2013–2017 Gas Access Arrangement Review (GAAR)

SP AusNet's Revised Access Arrangement Proposal (RAAP)

RAAP Chapter 3:

Operating Expenditure

Submitted: 9 November 2012

SP AusNet
A member of Singapore Power Group

RAAP Chapter 3: Operating Expenditure

This RAAP Chapter sets out SP AusNet's response to the amendments required by the Draft Decision relating to SP AusNet's Operating Expenditure (Chapter 9, Attachment 6 and Appendix C).

In the event of inconsistency between information contained in this chapter and SP AusNet's Initial Access Arrangement Proposal, the information contained in this chapter prevails.

1 Introduction

The AER approved $237.5 million of $272.6 million in operating expenditure, a reduction of $35.4 million, or 13% from the expenditure forecast set out in SP AusNet's Initial Access Arrangement Proposal.

The major cuts are due to the rejection of step changes (the AER approved $7.8 million out of $23.8 million) and lower price escalation (cutting $13.4 million). The general base-year rate-of-change methodology was accepted.

In summary, SP AusNet:

- accepts the majority of the required amendments to the base year operating expenditure, with the exception of the removal of the movement in provision associated with the 2011 unaccounted for gas (UAfG) expense;
- accepts most aspects of the Rate of Change decision, but does not accept the AER's labour cost escalators; and
- rejects a number of proposed changes to its step changes, including the reduction in the Carbon Tax step change, the rejection of network operations step changes for Magnetic Tomography (MTM), survey of mains and services in drains, and operations fees on Custody Transfer Meters (CTMs).

Having regard to the above changes, SP AusNet has proposed operating expenditure for the forthcoming access arrangement period of $252.4 million.

The remainder of this chapter is structured as follows:

- Section 2 explains base year operating expenditure.
- Section 3 explains Rate of Change.
- Section 4 explains step changes and other zero-based costs.

In support of the information in this chapter, SP AusNet provides the following Appendices:

- Appendix 3.A – Evidence of 2011 UAFG movements in provisions.
- Appendix 3.B – Report by Professor Borland on labour forecasting.
- Appendix 3.C – Update of labour cost escalation forecasts by BIS Shrapnel.
- Appendix 3.D – Argos Inspection MTM Field Testing Report August 2012.

- Appendix 3.E – SP AusNet Report on Verification of Pipe Defects using MTM Technology.
- Appendix 3.F – Tenix Licence 203 Pipeline Repair Coating Report.

2 Base year

With one exception, SP AusNet accepts the AER's base year adjustments. It does not accept the AER's correction to the provisions adjustment for UAfG because it has the effect of correcting twice for this expense.

These changes result in the base year 2012 expenditure of $44.5 million in $2012. The net impact of the changes are that base year expenditure in SP AusNet's Revised Access Arrangement Proposal is $783,000 ($2012) higher than the Draft Decision, and approximately $275,000 ($2012) below SP AusNet's Initial Access Arrangement Proposal.

The adjustments to base year expenditure required by the Draft Decision reduce SP AusNet's operating expenditure (opex) allowance for the next access arrangement period by $7.1 million ($2012). Revisions to base year operating expenditure in SP AusNet's Revised Access Arrangement Proposal and the correction for the UAfG adjustment result in forecast operating expenditure over the forthcoming access arrangement period that is $4.1 million above the allowance approved in the Draft Decision over that period.

2.1 Draft Decision

The Draft Decision made a number of revisions to the base year expenditure proposed by SP AusNet. These included:

- updating 2011 provisional opex to actual, final expenditure;
- rejecting the weather normalisation of 2011 maintenance expenditure;
- rejecting the removal of the SPIMS actuarial adjustment;
- removing Movements in Provisions; and
- adjusting the increment to calculate 2012 base year expenditure.

The AER accepted SP AusNet's use of actual 2011 expenditure as the base for the opex forecast for the next access arrangement period, noting that the opex efficiency mechanism "would have provided strong incentives for SP AusNet to reduce costs to efficient levels" and that "as many opex items are of a recurrent nature, actual costs incurred in 2011 are likely be a good indicator for the efficient costs to be incurred in the 2013–17 access arrangement period."[1]

The AER updated the base year data for 2011 with actual expenditures following the finalisation of SP AusNet's 2011 regulatory accounts. SP AusNet had used provisional figures for 2011 accounts as its regulatory accounts were finalised after the Initial Access Arrangement Proposal was submitted.

[1] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, Part 2, Section 6.5.2, p.147.

The Draft Decision rejected SP AusNet's proposal to adjust its 2011 maintenance expenditure to remove the effects of a wetter than average Q2 in 2011 on the basis that:[2]

> *"In any one year there are likely to be some costs that are higher than business-as-usual and some costs that are lower than business-as-usual. As there are many factors that influence actual opex in any one year in both directions, the AER considers a forecast of total opex is more likely to include estimation errors if a forecast is not reflective of all opex incurred a calendar year. As discussed above, the AER considers that actual opex in 2011 would lead to the best estimate of opex possible in the circumstances."*

The AER also rejected removal of the SPIMS actuarial adjustment from the base year on the basis that this adjustment was not made when the carry over increments from the operating expenditure efficiency mechanism were calculated, and that adjustment in the base year calculation would double the penalty (or reward) from this expense.[3]

The Draft Decision also required SP AusNet to remove the movements in provisions from the base year:[4]

> *"The AER considers the movement in these provisions does not represent actual costs incurred in a given year and should be removed from base year expenditure. The AER considers this necessary in setting forecast opex for SP AusNet, on the basis that movements in provisions:*
>
> - *may be used to represent the reported accounts for SP AusNet differently from its underlying economic circumstances*
> - *may prevent and distort the comparison of SP AusNet's expenditure on a consistent basis from year to year*
> - *can be affected by a change in accounting standards despite expenditure remaining unchanged."*

The AER accepted the principle of using the incremental cost increase between 2011 and 2012 from the Essential Services Commission (ESC) determination for the current access arrangement period to determine 2012 base year costs from 2011 expenditure for the purposes of opex forecasting, but required adjustments to reflect the actual Rate of Change model used by the ESC. The model used by the ESC was not available to SP AusNet.

The AER also accepted the removal of non-reference services and the UAfG expense from 2011 expenditure.

2.2 Response

There are two amendments to SP AusNet's base year operating expenditure required by the Draft Decision that, although accepted by SP AusNet, warrant further comment:

- adjusting 2011 maintenance costs for weather impacts; and

[2] Ibid, p.148.

[3] Ibid, p.150.

[4] Ibid, p.150.

- removing movements in provisions;

However, a third, and related issue, namely the removal of movement in provisions related to UAfG is not accepted by SP AusNet.

A brief discussion of some related party issues, which do not impact on the current Access Arrangement Review, is also provided.

2.2.1 Weather normalisation of maintenance expenditure

SP AusNet broadly accepts the AER's position that in any year there will be some expenditure that will be lower than usual and some that will be higher, and that on this basis total actual expenditure provides the best indicator of future costs as these variations will tend to balance each other out. However, SP AusNet considers there are limits to this logic. There are circumstances where atypical events skew expenditure in one year to the point that actual expenditure is not the best basis for forecasting costs. This is the case in 2011, where SP AusNet's maintenance costs were lower than budgeted due to a combination of atypically high rainfalls and a contract structure that had favourable unit costs for rainfall-related maintenance tasks.[5]

However, on the basis that after all of the adjustments made to base year expenditure (including a correction for UAfG adjustments discussed in Section 2.2.3) overall base year expenditure set by the Draft Decision is relatively similar to that proposed in the Initial Access Arrangement Proposal, SP AusNet is satisfied that 2011 expenditure is reasonably reflective of likely future costs.

