Multinet's Replacement Program will be delivered using a mix of project unit rates for projects that have been previously approved by the AER and new projects deemed necessary to maintain network reliability and safety.

Table 4. Pass through projects unit costs

Pass Through Application	Total km	Total Capex ($m)	No of Projects	Unit Rate/metre
New Projects Proposed	104,534	19.2	4	$ 183.82
Projects previously approved by AER	167,393	32.4	9	$ 193.50
Pass Through Submission	271,927	51.6	13	$ 189.78

3.3 Commitment to deliver the pass through event

Attachment E is the Board minutes that have been approved by the Multinet Board committing to the mains replacement program. They have approved the additional expenditure required to complete the 527km program in the 2013 to 2017 period.

Multinet Gas has established an OMSA (Operational and Management Services Agreement) with two Service Providers for the construction and maintenance activities on the gas distribution network. Combining construction and maintenance enables Service Providers to spread overhead across a broader base to reduce costs overall. Having two Service Providers provides competition by comparison for small scale activities and the agreements have provision for both Service Providers to directly compete for larger projects.

Efficiency in costs is incentivised by setting target process for projects with reference to an Independent Estimator and implementing pain/gain share for variations to the target cost.

The longer-term (5 year) relationship under the OMSA contracts enables Service Providers to invest in labour, equipment and training to ensure sufficient resources are available to complete the required works programs.

This approach is prudent and efficient as it:

- provides sufficient certainty to contractors to make necessary investments in the skilled labour and capital required to undertake mains replacement works;
- provides certainty over volumes of work over a long period of time to ensure economies of scale and scope benefits are captured;
- provides sufficient time to adequately plan and prepare for the increasingly difficult areas as the program moves towards the inner suburbs;
- provides sufficient time for Multinet Gas to arrange for the necessary funding of the program; and
- provides greater certainty over the capability to deliver the mains replacement program in the most efficient manner by 2033.

Unlike in the previous period, where progress with the mains replacement program was interrupted by the GFC, the mains replacement program is being delivered without any material delay. This has also been facilitated by the OMSA contracting processes established by Multinet Gas on 30th June 2013. As a result, Multinet Gas has met the targets set out in the mains replacement program and now expects to complete 527 km of mains replacement over the 2013 to 2017 Access Arrangement period.

Multinet Gas's financial year budget commits the company to 255km of mains replacement by 30th June 2015 of which approximately 215km has been completed by the end of April 2015. Furthermore the Multinet Board has approved budgets for a further 272km of mains renewal project to 31 December 2017 (refer Board Minutes attachment E).

Multinet Gas believes that this submission provides the AER with sufficient evidence that the pass-through volume will be completed.

3.3.1 Status of Multinet Gas's Mains Replacement Program

Multinet Gas has been undertaking a 30 year program to replace low pressure pipes which commenced in 2003. In the 2003 to 2008 Access Arrangement period Multinet Gas replaced approximately 540km of low pressure pipe consistent with the 30 year program. In the 2008 to 2012 period, the replacement program was reduced due to impacts associated with the Global Financial Crisis. The amount completed tin this period was 240km.

Multinet Gas Pipe works Strategy stipulates a completion date of 2033 for the replacement of the low-pressure network. The proposed program (including pass through projects) of pipe replacement for the current period is based on completion of the replacement program by 2033.

All low-pressure pipe replacement programs in Victoria are based on similar rationale, namely:

- Public and employee safety
  - 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 volumes of gas resulting in high risk of fire or explosion
  - Low-pressure gas leaks can infiltrate drains, sewers, conduits, pits and buildings
- Increasing network capacity by replacing low-pressure mains with high-pressure mains
- Reducing operating and maintenance costs
- Improving network reliability and reducing unplanned outages on the network
- Reducing greenhouse gas emissions

The rate at which low-pressure mains should be replaced is subject to debate but it is generally accepted good industry practice to have a long-term program to progressively replace these mains in a prioritised manner. Both of the other Victorian Gas Distributors have a completion date for their low-pressure replacement programs which is earlier than proposed by Multinet Gas.

