



Economic Regulation Authority

Draft decision on revisions to the access arrangement for the Mid-West and South-West Gas Distribution Systems

Attachment 4: Regulatory capital base

PUBLIC VERSION

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Note

This attachment forms part of the ERA's draft decision on proposed revisions to the access arrangement for the Mid-West South-West Gas Distribution Systems. It should be read in conjunction with all other parts of the draft decision, which is comprised of the following document and attachments:

Draft decision on revisions to the access arrangement for the Mid-West and South-West Gas Distribution Systems – Overview, 24 April 2024

- Attachment 1: Access arrangement and services
- Attachment 2: Demand
- Attachment 3: Revenue and tariffs
- Attachment 4: Regulatory capital base (this document)
- Attachment 5: Operating expenditure
- Attachment 6: Depreciation
- Attachment 7: Return on capital, taxation, incentives
- Attachment 8: Other access arrangement provisions
- Attachment 9: Service terms and conditions

Attachment 4. Summary

The setting of the capital base is an important step in determining two elements of the revenue required by ATCO to operate and maintain the gas distribution system: the return on the capital base (covered in Attachment 7); and the return of the capital base (depreciation) (covered in Attachment 6).

The regulatory framework requires the roll forward of the capital base from the current access arrangement period (AA5) to the new access arrangement period (AA6). The actual capital expenditure incurred during AA5 is reviewed by the ERA and once accepted is locked in to the capital base going forward and is used in setting the opening capital base for AA6. As the actual capital expenditure for the last year of the AA5 period (2024) will not be known before the publication of the ERA's Final Decision there will need to be an adjustment for any under or over forecast of expenditure when the AA7 period assessment is carried out. The projected capital base for AA6 will be reviewed in AA7 as well and then it will be locked in. The projected capital base for AA6 is important for setting the tariffs during this AA6 period so must reflect the best possible forecast of prudent and efficient investment and allow an appropriate amount of depreciation.

The ERA considered information provided by ATCO, public submissions and findings from the ERA's technical consultant (EMCa) to determine the amount of capital expenditure that meets the requirements of the National Gas Rules (NGR).

The ERA found that ATCO's capital expenditure proposal was consistent with ATCO's overarching framework documents.

The ERA assessed ATCO's proposed actual and forecast capital expenditure for AA5 and AA6 in accordance with the NGR using a three-step framework:

- Consider whether the expenditure is justifiable under the various grounds (economic, incremental revenue, safety, integrity).¹
- Evaluate whether the expenditure would be undertaken by a prudent service provider acting efficiently, in accordance with accepted good industry practice to achieve the lowest sustainable cost of providing services consistent with the national gas objective.²
- Assess whether forecasts or estimates have been arrived at on a reasonable basis and do they represent the best forecast or estimate possible in the circumstances.³

Opening capital base

The opening capital base for the start of the AA6 period (1 January 2025) is \$1,589.8 million. This reflects the ERA's draft decision on the amount of conforming capital expenditure for AA5 and the inclusion of the approved AA5 depreciation.

The ERA's draft decision is to approve actual (2020, 2021 and 2022) and forecast (2023 and 2024) capital expenditure of \$398.1 million for the AA5 period. This is 3.8 per cent lower than ATCO's proposed AA5 capital expenditure of \$413.7 million.

¹ NGR, rule 79(1)(b) and 79(2).

² NGR, rule 79(1)(a).

³ NGR, rule 74(2).

The main differences from ATCO's proposal are:

- Removal of expenditure relating to ATCO's environmental, social and governance projects, hydrogen blending and clean energy innovation hub;
- Removal of projects that ATCO has subsequently advised will not go ahead anymore or have been delayed and will not be undertaken in 2023 and 2024 and will move into AA6;
- Removal of contingencies from forecast projects in 2023 and 2024.

Only \$0.7 million (4.5 per cent) of the capital expenditure that the ERA considers is not conforming relates to actual capital expenditure for 2020, 2021 and 2022, with the majority of the non-conforming capital expenditure (\$14.8 million or 95.5 per cent) related to the forecast years of 2023 and 2024. Prior to the ERA's final decision, ATCO will provide actual capital expenditure for 2023, in which some of the adjustments for this year relating to contingencies will not apply, as contingencies are for forecast, and not actual, expenditure.

Table 4.1: ATCO actual and estimated capital expenditure for AA5 and ERA's assessment of conforming capital expenditure for AA5 by project driver (\$ million real at 31 December 2023)

Project category	ATCO's actual & estimated AA5 capital expenditure (A)	Capital expenditure that is not conforming (B)	Conforming capital expenditure for AA5 (A-B)
Network sustaining	214.4	8.9	205.5
Network growth	143.0	1.3	141.7
Structures and equipment	21.6	1.8	19.8
Information technology	34.6	3.6	31.0
Total	413.7	15.5	398.1

Source: ATCO, 2025-29 Plan (Access Arrangement Information), 1 September 2023, p. 55, Table 5.5 and ERA analysis.

Projected capital base

The projected capital base for the end of the AA6 period (31 December 2029) is \$1,685.5 million. This reflects the ERA's draft decision on the amount of conforming forecast capital expenditure and depreciation for AA6.

The ERA's draft decision is to approve forecast capital expenditure of \$443.1 million for the AA6 period. This is 4.9 per cent lower than ATCO's proposal of \$465.8 million. The main changes from ATCO's proposal are:

- **Contingency expenditure:** For routine expenditure programs within the asset replacement category, while the underlying cost estimate based on historical unit costs are a reasonable estimate for the future, the addition of individual project contingencies results in an over-estimation and is considered non-conforming with the NGR.
- **Renewable gas expenditure:** ATCO proposed to spend \$26.4 million to voluntarily reduce either its own or customers' carbon emissions. ATCO's proposals are not feasible under the current economic regulatory framework and ATCO has not sufficiently demonstrated that these proposals (if they were permitted under the legislative

framework) are the most cost-efficient solutions that would be undertaken by a prudent gas service provider.