2.2.2 Removal of Movements in Provisions

SP AusNet notes that the AER and the ESC have historically adjusted operating and capital expenditure to remove the effect of the movement in provisions reported in the regulatory accounts.[6] SP AusNet is of the view that removing the effect of movements in provisions is not necessary and results in an outcome which, when viewed holistically, reflects neither a 'cash' basis of accounting nor an 'accruals' basis of accounting. This is because the AER has only sought to treat some transactions on a cash basis (provisions), whilst leaving the rest of SP AusNet's reported expenditure on an accruals basis. Therefore, it is likely that the AER's approach results in an amount which is further from SP AusNet's underlying economic circumstances than reflected by SP AusNet's regulatory accounts.

Further, pursuant to accounting conventions, the AER's adjustments to reported expenditure can have unintended consequences. One such unintended consequence has occurred in its treatment of UAfG discussed below.

---

[5] SP AusNet, *Access Arrangement Information*, 30 March 2012, pp.141-143.

[6] For example, AER, *2011-15 EDPR Final Decision*, section 7.5.3.4, p. 337 and ESC, *2006-10 EDPR Final Decision*, section 5.2.4, p. 167.

2.2.3 Unaccounted for Gas and associated movement in provisions

The Draft Decision accepted SP AusNet's proposal to remove the costs incurred under the UAfG incentive framework from its base year operating expenditure. However, the AER also removed the increase in SP AusNet's reported provisions, which has an associated impact on the UAfG adjustment.

SP AusNet incurred $0.9 million ($2012) of UAfG expenditure in 2011, which it removed from its base year calculation. This adjustment was accepted by the AER. However, $0.8 million of the $0.9 million expense was booked to SP AusNet's P&L via its provision account. That is, the accounting entry was to debit the expense and credit the provision.

By removing the impact of this increased provision from SP AusNet's base year, and also accepting SP AusNet's proposal to remove the UAfG expenditure from the base year, the AER erroneously deducted the UAfG expense from SP AusNet's base year operating expenditure twice: first, by not recognising the expense (provision) as an "actual" cost and, secondly, by accepting that the expense should be deducted from SP AusNet's base year. The expense can only be deducted from the base year as an actual cost if the provision is retained in SP AusNet's base year.

Accordingly, SP AusNet's base year must be increased by $0.8 million to ensure the UAfG expense is not deducted twice.

SP AusNet is providing the AER with evidence of the UAfG related general ledger entries for 2011 in support of this correct approach.[7]

2.2.4 Related Parties

While accepting the AER's decision with regards to related parties in this case, SP AusNet would highlight that some costs are shared across its three networks, such as those incurred from SPI Management Services (SPIMS). It is crucial that AER opex and capex decisions for each network ensure that the total pool of SPIMS costs (which have been found to be efficient in each review) are recovered. It is also crucial that the efficiency schemes are allowed to operate as intended with respect to those costs. That is, that the regulator does not continually remove cost improvements in each review without the full efficiency benefit having been recognised. Finally, the methodology that the AER is using to allocate SPIMS costs between each network may not, in the long run, be consistent with SP AusNet's cost allocation methodology. SP AusNet will review its cost allocation and the other issues raised above, after further consideration of the interaction of the four AER Decisions that do (or will) cover this pool of costs.

SP AusNet does not consider it is desirable that particular business arrangements, with the potential to increase efficiency, are made impractical by the unintended consequence of AER Decisions. Rather, neutral regulatory treatment delivers the best outcomes for customers.

[7] SPN GAAR UAFG Provision Support.xlsx

2.3 Revised Proposal

SP AusNet accepts the AER's base year adjustments other than its adjustment to the movement of provisions for UAFG. As explained above, the Draft Decision has the effect of removing this expense from the base year expenditure twice.

Therefore, SP AusNet's revised access arrangement proposal increases the Draft Decision base year by $783,000 ($2012) to ensure UAfG expenditure is appropriately accounted for in the base year.

Table 3-1 shows the assumptions and values that form the basis of SP AusNet's base year calculation.

Table 3-1: Revised adjustments to base year

	Revised Proposal ($2012M)
Unadjusted 2011 opex	45.3
Normalisation of maintenance costs	–
Removal of non-reference services costs	–1.7
SPIMS actuarial adjustment	–
Returning UAFG to benchmark cost level	–0.9
Movement in provisions	0.2
Expected escalation of base year costs in 2012	1.5
Expected opex in 2012	**44.5**

3 Rate of Change

SP AusNet rejects the Rate of Change applied in the Draft Decision because it does not provide SP AusNet with a reasonable opportunity to recover at least the efficient costs the service provider incurs. The Draft Decision understates growth in operating expenditure because it uses a Labour Price Index (LPI)-based forecast of changes in labour costs in combination with an opex partial productivity measure, which results in a forecast that incorporates productivity benefits accruing from SP AusNet's workforce, without fully compensating it for delivering those compositional changes.

3.1 Draft Decision

The Draft Decision accepted SP AusNet's approach to forecasting the growth in operating expenditure based on a Rate of Change model as set out in reports from Economic

Insights.[8] The Draft Decision rejected SP AusNet's proposed price escalators for labour and materials, and accepted its proposed growth and productivity escalators.

The AER rejected SP AusNet's proposed labour escalators and substituted escalators developed by Deloitte Access Economics (DAE). Key differences in the assumptions that formed the basis of the AER's forecasts of changes in labour costs were:[9]

- using Labour Price Index (LPI) instead of Average Weekly Ordinary Time Earnings (AWOTE) to measure changes in labour costs; and
- using the Electricity, Gas, Water and Waste Services (EGWWS) sector data without adjustment to exclude the Waste Services category from the measure used for gas distributors' internal labour costs.

The Draft Decision found the DAE forecast to be a better forecast of LPI than BIS Shrapnel's forecast on the basis that DAE forecasts were consistently lower than BIS Shrapnel's and, to the extent that the DAE forecasts were typically below actual LPI growth, this compensated for productivity contributions to LPI growth that gas distribution businesses do not need to be compensated for:[10]

> *"Should DAE's forecast LPI be lower than actual LPI in the 2013–17 access arrangement period, future worker productivity improvements for that period are likely to outweigh any potential difference between forecast and actual LPI."*

The Draft Decision did not accept real materials price escalation, pointing to empirical data from gas networks in other states as evidence that materials costs for gas distributors have not been rising. The AER also criticised the methodology used by SKM to forecast materials costs.[11]

The Draft Decision on labour and materials escalation was also applied to capital expenditure.