The strong commitment to completing the mains replacement program by 2033 reflects the serious consequences that major gas leaks can have for public safety. Multinet Gas is therefore fully committed to completing its mains replacement program. The below figure shows actual and benchmark mains replacement volumes since 2003. This figure shows that:

- actual mains replacement over the 2003 to 2007 period matched the target;
- actual mains replacement volumes over the 2008 to 2012 period dropped, reflecting the impact of capital constraints brought on by the GFC; and
- since 2013 actual mains replacement volumes have been restored to ensure that the mains replacement program is completed by 2033.

Figure 1: Actual and Benchmark Mains Replacement Length (km), 2003 to 2014

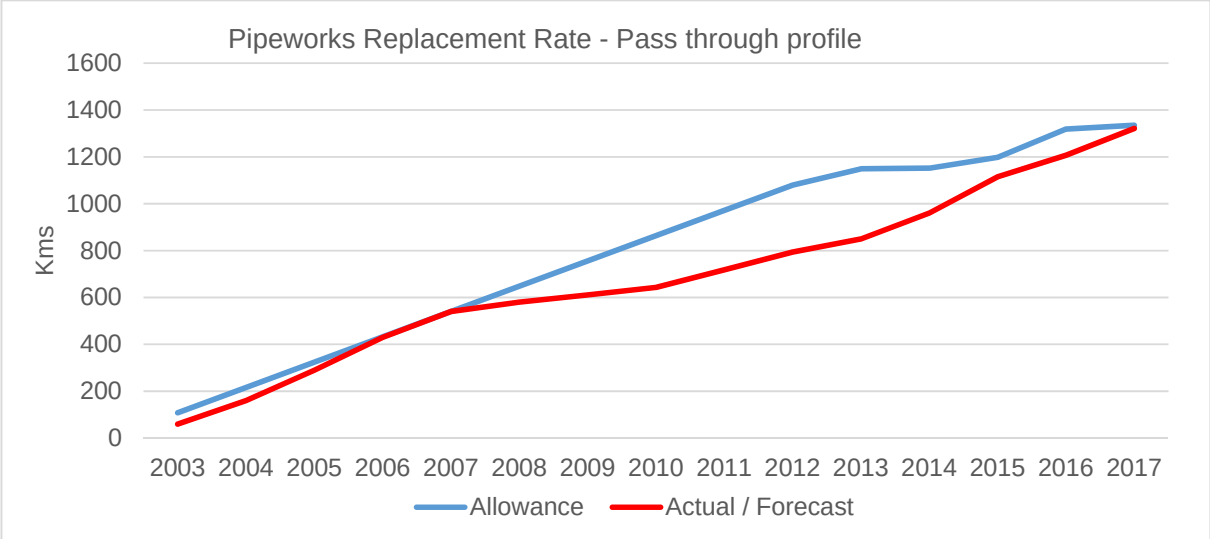
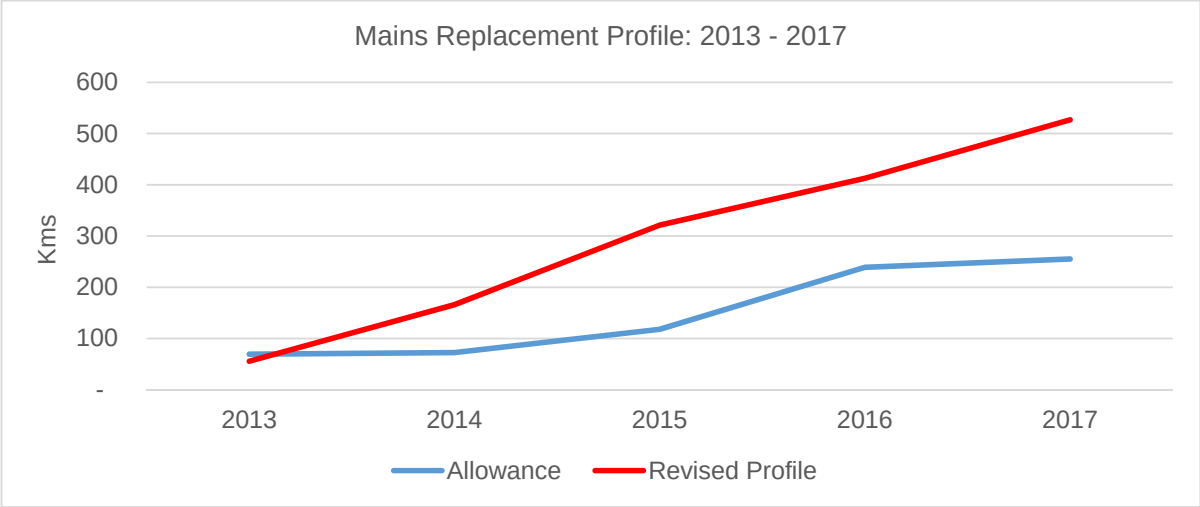