- **Information technology (IT) expenditure:** IT expenditure was reduced for the Enterprise Resource Planning (ERP) system replacement. ERP software integrates various business processes and functions into a single system to allow information and data to better move between departments. ATCO chose to replace the existing ERP, which was 30 per cent more expensive than upgrading the existing ERP. ATCO's consultant considered the upgrade of the existing ERP as a better choice. A further change made by the ERA was to move the ERP-related expenditure from operating expenditure to capital expenditure. While ATCO's rationale for moving it to operating expenditure was noted, the uncertainty associated with this expenditure, given the early stages the project is in, necessitated the move to capital expenditure given the regulatory framework's treatment of operating expenditure. The move to capital expenditure allows the adjustment of expenditure should the resultant expenditure outcome be lower than the draft decision approved expenditure. If ATCO can demonstrate that a prudent service provider would incur more expenditure for this item, then it could be added to the capital base in the next access arrangement review.
- **Network growth expenditure:** Given, the ERA's draft decision demand forecast is higher than ATCO's proposal, the ERA has increased the forecast for growth capital expenditure. The ERA expects that ATCO will update its demand forecast in response to this draft decision and will amend the growth capital expenditure to be consistent with that forecast. The ERA has used the average connection costs for mains, meters and feeders to estimate the additional growth capital expenditure.

The ERA's draft decision capital expenditure is summarised in the table below.

Table 4.2: ERA draft decision AA6 forecast capital expenditure by regulatory asset category (\$ million real at 31 December 2023)

Category	Proposal (\$M)	Draft Decision (\$M)	% difference
Network sustaining	271.6	218.1	-19.7%
Asset Replacement	214.0	196.0	-8.4%
Asset Performance and Safety	57.6	22.1	-61.6%
Network growth	157.4	177.9	13.1%
Customer Initiated	157.4	177.9	13.1%
Demand Related	-	0	-
Information technology	13.0	23.3	79.8%
Structures and equipment	23.9	23.7	-0.9%
Total	465.8	443.1	-4.9%

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.3; ERA draft decision analysis

Summary of required amendments

- 4.1 ATCO must amend its access arrangement information to revise its AA5 forecast capital expenditure to \$398.1 million (\$ real as at 31 December 2023).

- 4.2 ATCO must amend its access arrangement information to revise its AA6 forecast capital expenditure to \$443.1 million (\$ real as at 31 December 2023).

Regulatory requirements

1. Under the regulatory framework, these definitions apply in the National Gas Rules (NGR):⁴

capital base, in relation to a pipeline, means the capital value to be attributed, in accordance with [Part 4 of the National Gas Rules], to pipeline assets.

capital expenditure means costs and expenditure of a capital nature incurred to provide, or in providing, pipeline services.

conforming capital expenditure means capital expenditure that complies with the new capital expenditure criteria.

depreciation means depreciation of the capital base.

new capital expenditure criteria mean the criteria stated in rule 79.

non-conforming capital expenditure means capital expenditure that does not comply with the new capital expenditure criteria.

2. The NGR require the following capital base information to be included in the service provider's Access Arrangement Information (AAI).⁵ AAI is information that is reasonably necessary for users (including prospective users) to understand the background to the access arrangement; and the basis and derivation of the various elements of the access arrangement. This includes:

- Information on how the capital base is arrived at; and if the access arrangement period commences at the end of an earlier access arrangement period, information that demonstrates how the capital base increased or decreased over the previous access arrangement period (rule 72(1)(b)).
- Information on the projected capital base over the access arrangement period, including a forecast of conforming capital expenditure and a forecast of depreciation (rule 72(1)(c)).

3. Rules 77 to 86 of the NGR set out various provisions for the capital base, which cover:

- How the opening capital base is to be determined (rule 77):
 - Where an access arrangement period follows directly on from an earlier access arrangement period, the opening capital base for the later access arrangement period is to be calculated as follows:⁶
 - The opening capital base at the start of the earlier access arrangement period adjusted for any differences between forecast and actual capital expenditure included in that opening capital base;
 - **plus:** conforming capital expenditure made, or to be made, during the earlier access arrangement period;
 - **plus:** any amounts to be added for capital contributions, speculative capital expenditure or the reuse of redundant assets;
 - **plus:** the value of any extensions to the pipeline;

⁴ NGR, rule 69.

⁵ NGR, rule 72.

⁶ NGR, rule 77(2).

- **less:** depreciation over the earlier access arrangement period;
- **less:** redundant assets identified during the earlier access arrangement period;
- **less:** the value of pipeline assets disposed of during the earlier access arrangement period.
- How the projected capital base is to be determined (rule 78):
 - The project capital base for an access arrangement period is to be determined as: the opening capital base;
 - **plus** forecast conforming capital expenditure for the period;
 - **less** forecast depreciation for the period and the forecast value of pipeline assets to be disposed of over the course of the period.
- The criteria for new capital expenditure (rule 79):⁷
 - Rule 79(1)(a) Conforming capital expenditure is expenditure that would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable costs of providing services in a manner consistent with the achievement of the national gas objective; and is justifiable on one of the grounds stated in rule 79(2); and is properly allocated in accordance with rule 79(6).
 - Rule 79(2) states that capital expenditure is justifiable if it meets one or more of the following criteria:
 - (a) the overall economic value of the expenditure is positive subject to subrule (3); or
 - (b) the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; or
 - (c) the capital expenditure is necessary:
 - (i) to maintain and improve the safety of services; or
 - (ii) to maintain the integrity of services; or
 - (iii) to comply with a regulatory obligation or requirement; or
 - (iv) to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity); or
 - (v) to contribute to meeting emissions reduction targets through the supply of services; or
 - (d) the capital expenditure is an aggregate amount divisible into 2 parts, one referable to incremental services and the other referable to a purpose referred to in paragraph (c), and the former is justifiable under paragraph (b) and the latter under paragraph (c).
 - Rule 79(3) states that in deciding whether the overall economic value of capital expenditure is positive, consider the sum of:

⁷ NGR, Rule 79, new capital expenditure criteria, post 1 February 2024 ([AEMC NGR Amendment Rule 2024](#)). The previous capital expenditure criteria, which is applicable for expenditure prior to 1 February 2024, can be found in Appendix 3 of this attachment.