In accepting SP AusNet's productivity escalators, the AER stated:[12]

> *"The AER considers the methodology proposed by SP AusNet is an appropriate methodology to forecast opex partial factor productivity. … The AER considers the impact of the change [to] partial factor productivity from the use of [updated customer numbers and energy throughput] does not significantly change SP AusNet's total forecast opex. For this reason the AER considers SP AusNet's proposed approach to opex partial factor productivity forecasts is reasonable and represents the best methodology available in the circumstances. As such, the AER has applied SP AusNet's proposed methodology [to] the AER's adjusted base year forecast."*

The AER also accepted SP AusNet's network growth escalators. It noted that the growth escalators proposed by SP AusNet were based on its forecast customer numbers and energy throughput. The AER considered basing escalators on the increased customer and

---

[8] SP AusNet, *Access Arrangement Information*, 30 March 2012, Appendices 6A to 6D.

[9] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, Appendix C, p.70.

[10] Ibid, p.78.

[11] Ibid, p.81.

[12] Ibid, Attachment 6, Section 6.5.3, p.152.

energy forecasts approved in the Draft Decision, but concluded that the impact of using updated forecasts is not significant:[13]

> *"The AER considers the use of customer numbers and energy throughput in [Attachment 9] does not significantly impact SP AusNet's total opex. Consequently the AER is satisfied that the output growth escalators proposed by SP AusNet are reasonable and represent the best forecasts possible in the circumstances." (footnotes omitted)*

3.2 Response

The Draft Decision on the rate of change of opex underestimates expenditure requirements for the forthcoming access arrangement period because the LPI-based labour escalator it uses is inconsistent with the productivity escalator proposed by SP AusNet and accepted in the Draft Decision.

SP AusNet stands by its material escalators, which forecast some materials decreasing in price and others increasing. However, SP AusNet accepts the Draft Decision to apply zero real cost escalation of materials on the basis that the result is not significantly different to the net escalation proposed by SP AusNet.

In response to the Draft Decision regarding the best measure of changes in labour costs in the circumstances, SP AusNet:

- accepts the use of LPI, and EGWWS on the basis of practicality (i.e. driven by the availability of data from the ABS);
- accepts LPI in place of AWOTE on the condition that productivity adjustments are omitted; and
- submits that the best forecast of LPI available is the average of the DAE and BIS Shrapnel forecasts.

This section sets out the rationale for SP AusNet's position.

For the purposes of clarity, the debate between the AER and SP AusNet over what labour escalation to include in the access arrangement can be divided into two components:

1. The best measure of labour costs: that is, which labour cost index to use and how it should be adjusted for productivity effects. This debate is a theoretical one about the best measure to reflect historic labour cost increases and is not related to the actual data; and
2. The best forecast of that measure (or of changes in that measure): this is essentially a debate about which economic forecaster has a better performance record.

3.2.1 What is the best measure of labour costs?

There are three components to this discussion:

[13] Ibid, p.153.

- Whether the EGWWS category or the Electricity, Gas, Water (EGW) category provides the most suitable data to use as a basis to forecast the changes in labour costs;
- Whether the LPI or AWOTE is the most appropriate measure of changes in labour costs; and
- Given the choice between the LPI and AWOTE, how productivity improvements should be factored into opex forecasts.

Each of these is discussed in further detail below.

EGW vs. EGWWS

The Draft Decision stated that the ABS' EGWWS category was the most suitable industry sector data for using as a basis to forecast the changes in labour costs for internal labour for gas distribution businesses, including SP AusNet:[14]

> *"Forecast movements in labour costs for the electricity, gas, water and waste services (EGWWS) industry provide the best forecast of movements in all internal labour costs possible in the circumstances rather than the property and business services (PBS) industry for general labour and the electricity gas and water (EGW) industry for network labour."*

It is worth noting, given this statement, that SP AusNet did not split internal labour into general and network labour, or apply the category of Property and Business Services for any of its labour cost forecasts. Rather, all internal labour was escalated based on the forecasts for the EGW industry.

Ideally, forecasts would be based on data for the labour category that specifically relates to gas distribution businesses. However, historically, this has not been measured in isolation. In the absence of gas industry-specific data, a second best solution needs to have regard to the availability of data, and the extent to which the inclusion of additional sectors will skew the overall result.

SP AusNet had used EGW data as the basis for its forecasts for two reasons:

1. This combination of industries had been reported by the ABS prior to changes to its standard industry categorisations that resulted in the addition of waste service to create EGWWS; and
2. Waste services have typically exhibited different labour cost pressures relative to the other three measured sectors, which in turn skews the overall average.

BIS Shrapnel detailed the evidence of the lower growth of labour costs in the waste sector for both collective agreements[15] and industry wage data:[16]

> *"Using a comparison of the historical wages and employment data of EGW versus EGW and Waste Services at the national (Australian) level, annual growth in the combined EGWWS sector is 0.1% less on average than the EGW sector over the period from 1998/99 to 2008/09, and 0.6% less on average over the*

[14] Ibid, Appendix C, p.70.

[15] SP AusNet, *Access Arrangement Information*, 30 March 2012, Appendix 5F, p.31.

[16] Ibid, Appendix 5F, p.A5.

> *same period for AWOTE. The overall wages growth average has also been dragged down by the fact that employment growth in the lower paid waste services sub-sector has outstripped growth in the higher paid EGW sector over the eleven years to November 2008 — 4.8% p.a. for waste services compared to 3.8% p.a. for EGW."*

The Draft Decision rejected BIS Shrapnel's approach of deriving the EGW series from the EGWWS data, without dismissing the potential bias issue, because it was likely to introduce forecasting error:[17]

> *"The AER does not consider that BIS Shrapnel's reasons for excluding the waste service component (that it would result in a lower wage growth) are sufficient to adjust the EGWWS data. In the absence of any compelling evidence of a difference between the EGW and EGWWS industries, the AER considers it is not necessary to remove the forecast waste services component from EGWWS data. The AER considers removing the waste services component from the data introduces a potential source of forecasting error since it is necessary to estimate the waste services components. Further, there is likely to be forecasting error from applying the discontinued EGW industry data series which concluded in June 2009 when the ABS moved to the ANZSIC 2006 classification. This forecasting error will be magnified overtime as the period between the last available EGW data (2009) and the forecast period increases."*

The threshold test under the NGL and the NGR for retaining the 'Waste' category is not solely that removing it introduces a potential source of forecasting error. Rather, the AER must have regard to the impact that the inclusion of an industry category that does not relate to the industry being regulated (i.e. the Waste industry) has on its ability to derive robust, credible forecasts of real labour cost drivers, consistent with the NGL and the NGR. Hence, the real test is whether the forecasting error is less than the impact of applying a measure that is artificially skewed.

SP AusNet accepts that for reasons of practicality and to reduce the risk of specification error, it is appropriate to adopt EGWWS consistent with the ABS industry categorisations. However, evidence suggests this will skew labour escalation forecasts below the actual rates likely to be experienced by gas distribution businesses (i.e. will create a negative bias in forecasts). This bias must be recognised in the overall assessment of the best forecast in the circumstances.

LPI vs. AWOTE

The LPI[18] and AWOTE both measure changes in labour costs, but under different circumstances, meaning the scope of labour costs they capture differs. That is LPI measures labour prices where the quality (i.e. skill level) of the labour force is held steady, while AWOTE reflects labour prices for the prevailing skill mix in the industry, which changes over time.

The AER has described these differences:[19]

---

[17] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, Appendix C, p.71.