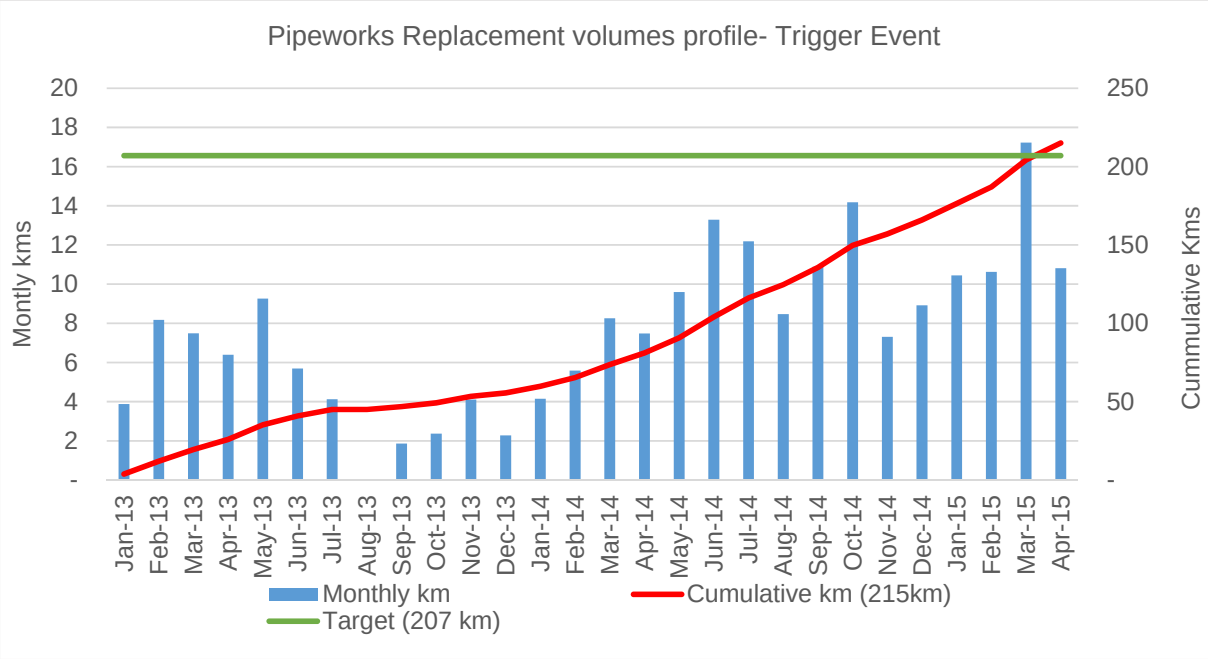
Figure 2: Actual/forecast versus AER Benchmark Mains Replacement Length (km), 2013 to 2017