- (a) the economic value, other than of changes to Australia's greenhouse gas emissions, directly accruing to the service provider, producers, users and end users; and
 - (b) the economic value of changes to Australia's greenhouse gas emissions, whether or not that value accrues (directly or indirectly) to the service provider, producers, users or end users.
- Rule 79(6) states that conforming capital expenditure must be for expenditure that is allocated between reference services; other services provided by means of the covered pipeline; and other services provided by means of uncovered parts (if any) of the pipeline.⁸
- Provisions for the regulator to make an advanced determination about future capital expenditure (rule 80).
 - An express provision that allows a service provider to make capital expenditure during an access arrangement period that is, in whole or in part, non-conforming capital expenditure (rule 81).
 - Provisions for users to make capital contributions towards a service provider's capital expenditure (rule 82).
 - Provisions for the service provider to be able to recover non-conforming capital expenditure by means of a surcharge (rule 83).
 - The establishment of a speculative capital expenditure account (rule 84):
 - To the extent that non-conforming capital expenditure is not recovered via a surcharge on users, the non-conforming expenditure may be added to a notional fund (the "speculative capital expenditure account") until it is determined that it complies with the criteria for conforming capital expenditure.
 - Provisions for capital redundancy (rule 85).
 - Provisions for the reuse of redundant assets (rule 86).
4. Further to the provisions covering the capital base, rule 71 of the NGR sets out the considerations that the regulator may and should have regard to when evaluating whether capital expenditure satisfies the governing criteria for new capital expenditure. The regulator:
- May, without embarking on a detailed investigation, infer compliance from the operation of an incentive mechanism or on any other basis that is considered appropriate.
 - Must consider and give appropriate weight to, submissions and comments received in response to an invitation for submissions on whether a service provider's access arrangement proposal should be approved.

⁸ The allocation of capital expenditure to these categories of services must be done in accordance with rule 93.

ATCO proposal

AA5 capital expenditure

5. In AA5, ATCO has projected it will spend \$413.7 million on capital expenditure. This expenditure is \$68.8 million (14 per cent) less than the \$482.5 million approved in the ERA's final decision for AA5.

Table 4.3: ATCO AA5 actual/forecast capital expenditure by cost driver (\$ million real at 31 December 2023)

Cost Driver	2020	2021	2022	2023	2024	TOTAL AA5		
						Actual / Forecast (A)	Approved (B)	% Var (A-B)
Network Sustaining	37.7	41.9	43.7	42.7	48.4	214.4	242.6	(12%)
<i>Asset Replacement</i>	32.3	37.9	38.9	38.5	41.7	189.3	222.2	(15%)
<i>Asset performance & safety</i>	5.4	4.0	4.9	4.1	6.7	25.1	20.4	23%
Network Growth	26.5	30.1	30.2	29.1	27.1	143.0	171.5	(17%)
<i>Customer initiated</i>	26.4	28.8	30.2	29.1	27.1	141.5	169.6	(17%)
<i>Demand related</i>	0.2	1.3	0.0	0.0	0.0	1.5	1.9	(22%)
Information technology	2.9	8.2	7.6	9.5	6.4	34.6	41.0	(15%)
Structures & equipment	4.8	3.8	3.4	3.5	6.0	21.6	27.4	(21%)
TOTAL	71.9	84.0	85.0	84.7	88.0	413.7	482.5	(14%)

Source: ATCO, 2025-29 Plan (Access Arrangement Information), 1 September 2023, p. 55, Table 5.5.

6. ATCO attributes its lower capital expenditure in AA5 largely due to the COVID-19 pandemic and industry resource constraints but considers that it delivered strongly on the investment programs necessary to maintain the safe and efficient operation of its network and to facilitate growth.

AA6 capital expenditure

7. For AA6, ATCO has proposed to invest \$465.8 million of capital expenditure (Table 4.4). This proposed investment is \$16.7 million less than the \$482.5 million approved in the ERA's final decision for AA5. and \$52.1 million higher than ATCO's projected actual capital expenditure for AA5 (\$413.7 million).
8. Major capital programs of work include network expansion, mains replacement, meter replacement, and sustainability initiatives. In support of its AA6 capital expenditure forecast, ATCO submitted:

Major contributors to the AA6 [capital expenditure] forecasts are a return to a normal activity level following the COVID-19 pandemic, the addition of our sustainability initiatives, and the increase in the real cost of labour and materials due to constrained global supply chains and competition with the mining sector and state infrastructure projects for resources.⁹

9. ATCO used a “bottom-up” forecasting approach to determine its forecasts for each capital expenditure investment driver. ATCO’s forecasts are based on available information, except for its forecasts related to the proposed changes to extend the national gas regulatory framework to include hydrogen and renewable gases. ATCO has assumed that these regulatory changes will be enacted in Western Australia before the ERA’s final decision is due.¹⁰
10. ATCO’s capital expenditure is driven by:¹¹
 - Sustaining network assets: This involves maintaining and improving the safety and integrity of services, complying with regulatory obligations, and ensuring it can meet current demand levels for services from our customers. In addition, it includes programs to enable the distribution of renewable gases to support the energy transition and reduce GHG emissions.
 - Growing network assets: This involves investment in network infrastructure to meet forecast growth in demand for service through expanding the gas distribution network and complying with regulatory obligations.
 - Investing in IT: This involves maintaining and improving IT systems at an operational and corporate level that enables the provision of services to customers and includes more strategic initiatives such as the digital transformation of our business.
 - Investing in Structures and Equipment: This involves maintaining and replacing fleet vehicles, equipment, and property and plant.
11. Table 4.4 summarises ATCO’s forecast AA6 capital expenditure by category. Further detail on this expenditure is provided in the draft decision section.

⁹ ATCO, *2025-29 Plan*, 1 September 2023, p. 141.

¹⁰ ATCO, *2025-29 Plan*, 1 September 2023, p. 140.

¹¹ ATCO, *2025-29 Plan*, 1 September 2023, pp. 141,142.