[18] While not mentioned in the Draft Decision, the ABS has ceased publication of the LPI. DAE and BIS now use the Wage Price Index in place of the LPI. For the purpose of comparison with AWOTE, WPI is similar to LPI.

[19] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, Appendix C, p.76.

> *"AWOTE measures average employee earnings from working the standard number of hours per week. It is not strictly a price index (that measures the pure price effect) because the composition of labour is not held constant. It captures composition productivity effects, worker productivity effects and other effects. In contrast the LPI is a Laspeyres type price index. As a Laspeyres type price index the LPI measures the change in labour costs with the quantity and quality of work performed held constant. It measures the pure price effect, showing how much the same quantity of labour costs in the current period, relative to the base period. The weights used are for the base period and are updated annually to represent job distribution." [footnotes omitted]*

The appropriateness of each measure in determining operating expenditure for the forthcoming access arrangement period is generally assessed against:

- the types of cost increases network businesses should be funded for; and
- other adjustments made in determining the future level of operating expenditure (i.e. productivity and growth).

The AER said that network businesses should not be compensated for productivity related cost increases. The AER also stated that the lower volatility of the LPI makes it a better forecast of labour costs than AWOTE.[20]

However, there are certain costs that gas distribution businesses are likely to face that are not captured in the LPI or otherwise compensated for in the operating expenditure forecasts approved in the Draft Decision. For example, in circumstances where firms promote staff to retain them in the face of tight labour markets, rather than due to an improvement in the skill levels, this will result in an increase in labour prices that is not captured in LPI. The effect on firms' labour costs is the same as if wages were increasing because there is no improvement in productivity.

Further, labour economist Professor Borland has pointed out that in cases where a productivity adjustment is being made, it is necessary to use AWOTE to avoid double counting productivity gains:[21]

> *"AWOTE includes all the components of productivity improvement that will be included in the adjustment for labour productivity, but LPI does not. Hence, to use LPI as the earnings measure, and then adjust for change to labour productivity, is to double-adjust for productivity changes. Because of the double-adjustment, the measure of the change in labour costs derived using LPI will under-estimate the true change in labour costs."*

AWOTE is theoretically superior and better matched to SP AusNet's opex partial productivity adjustment. However, in light of data availability issues (i.e. ABS discontinuing some AWOTE series) SP AusNet is willing to accept the use of LPI.

Notwithstanding this, as is discussed in the next section, SP AusNet does not accept the use of LPI in combination with the Economic Insights productivity escalator.

[20] Ibid, Appendix C, p.77.

[21] Professor Jeff Borland, *Labour Cost Escalation: Choosing Between AWOTE and LPI,* March 2012, p.4.

Productivity adjustment – matching productivity measure to labour index

The Draft Decision stated that LPI and AWOTE capture changes in labour costs that include different types of productivity contributions, and that they need to be adjusted using different measures of productivity impacts:[22]

> *"Conceptually at least, either the AWOTE or LPI labour price measures can quantify the change in labour costs. However, it is important to use matching labour price and productivity measures."*

And further:[23]

> *"Professor Borland considers the productivity adjusted LPI underestimates changes to labour costs by an amount equal to the change in the skill composition of the workforce. The AER agrees with Professor Borland if the standard labour productivity measure is used to adjust the LPI."*

Professor Borland also stated that productivity impacts captured in the LPI are minimal:[24]

> *"In previous reports (Borland, 2011; 2012) I have provided a detailed explanation and empirical evidence for why, as a matter of practice, any adjustment to LPI for changes in labour productivity should be minimal. There are two steps to this argument. First, I demonstrate that an appropriate measure of labour cost escalation would be to use LPI/WPI minus an adjusted measure of labour productivity (where the adjustment removes the change in labour productivity that is due to a worker composition effect; since this component is also excluded from the LPI/WPI) (Borland, 2012, section 4.1). I noted that this argument has been accepted by DAE (2011b, p.4): '…the fact that the LPI does not account for compositional productivity has implications for the productivity adjustments which need to be made to estimates of changes in labour cost.' Second, I show that the largest share of changes to labour productivity is explained by worker composition effects; so that the adjusted measure of labour productivity that would be subtracted from forecast changes to LPI/WPI is very small (see for example, Borland, 2012, section 6.1.2)."*

The Draft Decision (consistent with the Draft Decisions for the other Victorian gas distribution businesses) largely rejects the adjustment of forecasts of changes in labour costs for productivity impacts due to the practical difficulties in accurately measuring labour productivity in the sector. For example, the AER stated that the reason it found DAE's forecast of LPI *unadjusted* for productivity to be the best forecast in the circumstances is because the appropriate productivity measure (published by the ABS) is subject to significant measurement error issues:[25]

> *"…the AER notes the high degree of difficulty in estimating both quality adjusted labour productivity and conventional labour productivity as evidenced by the conflicting productivity estimates from BIS Shrapnel and DAE and the analysis conducted by the [Productivity Commission]. This, while the AER expects worker productivity to improve over the long run, due to estimation difficulties, it has not*

[22] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, Part 3, Appendix C, p.72.

[23] Ibid, p.74.

[24] RAAP Appendix 3.B, p.11

[25] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, Part 3, Appendix C, p.75.

> *sought to address this effect, at this stage, in SP AusNet's forecasts of capex labour costs."*

However, in considering the labour cost component of SP AusNet's operating expenditure, the AER did not consider that the use of an LPI forecast together with the partial productivity measure used in SP AusNet's 'Rate of Change' approach would suffer the same measurement error, or overcorrect for productivity.

In fact, the AER argued that LPI needs to be used to be consistent with SP AusNet's productivity escalator:[26]

> *"SP AusNet proposed the use of forecast movements in productivity unadjusted AWOTE, provided by BIS Shrapnel, to escalate its labour costs for anticipated real labour price increases.*
>
> *However, for consistency with the productivity adjustments applied by Economic Insights the AER considers the use of the unadjusted LPI to be the best forecast possible in the circumstances."*

However, this argument ignores that, in its report, Economic Insights considered what the appropriate and best measure of labour cost changes was to use with its rate of change methodology and concluded it was AWOTE.[27]

The AER's use of LPI in conjunction with the Economic Insights opex partial productivity adjustment relies on the assumption that the Economic Insights productivity forecast did not include any compositional productivity. The AER stated that it considered:[28]

> *"…any labour productivity included in Economic Insight's partial factor productivity adjustment would not include any adjustments for compositional productivity."*

No evidence is provided in support of this statement, which appears inconsistent with the evidence cited of the difficulties in producing accurate productivity forecasts, let alone 'quality adjusted' productivity estimates.