3.3.2 Outcomes of the Mains Replacement Program

For the current Access Arrangement period, Multinet Gas set an internal target of reaching the pass through target by April 2015 and has achieved this target. Progress on the target was negatively affected by the change of contracting model that occurred on 30 June 2013. Changing out existing contracting arrangements and mobilising a new service provider for construction and maintenance services resulted in a loss of progress on mains replacement for several months whilst the new arrangements were bedded in and Service Providers established their resources. Despite this loss of progress, work was accelerated in the past year and the target has been met. The chart below shows the dip in progress and the recent acceleration to meet the target. Service Providers now have on-board more than sufficient resources to meet the required level of progress to the end of the Access Arrangement period.

Figure 3: Actual pipe works replacement 1 January 2013 to 30 April 2015



Multinet Gas recognised that the operational measures employed during the GFC were not sustainable over the longer term. Relying on activities such as leak surveillance and repair over a lengthy period is not consistent with good industry practice to achieve the lowest sustainable cost of providing gas distribution services over the long term.

Multinet Gas's mains replacement strategy focuses on minimising, to the extent practicable, public safety risks by targeting mains that have:

- a high incidence of leaks and mains breakage;
- been associated with water in mains incidents; and
- limited capacity to service additional demand from existing and new customer connections.

Multinet Gas's mains replacement program also leads to the lowest sustainable costs over the long term as it reduces the need to undertake leak repair work, which work does not substitute for the requirement to replace the deteriorating mains.

While the focus is on public safety, the mains replacement program is also 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 high pressure mains do not have these constraints.

Multinet Gas is seeking to recover, pursuant to the requirements of the Mains Replacement Event defined in its Victorian Access Arrangement, the additional capital expenditure associated with meeting the objective of completing the mains replacement program by 2033. The following sections provide the necessary assurance that Multinet Gas will deliver this volume and how the resultant changes in Reference Tariffs have been determined.

3.3.3 Summary

The ESV has approved Multinet Gas's mains replacement program as part of the Multinet Gas Safety Case and as a way of minimising, as far as practicable, both the hazards and risks to the safety of the public and the risk of property damage arising from the supply of gas. The mains replacement program is efficient as it is undertaken on a "block insertion" basis and consistent with lowest sustainable costs as it will avoid the need to undertake higher levels of leak surveillance and repair work.

Importantly, the mains replacement program is necessary in order to mitigate a catastrophic failure of cast iron which puts the public and Multinet Gas at risk.

Multinet Gas submits that the completion of its 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 (as required by NGR 79(1)). Multinet Gas further submits that the additional capital expenditure associated with the 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;
- 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.
- 79(2)(c)(iii) – the additional capital expenditure is required to comply with the Gas Safety Case (as per section 44(2) of the Act), which requires Multinet Gas 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
- 79(2)(c)(iv) – the additional capital expenditure is required to maintain Multinet Gas's 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.

Given the above, the mains replacement program being undertaken over the 2013 to 2017 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.

3.4 Revised Reference Tariffs

3.4.1 Revised Capital Expenditure Benchmark

Multinet Gas has determined the revised capital expenditure benchmark by adjusting the same capital expenditure model that was used by the AER in making its Final Decision (the adjusted AER capital expenditure model is set out at Attachment E). Specifically, Multinet Gas has adjusted that model to reflect:

- the actual kilometres of mains replaced through to 30 April 2015 and the forecast kilometres for the remainder of the Access Arrangement period (where the total volume of mains replacement equals 527 km over the 2013 to 2017 period); and

The above changes in the volume of mains replacement flow through to the "PTRM classification" sheet of the capital expenditure model, where the resultant total capital expenditure amount is calculated (this is the source of the capital expenditure information used for the AER Post-tax Revenue Model (PTRM) set out in

Attachment F). The revised capital expenditure benchmark resulting from this calculation is $108.4 million (in 2012 dollar terms), reflecting an increase of $51.6 million relative to the amount included in the AER Final Decision (see Table 3).