Table 4.4: ATCO AA6 forecast capital expenditure by investment driver
 (\$ million real at 31 December 2023)

Category	2025	2026	2027	2028	2029	Total
Network Sustaining	58.2	53.1	55.3	52.7	52.2	271.6
Asset Replacement	45.1	41.9	43.7	42.0	41.3	214.0
Asset Performance and Safety	13.1	11.2	11.7	10.7	10.9	57.6
Network Growth	27.3	30.2	32.2	33.5	34.2	157.4
Customer Initiated	27.3	30.2	32.2	33.5	34.2	157.4
Demand Related	-	-	-	-	-	-
Information Technology	4.0	3.7	2.7	1.9	0.7	13.0
Structures and Equipment	6.3	6.9	2.8	3.8	4.2	23.9
Total	95.8	93.8	93.0	91.9	91.3	465.8

Source: ATCO, 2025-29 Plan, 1 September 2023, p. 142 Table 10.1.

Submissions

12. Submissions from 12 parties addressed matters related to regulatory capital.
13. The ERA received public submissions from:
 - AGL Energy
 - Alinta Energy
 - Chamber of Minerals and Energy (CME)
 - Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) – Building and Energy
 - WA Expert Consumer Panel
 - Housing Industry Association (HIA)
 - Kleenheat
 - Origin Energy
 - Stewart Lee (individual)¹²
 - Synergy
 - Urban Development Institute of Australia (UDIA)
 - WA Council of Social Service (WACOSS)
14. In summary, these submissions:
 - Showed concern about ATCO's history of over-estimation of capital expenditure.
 - Supported timely replacement of components that have reached the end of service life and the use of technology to detect leaks.
 - Suggested that new growth needed to be scrutinised, including the underpinning demand forecasts.
 - Voiced some support for the capital investment associated with introducing renewable gases into the distribution network, but also raised concern about the supply and market for renewable gases not being there, about the cost of renewable gases, and about leakages having bigger environmental impacts than just natural gas.
15. Details of the matters raised in submissions are discussed further as part of the ERA's draft decision considerations.

¹² Mr Stewart Lee is a current employee of the ERA. The submission made in response to ATCO's proposal and the ERA's issues paper was received prior to Mr Lee applying to work at the ERA. Mr Lee has not been involved in the draft decision review process. The ERA has deemed that there are no conflicts of interest arising from Mr Lee's submission.

Draft decision

16. On 1 February 2024, the NGR were amended to align with a new explicit emissions reduction objective in the national gas objective. Given that the ATCO proposal had already been lodged and the ERA was well into its review, the NGR gave discretion to the ERA to adopt either the amended expenditure assessment rules or maintain the old expenditure assessment rules. The ERA has decided to apply the new expenditure rule for capital expenditure that was incurred or is forecast to be incurred after 1 February 2024 and the old expenditure rule for capital expenditure that was incurred prior to 1 February 2024. Forecast operating expenditure for the next access arrangement period will be assessed based on the new expenditure rules (see Attachment 5).
17. ATCO had based its proposal on the regulatory framework being amended to insert an emissions reduction objective into the national gas objective. Stakeholders had an opportunity to comment on ATCO's proposal and the ERA's Issues Paper which was clear that it had intentions to adopt the applicable legislative framework at the time and noted that this draft decision would also provide commentary on matters that were pending legislative framework changes and whether they may likely satisfy future legislative requirements.

Opening capital base

18. ATCO proposed an opening capital base for AA6 of \$1,605.4 million at 1 January 2025. Table 4.5 details ATCO's opening capital base calculation.

Table 4.5: ATCO's closing capital base for AA5 (\$ million real at 31 December 2023)

	2019	2020	2021	2022	2023	2024
Opening capital base 2019 before adjustment	1,499.2					
Benefit from the difference between the estimated and actual 2019 capital expenditure	(1.4)					
Opening capital base	1,497.8	1,518.8	1,535.8	1,554.2	1,571.9	1,588.3
Plus: Capital Expenditure	84.6	71.9	84.0	85.0	84.7	88.0
Less: Depreciation	(62.6)	(54.3)	(65.1)	(66.8)	(68.3)	(71.0)
Less: Asset disposals	(1.0)	(0.7)	(0.6)	(0.4)	0.0	0.0
Closing capital base	1,518.8	1,535.8	1,554.2	1,571.9	1,588.3	1,605.4

Source: ATCO, 2025-29 Plan (Access Arrangement Information), 1 September 2023, p. 204, Table 11.2.

19. Rule 79 of the NGR sets out the criteria of conforming capital expenditure. Under 79(1) of the NGR, 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 in a manner consistent with the achievement of the national gas objective. Under rule 79(2)(a) to (c) of the NGR, conforming capital expenditure must also be justifiable on one of the following grounds:
 - The overall economic value of the capital expenditure is positive.

- The present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure.
 - The capital expenditure is necessary to:
 - Maintain and improve the safety of services.
 - Maintain the integrity of services.
 - Comply with a regulatory obligation or requirement.
 - Maintain the service providers capacity to meet levels of demand for services existing at the time the capital expenditure is incurred.
 - Contribute to meeting emissions reduction targets through the supply of services (applies to expenditure incurred after 1 February 2024).
20. ATCO submits that all the past capital expenditure satisfies NGR79(1)(a) and is justifiable on the grounds stated in NGR 79(2).
21. As noted above, ATCO has proposed to add \$413.7 million for the AA5 period to the opening capital base for AA6. Table 4.6 shows the ERA's AA5 final decision forecast capital expenditure, ATCO's proposed capital expenditure for the AA5 period and the variances by cost driver.

Table 4.6: ATCO proposed conforming capital expenditure for AA5 by cost driver compared to ERA AA5 final decision forecast (\$ million real as at 31 December 2023)

Cost Driver	2020	2021	2022	2023	2024	Total AA5		
						Actual / Forecast (A)	Approved (B)	Variance (A-B)
Network sustaining	37.7	41.9	43.7	42.7	48.4	214.4	242.6	(28.2)
Network growth	26.5	30.1	30.2	29.1	27.1	143.0	171.5	(28.5)
Information technology	2.9	8.2	7.6	9.5	6.4	34.6	41.0	(6.4)
Structures & equipment	4.8	3.8	3.4	3.5	6.0	21.5	27.4	(5.9)
Total	71.9	84.0	85.0	84.7	88.0	413.7	482.5	(68.8)

Source: ATCO, 2025-29 Plan (Access Arrangement Information), 1 September 2023, p. 55, Table 5.5.