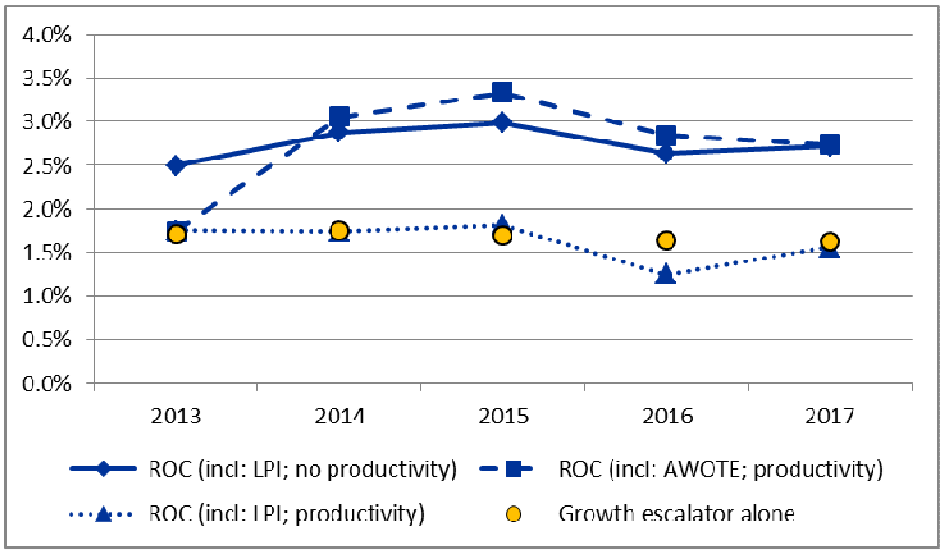
A comparison of the forecasts for the forthcoming access arrangement period supports the theoretical and other evidence that worker productivity effects are small, and that forecasts of changes in labour costs should either be based on AWOTE with a productivity adjustment, or based on productivity-unadjusted LPI. As shown in Figure 3-1 below, these two approaches result in a similar forecast of the rate of growth of opex. In contrast, the AER's approach results in significantly lower forecasts, suggesting large worker productivity effects of more than one per cent per annum.

[26] Ibid, Appendix C, p.76.

[27] SP AusNet, *Access Arrangement Information*, 30 March 2012, Appendix 6A, Section 3.1.

[28] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, Part 3, Appendix C, p.75.

Figure 3-1: Forecast rate of change in opex under different labour and productivity assumptions



Source: SP AusNet analysis.
AWOTE forecasts are from BIS Shrapnel, LPI forecasts are the average of BIS Shrapnel and DAE forecasts

What is clear from the above, is that the use of the LPI measure of changes in labour costs is in error when applied in combination with the Economic Insights partial factor productivity adjustment. Moreover, it leads to outcomes that are inconsistent with the NGL and NGR, as it does not provide SP AusNet with a reasonable opportunity to recover at least the efficient costs it incurs, as required under section 24. This is because, in effect, it incorporates the productivity benefits accruing from its workforce into SP AusNet's opex forecasts, without fully compensating it for delivering those compositional changes.

Either, the AER can use the productivity measure in combination with an AWOTE measure of changes in labour costs – as SP AusNet proposed in its Initial Access Arrangement Proposal – or the AER can apply the LPI measure but remove the productivity adjustment to future labour costs. Mixing and matching these is inappropriate.

3.2.2 What is the best forecast of changes in labour cost as measured by the LPI for the EGWWS sector?

The Draft Decision selects DAE's EGWWS[29] LPI forecast as the best available data series for measuring changes in labour cost on the basis that it is likely to be pessimistic which will counterbalance for not making a productivity adjustment.[30]

In relation to SP AusNet's operating expenditure forecast, the AER found that DAE's LPI forecast unadjusted for productivity used in combination with the firm specific Economic

[29] Note that EGWWS is used to forecast the changes in internal labour costs. The LPI for the Construction sector is also applied to forecast operating costs of external (contractor) labour.

[30] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17,* Appendix C, pp.78-79.

Insights productivity adjustment was the "best forecast in the circumstances".[31] In relation to SP AusNet's capital expenditure forecast the best forecast was the LPI forecast unadjusted for productivity.

As noted above, the AER did not argue that DAE's forecast was the most accurate, and was open to the possibility that the forecast was biased on the low side. In relation to forecasting accuracy, the AER stated:[32]

> *"The AER undertook its own analysis and compared both BIS Shrapnel's and DAEs forecasts of LPI movements for the Australian economy (Table c.3). For the forecast series commencing 2006 to 2011 included in the analysis, the average of DAEs and BIS Shrapnel's forecasts had the lowest mean absolute error on three occasions, DAEs forecasts on two and BIS Shrapnel's once.* ***This result is consistent with a significant body of literature concluding forecast accuracy can be improved by combining multiple individual forecasts.*** *It is also consistent with DAEs finding that its forecasts were too pessimistic but BIS Shrapnel's were too optimistic. The AER did not have the necessary data to undertake the same analysis for Victoria." (emphasis added)*

SP AusNet engaged labour economist Professor Borland to advice on what is the best forecast of Wage Pricing Index. Professor Borland summarised his findings as follows:[33]

> *(a) "There is a relatively large difference between forecasts made by BIS and DAE of changes to WPI in the utilities/EGWWS sector in Victoria for 2013 to 2017. Hence which measure is chosen can have a substantial impact on the size of real labour cost escalation over the access arrangement period;*
>
> *(b) Comparison of past forecasts of changes to LPI made by DAE and BIS against data on actual changes to LPI shows that: (i) There is no basis for concluding that forecasts made by DAE have had lower forecast error than those made by BIS; and (ii) A forecast that is an average of the DAE and BIS forecasts is associated with lower forecast error than using either the DAE or BIS forecasts; and*
>
> *(c) Statistical theory supports that an average of the DAE and BIS forecasts is likely to be a superior approach to forecasting changes to WPI compared to using either the DAE or BIS forecasts.*
>
> *On the basis of this analysis my recommendation is that the AER should use an average of the forecasts made by DAE and BIS as the best forecast of changes to WPI for the purposes of real labour cost escalation."*

Hence, the evidence suggests an average makes the best forecast of changes in LPI.

Given the evidence presented above that the DAE forecasts alone cannot be shown to be the most accurate forecast in the circumstances, and that an average of forecasts performs better (even when one forecast is slightly more recent), the use of the DAE forecast on the basis of recency alone cannot be found to be the best forecast under the circumstances.

---

[31] Ibid, Appendix C, pp.68, 70. and Attachment 6, p.152.

[32] Ibid, Appendix C, p.79.

[33] RAAP Appendix 3.B, p.3.

3.3 Revised Proposal

For the reasons set out above, SP AusNet accepts the amendment made by the Draft Decision to apply zero per cent inflation to real materials prices in the forthcoming access arrangement period.

SP AusNet rejects the AER's labour cost escalation forecast, and proposes labour escalators based on the average of forecasts from BIS Shrapnel and DAE.

SP AusNet sought updates from BIS Shrapnel of its forecasts. These are set out in Table 3-2. The forecasts included in SP AusNet's Initial Access Arrangement Proposal were completed in November 2011. The updated forecasts reflect more recent employment and other economic data released by the ABS.[34]

Table 3-2: BIS Shrapnel updated forecast – changes in WPI

Parameter	2012	2013	2014	2015	2016	2017
EGWWS Real Labour Growth Rates	2.2%	1.2%	1.9%	2.2%	1.8%	1.8%
Outsourced Real Labour Growth Rates	1.7%	1.0%	1.9%	2.2%	1.9%	1.7%

Source: BIS Shrapnel, 2012, RAAP Appendix 3.C, Updated Table 1a

Forecasts for Victoria, year-end December

The updated BIS Shrapnel forecasts were used together with DAE LPI forecasts from the Draft Decision to determine an average LPI forecast. These average forecasts, set out in Table 3-3 below, are applied in the Revised Access Arrangement Proposal to both capital and operating expenditure.