Table 5: Determination of the Revised Net Capital Expenditure Benchmark

$m ($2012)	2013	2014	2015	2016	2017	Total
AER Final Decision	12.6	3.6	12.3	22.6	5.7	56.7
Revised capex benchmark	11.9	22.8	32.4	20.9	22.6	110.5
Variance	(0.7)	19.2	20.1	(1.7)	16.9	53.8

Multinet Gas has used the AER Final Decision PTRM to determine the required changes to reference tariffs stemming from the Mains Replacement Pass-through Event. Specifically, Multinet Gas has:

- updated the AER Final Decision PTRM to reflect the revised capital expenditure benchmarks;
- held the X-factors fixed for 2013 to 2015, reflecting that the change in reference tariffs will take effect from 1 January 2016; and
- varied the X-factor for 2016 and 2017 in order to equate the net present value of the building block and reference tariff revenue.

Table 6: 2013 – 2017 real price movement

Real Price Movement	2013	2017	2018	2019	2020
GAAR Final Decision	-13.3%	1.5%	1.5%	2.0%	2.0%
Mains Replacement	-13.3%	1.5%	1.5%	3.4%	3.4%

3.5 Time Value of Money Adjustment: Updating Capex 2013-2017 in PTRM

The time value of money adjustment arises from the variance of the different profiles between actual and forecast mains replacement volumes compared to the AER's allowance for the 2013-2017 period. When the AER's PTRM is updated for this change in profile, the combination of including relatively higher actual capital expenditure for 2013 -2015 whilst holding the X-factors in those years fixed, results in a time value of money adjustment when equating the net present value of building block and Reference Tariff revenue.

Overall, and consistent with the intent of the Mains Replacement Event, the modelling approach has ensured that a time value of money adjustment has been made in respect of both a difference in the 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, Multinet has ensured that it is no better or worse off from including the full 527km of mains replacement in the Final Decision or through the pass-through mechanism.

Attachment F provides a copy of the PTRM adjusted for Actual and Forecast capex 2013-2017.

The above approach has ensured compliance with all requirements of the Mains Replacement Event set out in the AER Final Decision (and re-stated in section 2.2 of this submission). In particular:

- Multinet Gas will be submitting only one pass-through application for the entire 2013 to 2017 Access Arrangement period;
- the benchmark unit rates set by the AER Final Decision have been applied to all suburbs where possible (where a suburb was not covered by AER rates an adjacent suburb rate was used or the average of nearest suburb rates as appropriate); and
- Multinet Gas is no better or worse off from implementing a different mains replacement program from that set out in the AER Final Decision.

It is noted that the AER developed a model to assist it in assessing the dollar amount of the cost pass through. Multinet Gas has also completed the AER model as it provides a useful summary of the detailed information provided by Multinet Gas in support of this application, and as such, might expedite the review process by allowing the AER to (for example) verify the information provided by sampling. The AER model has also been used to confirm the modelling approach described in this section.

ATTACHMENTS

Attachment A: Authorised Officer Statement

Attachment B: Evidence of Completion of 207 km

Advisian Report

Attachment C.1 and C.2: Evidence of completion of 207 km

These attachments meets the criteria of independently verifiable information

- RINs 2013 & 2014

Attachment D: Evidence that the business has and will incur expenditure to complete historical volumes.

This attachment details all the revised capex profile for the Pipeworks Replacement capex.

Attachment E: Evidence of planned expenditure to complete the pass through volumes.

Board minutes – to be provided week ending 19 June 2015

Attachment F: Adjusted AER Post-tax Revenue Model

Attachment G: Revised Capex Model & AER Pass Through Model