22. Table 4.7 shows the ERA's AA5 final decision forecast capital expenditure, ATCO's proposed capital expenditure for the AA5 period and the variances by asset class.

Table 4.7: ATCO proposed conforming capital expenditure for AA5 by asset class compared to ERA AA5 final decision forecast (\$ million real as at 31 December 2023)

Asset Class	ERA final decision forecast AA5 (A)	ATCO total proposed AA5 (B)	Variation (B-A)
High pressure mains – steel	15.1	20.8	5.7
High pressure mains – polyethylene (PE)	0.0	0.5	0.5
Medium pressure mains	0.0	0.0	0.0
Medium and low pressure mains	206.6	181.2	(25.4)
Low pressure mains	0.0	0.0	0.0
Regulators	4.5	10.0	5.5
Secondary gate stations	0.4	1.7	1.3
Buildings	3.2	4.2	0.9
Meter and services pipes	178.6	138.6	(40.0)
Equipment and vehicles	4.9	4.9	0.0
Vehicle	18.7	12.5	(6.3)
IT	41.5	34.6	(6.9)
Telemetry and monitoring	8.9	4.6	(4.2)
Full retail contestability	0.0	0.0	0.0
Land	0.0	0.0	0.0
Equity raising costs	0.0	0.0	0.0
Total	482.5	413.7	(68.8)

Source: ATCO, 2025-29 Plan (Access Arrangement Information), 1 September 2023, p. 56, Table 5.6.

23. The ERA has assessed ATCO's proposed opening capital base for the AA6 period pursuant to rules 77 and 79 of the NGR. This included:
- determining ATCO's opening capital base for AA6, and assessing:
 - conforming capital expenditure in AA5
 - capital contributions
 - depreciation
 - assessing ATCO's general method of calculating the capital base.
24. The ERA appointed Energy Market Consulting associates (EMCa) to provide an independent assessment of whether ATCO's actual and proposed capital expenditure

during AA5 was conforming capital expenditure that should be rolled into the opening capital base of AA6.

25. EMCa reviewed the information provided by ATCO to support the capital expenditure incurred (or to be incurred) in the AA5 period and sought further information or clarification where required. EMCa has assessed the extent to which the actual and estimated capital expenditure is likely to satisfy the capital expenditure criteria for the purposes of assisting the ERA in determining the level of conforming capital expenditure under the NGR.
26. ATCO's proposed conforming capital expenditure of \$413.7 million for the AA5 period is \$68.8 million, or 14 per cent, less than the ERA's AA5 final decision forecast as shown in Table 4.6. ATCO noted that its capital expenditure was lower in AA5 largely due to the COVID-19 pandemic and industry resource constraints.
27. Despite the large underspend of \$68.8 million between the AA5 actual expenditure and the ERA's AA5 final decision forecast, the ERA's assessment shows that a total of \$15.6 million is not conforming capital expenditure under rule 79 of the NGR, and should not be rolled into the opening capital base of AA6.
28. The capital expenditure that is not conforming comprises:
 - \$8.9 million on network sustaining capital expenditure
 - \$1.3 million on network growth capital expenditure
 - \$1.8 million on structures and equipment capital expenditure
 - \$3.6 million on IT capital expenditure
29. The majority, \$14.8 million of the reduction in expenditure is for the forecast years (2023 and 2024). Only \$0.7 million relates to a reduction in actual expenditure (2020 to 2022), incurred on ATCO's clean energy hub and hydrogen blending project.
30. Table 4.8 shows ATCO's actual and estimated capital expenditure over AA5, the capital expenditure that is not conforming based on the ERA's assessment, and the ERA's amended conforming capital expenditure (AA5) by project driver. The ERA's assessment on each project is presented in the following paragraphs of this draft decision.

Table 4.8: ATCO actual and estimated capital expenditure for AA5 and ERA's assessment of conforming capital expenditure for AA5 by project driver (\$ million real at 31 December 2023)

Project category	ATCO's actual & estimated AA5 capital expenditure (A)	Capital expenditure that is not conforming (B)	Conforming capital expenditure for AA5 (A-B)
Network sustaining	214.4	8.9	205.5
Network growth	143.0	1.3	141.7
Structures and equipment	21.6	1.8	19.8
IT	34.6	3.6	31.0
Total	413.7	15.6	398.1

Source: ATCO, 2025-29 Plan (Access Arrangement Information), 1 September 2023, p. 55, Table 5.5. and ERA analysis

Network sustaining capital expenditure

31. ATCO estimates it will incur \$214.4 million in AA5 for network sustaining capital expenditure which is \$28.2 million lower than the ERA's final decision. The ERA's assessment of the AA5 network sustaining expenditure has found that \$8.9 million of this expenditure is not conforming capital expenditure.
32. Of the \$8.9 million of expenditure that is not conforming capital expenditure, \$0.1 million relates to actual expenditure in 2020 for a project that was incorrectly included in ATCO's AA5 expenditure model twice. The remaining \$8.8 million in reductions relate to AA5 forecast expenditure in 2023 and 2024. The capital expenditure reductions for the network sustain cost category are set out below by project or cost category.

Pressure vessels

33. As part of its review of AA5 capital expenditure on pressure vessels, EMCa requested ATCO to confirm the costs attributed to non-regulated services and whether these costs have been removed from the AA5 capital expenditure model. In its response, ATCO confirmed that expenditure had been included for non-regulated assets and would be removed in its subsequent submission forecast.
34. For this draft decision the ERA has removed the AA5 forecast capital expenditure for pressure vessels that relates to the non-regulated network.
35. As a result, the ERA determines that a reduction of \$0.04 million is required from the pressure vessels capital expenditure for AA5 as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Regulator and meter projects - End of life replacement programs

36. In its review of ATCO's AA5 capital expenditure, EMCa found evidence of projects that had large increases in the final two years of the AA5 period, relative to the expenditure that had been incurred during the first three years in the end of life (EOL) replacement

program. EMCa considered that ATCO did not provide sufficient explanation of these increases to determine the drivers of the increases.