SP AusNet submits that, based on the expert advice of Professor Borland, these forecasts represent the best forecast possible in the circumstances.[35]

Table 3-3: SP AusNet's revised real labour cost escalation rates (WPI)

Parameter	2012	2013	2014	2015	2016	2017
EGWWS Real Labour Growth Rates	2.0%	1.2%	1.5%	1.7%	1.4%	1.5%
Outsourced Real Labour Growth Rates	1.5%	0.8%	1.4%	1.6%	1.2%	1.3%

Source: SP AusNet analysis of BIS Shrapnel, 2012, RAAP Appendix 3.C, Updated Table 1a; DAE 2012 Draft Decision.

[34] RAAP Appendix 3.C.

[35] Clause 74(2)(b) of the NGR.

SP AusNet has also removed its productivity escalator from its rate of change forecast for consistency with the use of LPI. Growth escalators from the Initial Access Arrangement Proposal are retained.

Based on the above, SP AusNet's 'Rate of Change' forecasts, applied to determine operating expenditure over the forthcoming Access Arrangement period, are:

Table3-4: SP AusNet's rate of change forecast

Parameter	2013	2014	2015	2016	2017
Rate of Change	2.50%	2.87%	2.99%	2.64%	2.71%

Source: SP AusNet

4 Step Changes and zero based costs

4.1 Draft Decision

SP AusNet's Initial Access Arrangement Proposal included $20.73 million ($13.17 million excluding National Energy Customer Framework costs) ($2012) in step changes and zero-based costs. The Draft Decision approved $4.32 million of these costs, with NECF costs open to pass through arrangements once the framework is implemented in Victoria. SP AusNet's Revised Access Arrangement Proposal includes $7.54 million in step changes and zero-based costs.

Table 3-5: Summary of Step Changes and Zero Based Costs

	SP Proposal ($ million)	Draft Decision ($ million)	SP AusNet Response to Draft Decision
Step Changes	*11.72*	*0.59*	
Survey of mains and services in drains	1.05	0.00	Reject
Changes to heater maintenance	0.30	0.00	Accept
Operations fees on CTMs	0.91	0.00	Reject
Magnetic Tomography	0.39	0.00	Reject
Pipe saddle repairs	0.32	0.00	Accept
Carbon Tax	1.19	0.59	Reject
NECF	7.55	Pass Through	Accept
Survey to determine location of Class 250 mains	n/a	n/a	Included in response to draft decision on proposed capex that identified $0.2 million in

	SP Proposal ($ million)	Draft Decision ($ million)	SP AusNet Response to Draft Decision
			2013
Zero-Based Costs	*9.01*	*3.73*	
Change in capitalisation policy	3.73	3.73	Accept
Reallocation of SPIMS and overheads	5.28	0.00	Accept

The Draft Decision included debt raising costs in the write-up of step changes. While the value of debt raising costs is affected by the overall level of the expenditure forecast, and hence the Draft Decision approved a different amount than was included in SP AusNet's Initial Access Arrangement Proposal, there is an agreed methodology for calculating these costs that is not in dispute.[36] For simplicity SP AusNet has excluded debt raising costs from the discussion below. Estimation of debt raising costs is discussed further in section 5 of this chapter.

4.1.1 Carbon Tax

The Draft Decision accepted that SP AusNet will incur a step change in administering the carbon scheme.[37] However, the amount of the step change proposed by SP AusNet was found not to reflect the quantum of expenditure that would be incurred by a prudent and efficient service provider. The Draft Decision stated that the work proposed by SP AusNet would be intermittent in nature, and therefore would not require 1.5 FTE. The AER approved 0.5 FTE and the audit costs required to administer the scheme.[38]

4.1.2 Operation Fees on Custody Transfer Meters

The Draft Decision rejected SP AusNet's proposed network step change for increased operating expenses resulting from the installation of three network city gate regulating facilities over the access arrangement period.

In support of its decision, the AER pointed to SP AusNet's rate of change forecasting approach for opex. Particularly, the AER noted that SP AusNet had applied output growth escalation to its opex forecast, meaning that opex is forecast to grow when the volume of gas delivered to customers is forecast to increase. This growth escalator should provide SP AusNet with the additional opex required to supply more energy to more customers. The AER is of the view that the output growth escalator includes operating and maintenance expenditure associated with new network equipment, including custody transfer meters

[36] SPN PTRM.xlsm

[37] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, Attachment 6, p.158.

[38] Ibid, pp.158-159.

(CTMs). For this reason, the AER considered the proposed step change was not required in addition to the network growth escalator.[39]

4.1.3 Survey of Mains and Services in Drains

The Draft Decision did not accept that the survey of mains and services in drains necessitated a step change in opex. The AER considered that while the risk associated with gas pipes installed in drains is material, SP AusNet acting in accordance with good industry practice to achieve the lowest sustainable cost of delivering pipelines services should have taken immediate action to address this risk. The AER does not consider funding a program to address a risk that should have been addressed prior to 2013-2017 is in accordance with good industry practice.[40]

The AER submitted that the fact that SP AusNet had not responded to this risk to date indicated it was not a material risk.

The AER was not satisfied that the opex of this program satisfies rule 91 of the NGR.[41]

4.1.4 Magnetic Tomography

The Draft Decision states that the AER is not satisfied that an increase in Magnetic Tomography (MTM) inspections of un-piggable gas pipelines would be expenditure that would be incurred by a prudent service provider acting efficiently, in accordance with good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.[42]

The AER stated that, at the time of the Draft Decision, SP AusNet had not received the full results of a trial of this new technology, and that this information was necessary to establishing how MTM would be used by SP AusNet:[43]

> *"The AER understands that the results from the trial will help SP AusNet to determine which pipeline sections will require dig-up for further verification and how results from MTM inspections compared with recent pigging of the same section of pipeline."*

4.2 Response

The amendments required by the Draft Decision which SP AusNet does not accept are:

- the reduction in the Carbon Tax step change; and
- the rejection of network operations step changes for magnetic tomography, survey of mains and services in drains, and operations fees for CTMs.

---

[39] Ibid, p.156.

[40] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, Attachment 6, Section 6.5.4, p.154-155.

[41] Ibid, p.155.

[42] Ibid, p.156

[43] Ibid, p.156

SP AusNet is also proposing a new opex step change in relation to the identification of Class 250 PE pipe. The rationale for this step change is discussed in RAAP Chapter 2, Section 5.

4.2.1 Carbon Tax

SP AusNet does not accept the Draft Decision's rejection of the step change for the carbon tax administration.

Employment

The AER considered that most of the work would be intermittent in nature but that there may be some periods where one or more full time equivalent (FTE) staff are required to administer the project.[44]

The AER's Draft Decision, which allows for only one part-time employee to cover the administrative costs of the carbon tax scheme, if it stands, will create a potential compliance risk for SP AusNet. In particular, the nature of the Carbon Tax scheme is that it is administratively, very labour intensive, as explained below.

SP AusNet notes that the AER has not provided any evidence to substantiate its estimate of the resources required. Given this, it is unclear how the AER could consider that its proposed change is necessary to correct non-compliance with a provision of the NGL or an inconsistency between that matter and the NGR. SP AusNet considers that this is inconsistent with the requirement under the rules that provides the AER with only limited discretion with regards to the acceptance of SP AusNet's proposed operating expenditure forecasts.

A significant amount of change is to occur during the upcoming access arrangement period (as new systems are implemented and administrative processes are refined) and during the transition in the lead up to the cap and trade scheme commencing in 2015.

Annual regulatory obligations introduce new administrative burdens for multiple aspects of SP AusNet's operations relating to its gas distribution network, both in terms of identifying and discharging SP AusNet's direct carbon liability, and as a result of an increased workload for other corporate functions, primarily driven by compliance with Australian financial accounting and taxation standards, and regulatory and statutory reporting requirements arising from the carbon pricing legislation. Direct administrative costs are shared across multiple corporate functions, including audit, financial accounting, and taxation, procurement, regulatory and legal teams.

While the principles of the legislation are understood for the fixed price period, its newness, the fact that details are not yet available from the Clean Energy Regulator (e.g. application to register liable entity), and evolving regulations means there are still gaps in SP AusNet's ability to assess detailed requirements, which requires continued business oversight and response as operational aspects are clarified.

Emissions Trading Scheme

There has been an increase in the projected implementation and administrative effort associated with discharging liability under the flexible trading scheme, resulting from several

[44] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, Attachment 6, pp. 158-159.

significant (and unforeseen) policy changes initiated by the Commonwealth Government since the commencement of the carbon price on 1 July 2012.

Most notable are the announcements that from 1 July 2015, Australia's carbon price will be linked to the European Union Emissions Trading System (EU ETS) and therefore subject to a range of domestic and international economic variables, and the removal of the $15 per tonne floor price.[45]

In its Initial Access Arrangement Proposal, SP AusNet recognised the need to actively prepare for the introduction of carbon trading during the fixed price period, and has already invested considerable effort and organisational resources in order to understand those legislative requirements, and in the design and implementation of complementary business processes for use in both the fixed and flexible price periods.

The introduction of the *Clean Energy Amendment (International Emissions Trading and Other Measures) Bill 2012* to Parliament in September 2012 added another layer of complexity and uncertainty in the lead up to the move into a cap and trade scheme on 1 July 2015, with detailed policies supporting international linking (such as the design and timing of the auction process) left to regulations, and with operational apparatus – such as the design of the auction process – still under development.

A significant degree of uncertainty remains as to the content of instruments and regulations, and the evolving policy and changing design of Australia's carbon trading scheme creates new implementation costs. It is reasonable to expect that, as more details about arrangements in the flexible price period are released, a comparable – if not greater – effort will be required to prepare, particularly in light of newly announced changes. This would be a one-off implementation cost which was not been factored into the Initial Access Arrangement Proposal.

There is a strong probability that SP AusNet may require external advice to guide some aspects of its preparations as a regulated entity, in particular to identify options for carbon procurement and/or trading strategies, to navigate the proposed auction process (scheduled to commence in early 2014), and to fully comprehend regulatory parameters for prudent and efficient investment decisions, balancing business risk with cost mitigation strategies where appropriate.

To elaborate, while SP AusNet is mindful of avoiding unnecessary costs for customers, attempts to minimise customer costs through active trade in domestic and/or international carbon permits (in preference to a more straightforward annual purchase/surrender approach) will see higher administrative costs and increased business risk, for which SP AusNet is not currently incentivised and which is a competency beyond core business functions.

4.2.2 Operation Fees on CTMs

SP AusNet does not accept the AER's decision to reject SP AusNet's step change for city gate CTMs because:

[45] DCCEE, *Australia and European Commission agree on pathway towards fully linking Emissions Trading Systems* (28/08/2012), http://www.climatechange.gov.au/media/whats-new/linking-ets.aspx (Accessed 9 November 2012).

- SP AusNet considers the AER has found similar programs to be prudent and efficient for other gas distribution networks; and
- the AER's conclusion that operating expenditure for three new CTMs lies within the 'Output Growth/Network Growth' escalator is incorrect.

There is a large similarity in the two programs proposed by SP AusNet and Envestra. Both service providers proposed a step change in opex for the fees associated with the introduction of new CTMs. SP AusNet's program was not approved on the basis that the AER considered that the costs would be absorbed in SP AusNet's network growth escalator. Envestra's program was approved (with some amendments) without reference to any interaction with growth opex.[46] SP AusNet believes the AER has been inconsistent with its approach in assessing new CTM operational expenses for the coming access arrangement period.

The Draft Decision for Envestra approved its proposed step change for additional Meter Station Charges.[47] This program is comparable to SP AusNet's CTM proposal. Both programs forecast an increase in opex for charges relating to the installation of new CTMs.

In the case of SP AusNet's program, the AER stated that the program costs would be covered by adjustments from the 'Output Growth' factor used within the 'rate of change' forecasting method.[48] In contrast, the AER did not consider Envestra's proposal to be driven by 'Network Growth'.[49]

The forecast for opex proposed by Envestra included a specific component of expenditure driven by network growth. This component was "required to cover the incremental cost stemming from new customer connections primarily including meter reading, data processing and billing".[50]

This "Network Growth" expenditure forecast is comparable to SP AusNet's proposed "Output Growth" factor as both quantify an increase in operational costs to the businesses as the size of the gas networks increase.

The introduction of three new CTMs in the system involves operating costs that have not been incurred by SP AusNet, and are not within base year opex of 2011.

The installation of the three new city gate sites, which the AER approved in the capex program, requires the installation of the three new CTMs. City gate sites are introduced into the network as a regulating facility required to maintain security of supply and to be compliant with the Gas Distribution Code and the Retail Market Rules.

The new city gate sites, with the associated CTMs, are required to manage movement in energy throughput into the network. This function is not purely driven by output growth or network size. The city gates are critical to the ability of the network to be dynamic (i.e. responding to the movement of energy), whilst also maintaining minimum pressure requirements set by the Gas Distribution System Code. Hence, the need for a city gate in

[46] AER, *Access Arrangement Draft Decision Envestra Ltd 2013-17*, Attachment 6, p.183.

[47] Ibid, p.183.

[48] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, p.156.

[49] Ibid, p.183.

[50] Ibid, p.174.

one part of the network may be driven by local factors and not relate to the growth rate of the entire network.

Therefore, the opex that SP AusNet will incur due to the introduction of the three new CTM sites is not compensated for via the 'Output Growth' expenditure, but rather represents a step change in opex.

If these costs are not recognised as a step change, SP AusNet will not be provided with any allowance for the costs associated with operating the three new CTM sites, and therefore will not be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs. Furthermore, excluding such costs risks creating an incentive for distribution businesses to inappropriately defer such investment in the future, as they are unable to recover the operating costs associated with such investments. This outcome is inconsistent with the Revenue and Pricing Principles, which require a service provider to be provided with effective incentives to promote efficient investment in pipelines used to provide reference services, and that regard be had to the economic costs and risks of the potential for under and over investment by a service provider.[51] Overall, SP AusNet considers that the AER's proposed treatment of such costs is inconsistent with the NGO, as it fails to promotes efficient investment in, or use of, gas services, with potentially detrimental effects on safety and reliability of gas supply.