37. EMCa considered that the increases for the final two years could be a result of unit rates that reflected assumed unit rates in the original business case and did not reflect reductions in unit costs that had been achieved since that time and also recommend removing project contingency from the forecast. Accordingly, EMCa considered that a level of activity aligned with historical levels (2020-2022) is more likely to reflect the level of activity that ATCO will undertake.
38. Using historical averages for a number of EOL projects' forecast expenditure would result in reductions of \$0.2 million in 2023 and \$0.6 million in 2024.
39. As a result, the ERA determines that a reduction of \$0.8 million is required from EOL replacement program expenditure as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Vehicle protection program – High Pressure Regulator (HPR) vehicle project

40. As was found in the above EOL programs, EMCa found that the estimated capital expenditure for the HPR vehicle project in 2023 and 2024 was significantly higher than historical volumes in AA5 and was not sufficiently justified. EMCa found that lower volumes had been delivered with a lower unit cost in the previous years.
41. Using historical averages for the HPR vehicle project forecast would result in reductions of \$0.1 million in 2023 and \$0.1 million in 2024.
42. As a result, the ERA determines that a reduction of \$0.2 million is required from the HPR vehicle project expenditure as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Network reinforcement projects

43. In its access arrangement submission, ATCO identified areas of the network where an increase in demand is likely to reduce the safe operating pressure of the network to a point where an upgrade to the line is required. ATCO has proposed that from 2022 onwards these projects be classified as Asset Performance and Safety-driven projects, rather than as demand driven.
44. ATCO nominated three sites (Atwell, Secret Harbour and Queens Park) requiring reinforcement in 2024. EMCa sought additional information from ATCO to provide justification for the need and timing of the three reinforcement projects planned for completion in 2024.
45. In its response, ATCO stated:

Three reinforcement projects are currently proposed for 2024 (Atwell, Secret Harbour and Queens Park). These projects are currently undergoing scoping and options review, with Business Cases in early stages of development. The key needs and timing of these projects, which will be further reviewed and justified within subsequent Business Cases is summarised below.'

46. EMCa notes that the Queens Park project responds to a specific trigger, being an alarm in 2022 that indicated that the system minimum pressure (3 kilopascals) was almost

met. Based on the information provided, EMCa considered that there is a reasonable case for this project to be undertaken in 2024 as proposed.

47. For the remaining two sites, Atwell and Secret Harbour, these projects have been raised to improve the network design as the networks are supplied by a single HPR. ATCO did not indicate how long these networks have been operating in this way, or the trigger for reinforcement to occur in 2024, or why this timing is prudent. ATCO did state that:

Modelling has indicated that interlinking/merging with their adjacent networks (which will occur in the future as the network grows) will still not provide adequate capacity to provide suitable supply back up. The proposed reinforcement aligns with good industry practice.

48. In a response to an EMCa information request on works carrying over into AA6, ATCO included the Secret Harbour project in this list. ATCO stated that the project was planned for commencement and completion in 2024 but due to the complexity of the project scope, a longer planning and design phase is required and therefore completion of construction will be in 2025.
49. EMCa considered that this response reinforced their view that the Secret Harbour and Atwell projects will likely be subject to further planning and design and be deferred until a later time outside of the AA5 period.
50. The ERA considers that without appropriate information on the timing for these projects and the fact that ATCO has stated that the Secret Harbour project will fall outside of AA5, both the Atwell and Secret Harbour projects should be removed from the AA5 capital expenditure forecast.
51. As a result, the ERA determines that a reduction of \$1.0 million is required from the network reinforcement project AA5 expenditure as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Pigging infrastructure

52. During an onsite meeting between the ERA, EMCa and ATCO, the scope and timing of pigging infrastructure for the three Bunbury pipelines was discussed, after which EMCa sought additional information from ATCO via a formal information request requesting justification for the inclusion of the \$1.5 million in AA5 expenditure based on the comments made during the onsite meeting that the project was under review and unlikely to proceed.
53. ATCO's response to the information request provided an updated forecast capital expenditure for the project with 2023 being nil and 2024 forecast to be \$0.1 million, with the balance to be part of carry-over works into AA6.
54. Based on this revised forecast expenditure for the pigging infrastructure project as nominated by ATCO, the ERA determines that a reduction of \$1.4 million is required from the pigging infrastructure project expenditure as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Confined space project

55. EMCa sent an information request to ATCO on the risk assessment for the confined space project to determine the need and timing of the AA5 program of works.

56. ATCO said the project was to address a change in compliance requirements arising from Work Health and Safety (General) Regulations 2022, Part 4.3 – Confined spaces. ATCO stated that the strategy and planning for any remediation of existing confined spaces has not yet been determined and it would be conducting a review in 2024, at which point in time the scope and timing of the project would be refined and finalised.
57. EMCa considered that on the basis that planning is likely to be undertaken throughout 2024, the identification and design of any remediation actions to be completed as capital expenditure are unlikely to proceed during the AA5 period.
58. EMCa noted that ATCO had also listed the confined space project as part of its carry-over works into AA6, however, ATCO did not detail the reason for the delay or breakdown of the expenditure compared to the original estimate.
59. The ERA has reviewed the available information regarding the confined space project and determine that without greater knowledge on the need for and timings of the project it does not meet the criteria for conforming capital expenditure.
60. As a result, the ERA determines that a reduction of \$0.4 million is required from the confined space AA5 project expenditure as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Environmental, social and governance (ESG) related projects

61. ATCO included projects in its AA5 capital expenditure associated with its ESG program, including the Clean Energy Innovation Hub (CEIH) and blending of hydrogen in the GDS. In the ERA's AA5 Final Decision, the ERA considered that the capital expenditure for the CEIH submitted at that time was non-conforming capital expenditure.
62. EMCa sought additional information from ATCO to provide justification of inclusion of projects relating to ESG and blending project during AA5. In its response, ATCO stated:

For CEIH, the expenditure is consistent with the amended National Gas Objective (NGO) which requires the ERA to consider the contribution of the expenditure towards the likely reduction of Australia's greenhouse gas emissions; and

For the blending facilities, the expenditure on the project is built on the foundation created through the CEIH to blend hydrogen into the gas supply at ATCO's Jandakot depot for use on premise. Further, ATCO claims that the project provides readiness of the GDS for injection of renewable gases in the future, consistent with the change to the NGO that occurred in 2022.