4.2.3 Survey of Mains and Services in Drains

SP AusNet recognises the potential risk and dangers noted by WorkSafe Victoria with regard to gas pipelines when they run through storm water drains and sewers. It is noted that this risk was only identified half way through this current access arrangement period. This risk has been addressed through increased communication with contractors of the potential dangers. However, further works have been identified by WorkSafe and other gas distribution businesses in order to put in place effective control measures in order to minimise the risk.

As this program was only recognised in the current access arrangement period, sufficient time has not been allowed to measure the efficiency of the program. For this reason SP AusNet believes that the gas and services in drains program should be recognised as a step change in opex.

SP AusNet has taken several steps in order to minimise the risk identified by WorkSafe Victoria associated with mains and services located within drains. One control measure that was introduced is the use of increased communication to contractors, and the identification of areas of potential danger on SP AusNet's district plan.[52] However, while this creates awareness of the issues, it does not increase SP AusNet's understanding of the potential risks created by mains and services in drains, nor its ability to mitigate this risk through relocation.

SP AusNet has discussed with the ESV and other Victorian gas distribution businesses the need for additional control measures to minimise the risks. One appropriate program that was identified was to survey services and mains in high-risk areas.

[51] Sections 24(3)(a) and (6), National Gas Law.

[52] SP AusNet, *Access Arrangement Information*, 30 March 2012, Appendix 6E, p.17.

Planning and research into the high-risk areas was firstly identified, and a program was drafted. SP AusNet, alongside the ESV and other distribution businesses, wanted to ensure all control measures were in place to reduce the identified risk and cost of the program.

As the risk was first identified in 2010, SP AusNet had no prior opportunity to respond and minimise the risk. The time from the WorkSafe alert in the current access arrangement period, to the end of 2011, the year on which base year costs are determined and from which step changes need to be identified, did not allow sufficient time for SP AusNet to plan, develop and deliver a program to fully address this risk.

In summary, ESV acknowledged this is a real risk. SP AusNet has not otherwise been compensated for mitigating this risk in its forecasts, and SP AusNet could not have reasonably adopted a proactive risk mitigation strategy in time for inclusion in its base year expenditures. Given these circumstances, SP AusNet considers that the exclusion of any funding for this program would be unreasonable as it results in SP AusNet not being provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs, as required under section 24, nor will the AER be making a decision that is consistent with the NGO. In particular, it is not in the long term interests of consumers that this risk not be investigated further, so that appropriate, efficient risk mitigation strategies can be put in place.

Therefore, SP AusNet considers that consistent with the requirements of the NGR and the NGL, this program should be recognised as a step change in opex.

4.2.4 Magnetic Tomography

SP AusNet does not accept the AER's decision to reject SP AusNet's step change for magnetic tomography inspections of un-piggable gas pipelines. Subsequent to the release of the Draft Decision, SP AusNet received the report by ARGOS Inspection of the assessment of four licensed transmission pipelines. This report has allowed SP AusNet to do a comparison of the results to sections of pipe whose condition is known and through pipeline dig-ups on its distribution network.

The report provided by ARGOS Inspection detailed the findings of the feasibility trial study on certain identified natural gas pipelines in and around Victoria. The total distance of pipe inspected was 2.89km using MTM technology. The findings from the inspection were that the pipe was considered to be in generally good condition, with some results showing pipe-coating defects and significant corrosion and crack-like defects.[53]

The results from pipeline dig-up inspections were consistent with the identified anomaly from the MTM technology result (on Transmission Pipeline: Licence No.203) with further pipeline dig-ups planned for January 2013 to verify other anomalies – refer to RAAP Appendix 3.E and RAAP Appendix 3.F for further information.

The AER stated:[54]

[53] RAAP Appendix 3.D, p.4.

[54] AER, *Access Arrangement Draft Decision SPI Networks (Gas) Pty Ltd 2013-17*, Attachment 6, p.156.

> *".. the results of the field trial appear to be important for determining how SP AusNet will use MTM in the future and what opex SP AusNet will incur in the 2013-2017 access arrangement period related to MTM."*

Due to the promising results and the validation of the MTM technology, SP AusNet submits that the AER reconsider SP AusNet's Initial Access Arrangement Proposal and approve operating expenditure to use MTM technology for the pipeline Integrity Management Program.

The integrity of transmission pipelines must be maintained and periodically demonstrated according to Australian Standard 2885.3 (2008). The MTM inspection technology was introduced for testing to help understand the integrity of pipelines that due to their geometry (sharp bends, changing diameter) are not able to be inspected by existing technologies such as in-line testing (pigging).[55] The ESV has also shown a strong interest in the MTM technology and has followed the progress of field trials conducted by SP AusNet.[56]

SP AusNet believes that the technology provided by MTM delivers the opportunity to have a detailed understanding of pipelines that previously had no method of measuring pipeline integrity. SP AusNet plans to initiate the works program as evidenced by the trial process, and further investigative works. This technology will provide SP AusNet with a real understanding of the risk profile of the network's highest pressure pipelines, and will be able to mitigate these identified risks. The adaptation of this new technology will ensure safety obligations are met in delivering pipeline services.[57]

4.3 Revised Proposal

The step changes and zero-based costs included in SP AusNet's Revised Access Arrangement Proposal are set out in the table below.

Table 3.6: Step changes and zero-based costs

($2012M)	2013	2014	2015	2016	2017
Network Operations	0.53	0.38	0.48	0.59	0.59
Carbon Tax Administration	0.24	0.24	0.24	0.24	0.25
Accounting Treatment Change	0.67	0.88	0.61	0.74	0.87
Total	**1.44**	**1.49**	**1.34**	**1.57**	**1.71**

Source: SP AusNet

[55] SP AusNet, *Access Arrangement information*, 30 March 2012, p.150.

[56] SP AusNet, Response to AER Request for Information on Opex Step Changes, 8 June 2012, p.12.

[57] SP AusNet, *Access Arrangement information*, 30 March 2012, p.150.

5 Revised Proposal for Operating Expenditure

The table below shows SP AusNet's total forecast operating expenditure. Expenditure is reported in its component parts: the rate of change forecast that is extrapolated from base year costs; forecast step changes, which are new expenditures that will occur in the next regulatory period; and, zero-based costs, which were not included in the base year and are added back to the total operating expenditure forecast.

Table 3-7: Revised total operating expenditure forecast

($2012M)	2012	2013	2014	2015	2016	2017
Rate of change	44.5	47.0	48.4	49.6	51.1	52.6
Operations	*30.9*	*31.7*	*32.5*	*33.5*	*34.3*	*35.2*
Maintenance	*13.6*	*13.9*	*14.3*	*14.8*	*15.2*	*15.7*
Step changes		0.8	0.6	0.7	0.8	0.8
Zero-based costs		1.4	1.6	1.4	1.5	1.7
Opex	**44.5**	**47.7**	**49.1**	**50.4**	**51.9**	**53.4**

Source: SP AusNet forecast

The above table includes debt raising costs in the 'zero-based costs' category. The value of debt raising costs, which are determined (consistent with the methodology set out in section 6.11.3 of the Initial Access Arrangement Proposal and used by the AER) based on expenditure levels as detailed throughout SP AusNet's Revised Access Arrangement Proposal, are set out in the table below.

Table 3-8: Debt raising costs

($2012M)	2013	2014	2015	2016	2017
Debt Raising Costs	0.69	0.72	0.75	0.78	0.80

Source: SP AusNet PTRM