63. ATCO's proposal in September 2023 assumed that proposed changes to the NGL and NGR to include an emissions reduction objective in the National Gas Objective and to enable the injection of renewable gases will be adopted in Western Australia prior to the ERA's final decision. Therefore, ATCO included in its proposal actual expenditure on ESG projects.
64. At the publication date of this draft decision, only the new National Gas Objective has been adopted in Western Australia.
65. EMCa considered that ATCO has not sufficiently demonstrated that it has addressed the areas of concern raised by the ERA in the AA5 final decision, determining that the capital expenditure associated with these projects was not conforming with the capital expenditure criteria; or that the governing regulations have been altered such that the

proposed capital expenditure, when assessed against the new requirements, is now conforming.

66. EMCa also considered that ATCO had made assumptions concerning its role, which EMCa considered had not sufficiently addressed whether the proposed activities should be recognised as covered services, to be recovered from gas customers as it has proposed.
67. The ERA has assessed actual capital expenditure against the expenditure rules that applied at the time of investment. The incorporation of an emissions reduction objective commenced in Australia on 21 September 2023, and in Western Australia on 25 January 2024, with the NGR amended on 1 February 2024 to align the rules with the emissions reduction objective. The amendments to the rules make clear that gas network service providers can now propose expenditure that contributes to meeting emissions reductions targets set by governments. Transitional provisions for access arrangement reviews that commenced prior to 1 February 2024 allow the ERA to adopt either the old expenditure rules or the new expenditure rules.
68. With regards to the emissions reduction objective and the transitional provisions that allow the ERA to apply either the old or new expenditure rules for this review, the ERA has decided to apply the new expenditure rule for capital expenditure that was incurred or is forecast to be incurred after 1 February 2024 and the old expenditure rule for capital expenditure that was incurred prior to 1 February 2024.
69. As a result, the ERA determines that a reduction of \$1.4 million is required from the environmental, social and governance related projects AA5 expenditure as this expenditure was incurred prior to 1 February 2024 and therefore does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.
70. Irrespective of whether the NGL and NGR are amended in Western Australia to enable the injection of renewable gases, this expenditure was incurred prior to 1 February 2024 would not be considered conforming capital expenditure.

Duplicate asset monitoring project

71. While reviewing the AA5 capital expenditure model, EMCa identified two projects with identical project identifier names and expenditure profiles. In response to an information request to confirm if this was a duplicated project, ATCO advised that this was included in error and that AA5 capital expenditure should be reduced by \$0.1 million.
72. As a result, the ERA determines that a reduction of \$0.1 million is required from the asset monitoring project expenditure as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Project contingency expenditure

73. EMCa noted that it found evidence of project contingency being included in some costs for projects and programs that are planned for the remaining years of the AA5 period. EMCa noted it does not consider it prudent to retain project contingency amounts in the forecast capital expenditure for revenue determination purposes.
74. From its analysis of the supporting documentation, EMCa noted that project contingency is not applied to all projects and EMCa had limited evidence to definitively determine the level of contingency included in the estimated capital expenditure at a

project level which may not be realised in the actual incurred capital expenditure. EMCa observed that contingencies varied between 10 per cent to 30 per cent.

75. EMCa proposed that the contingency amounts are removed from the estimated capital expenditure for 2023 and 2024.
76. The ERA proposes to remove contingency from the network sustaining cost category with an aggregate adjustment per year of 5 per cent. This results in a reduction of \$1.8 million in 2023 and \$1.8 million in 2024.
77. As a result, the ERA determines that a reduction of \$3.6 million is required to the AA5 network sustaining cost category as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Network growth capital expenditure

78. ATCO estimates it will incur \$143.0 million in AA5 for network growth capital expenditure, which is \$28.5 million lower than the ERA's final decision. The ERA's assessment of the AA5 network growth expenditure has found that \$1.3 million of this expenditure is not conforming capital expenditure.
79. All of the \$1.3 million of expenditure that is not conforming capital expenditure relates to AA5 forecast expenditure in 2023 and 2024. The capital expenditure reductions for the network growth cost category are set out below by project or cost category.

Customer connections – commercial and industrial customers metersets

80. In a response from ATCO to an information request from EMCa regarding projects in AA5 that will carry over into AA6, ATCO noted that one of the projects was the commercial and industrial customers meterset project for [REDACTED].
81. The information request response noted that the timing and scope of the works forecast for completion in 2025 remain uncertain as discussions with the customer are still ongoing. As a result, EMCa considered that the project should be removed from the estimated capital expenditure for AA5 until such time as the timing becomes more certain.
82. The ERA also considers that until the timing of the project expenditure can be accurately determined, the expenditure does not meet the criteria for inclusion in the capital base.
83. As a result, the ERA determines that a reduction of \$1.3 million is required from the commercial and industrial customers metersets project AA5 expenditure as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Structures and equipment

84. ATCO estimates it will incur \$21.6 million in AA5 for structures and equipment which is \$5.9 million lower than the ERA's final decision. The ERA's assessment of the AA5 structures and equipment expenditure has found that \$1.8 million of this expenditure is not conforming capital expenditure.
85. Of the \$1.8 million of expenditure that is not conforming capital expenditure, \$0.7 million relates to actual expenditure between 2020 to 2022 for projects relating to ATCO's

hydrogen blending project and clean energy innovation hub. The remaining \$1.1 million in reductions relate to AA5 forecast expenditure in 2023 and 2024. The capital expenditure reductions for the structures and equipment cost category are set out below by project or cost category.

Depots and other building works

86. EMCa noted in its assessment of the depot and building related works that there were inconsistencies in the claimed expenditure for structures and equipment projects. An example of this being the compliance summary including the completion of Jandakot depot phase 3, comprising office extensions and extensions to the car parking facilities at the Jandakot depot.
87. EMCa found conflicting references as to whether ATCO proposed to proceed with a larger value of \$1.1 million included in the AA5 capital expenditure model. ATCO responded to an information request about the project and explained that:
 - 1) \$0.2 million had been incurred to extend the shared workspace program, and early work (that is, design and preparation of planning approval) for the larger project.
 - 2) \$0.2 million was identified for reconfiguration works of its call centre and a workshop within the training centre to establish additional workstations to meet its forecast growth, however, this has been put on hold. ATCO Australia has decided as part of its growth plan to lease an additional floor at its Mill Street office to alleviate pressure at Jandakot.
 - 3) \$0.7 million was identified for an extension to the main staff parking area at Jandakot, which, following the decision to relocate staff to Mill Street, is also not required.
88. ATCO notes that based on the information currently available, it will likely not proceed with the works at its Jandakot depot in points 2 and 3 above resulting in a reduction of \$0.9 million.
89. In a response to an information request, ATCO noted a reduction to its minor depot capital works of \$0.4 million over 2023 and 2024. This reduction is the result of reprioritised and deferred works, taking account of latest pricing and capacity information from suppliers, changes in operational needs and advice from third-party contractors on works required.
90. ATCO also noted in its information request response that it had incurred an additional \$0.1 million in expenditure on the new depot building in Malaga, increasing the cost of that project in AA5 from \$0.2 million to \$0.3 million. This additional expenditure related to a revision of the building design and planning approval.
91. As a result, the ERA determines that a reduction of \$1.1 million is required from depots and minor building works AA5 expenditure as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Environmental, social and governance-related projects

92. ATCO has included in its AA5 structures and equipment expenditure, projects associated with its environmental, social and governance program, including its hydrogen blending pilot project in the GDS and its clean energy innovation hub (CEIH).

93. EMCa has reviewed this expenditure and received a response to an information request where ATCO added further information to its claim for capital expenditure for the CEIH:

The ERA disallowed the expenditure on the CEIH because the ERA was not satisfied that the proposed AA4 capital expenditure for the project 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, as is required under rule 79(1)(a) of the NGR. ATCO is not seeking to re-open the CEIH decision from AA5 for this final expenditure items. Instead ATCO will seek for Energy Policy WA to include transition provisions for the CEIH when Western Australia adopts the renewable gases changes to the regulatory framework.

94. EMCa considered that this response reinforced its assessment that the project is not conforming capital expenditure.
95. The ERA notes that the changes to the regulatory framework in Western Australia that ATCO refers have not been enacted at the time of preparing this draft decision. The current regulatory framework does not allow for the injection of renewable gases into the network and, as a result, the expenditure relating to blending and its CEIH under structures and equipment, \$0.7 million, does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c).

Information technology

96. ATCO estimates it will incur \$34.6 million in AA5 for IT, which is \$6.4 million lower than the ERA's final decision. The ERA's assessment of the AA5 IT expenditure has found that \$3.5 million of this expenditure is not conforming capital expenditure.
97. All of the \$3.5 million of expenditure that is not conforming capital expenditure relates to AA5 forecast expenditure in 2023 and 2024. The capital expenditure reductions for the information technology cost category are set out below by project or cost category.

Application renewal program

98. ATCO noted that one of the primary reasons for the lower actual spend in AA5 compared to the ERA's final decision was due to deferral of projects in 2020 and 2021 due to lack of resources (largely affected by the pandemic) to manage projects and the resources available were focused on critical end of life projects and application upgrades.
99. EMCa considers that these reasons have contributed to a greater proportion of investment towards the end of AA5 driven by specific projects and based on ATCO's delivery performance, and the proposed composition of the IT program, therefore EMCa considers that it is unlikely that the projects, as estimated, will be achieved in 2023 and 2024.
100. EMCa noted that a large number of bespoke applications are included in the forecast to be completed over the final two years of the AA5 period. Replacement of bespoke applications is complex, and the integrations, stakeholder engagement and change management processes take time.
101. An example of a bespoke application is the G-suite application renewal program. EMCa noted that given the business case was not approved until mid-2023, and accounting for the complexity, this program will likely be delivered at a slower pace than ATCO has forecast in its estimated remaining AA5 capital expenditure.

102. In response to an information request, ATCO noted that the IT forecast expenditure in 2023 had decreased by \$2.2 million, while its forecast for 2024 had increased by \$1.1 million resulting in an overall decreased forecast for AA5 IT capital expenditure of \$1.1 million from its original proposal.¹³ EMCa has attributed this reduction to the application renewal program.
103. Having considered EMCa's advice, the ERA determines that a reduction of \$1.1 million is required from the application renewal program AA5 expenditure as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Network digitisation & intelligence program

104. EMCa noted that for the Digitisation – Agile Business Intelligence project, ATCO has ramped up its expenditure in 2023 and 2024. ATCO noted in its supporting information the increase was linked to a re-allocation of capital expenditure associated with its program of digital work. In its compliance summary, ATCO states:

Whilst only initially allocated \$0.88M (in 2023 dollars) at the start of the AA5 period, the business needs changes and following the governance framework in place, re-prioritisation of funds was conducted to ensure that investment in IT projects was in line with the changing business needs. \$1.8M of the re-allocated funds was made to support the Agile BI Project (Program of Digital Work), which began in 2022 and funds a program of digital work to develop and implement business improvement initiatives.

105. EMCa noted that the basis for the allocation to the GDS was not clear and the full amount is not sufficiently justified from the information provided. The supporting information includes a single capital expenditure approval request (CEAR) for \$0.2 million. However, EMCa noted that this did not adequately explain the increase in both 2023 and 2024, for what appears to be a much larger amount.
106. EMCa noted after reviewing the CEAR it considered that the program of digital work includes forecast cost savings that more than offset the proposed capital expenditure and have immediate pay-back.
107. EMCa noted that the cost of initiatives such as this should not be borne by customers when there is no corresponding mechanism to provide the savings to customers. Accordingly, EMCa considered that the additional capital expenditure estimated to be incurred by ATCO is self-funding through the cost savings delivered by these initiatives and any continuous improvement capital expenditure would therefore revert to the ERA's AA5 final decision levels.
108. As a result, the ERA determines that a reduction of \$1.9 million is required from the network digitisation & intelligence program AA5 expenditure as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Project contingency expenditure

109. As noted previously in the network sustaining section for AA5, EMCa found evidence of project contingency being included in some costs for projects and programs that are planned for the remaining years of the AA5 period and noted it does not consider it

¹³ EMCa63.

prudent to retain project contingency amounts in the forecast capital expenditure for revenue determination purposes.

110. Accordingly, the ERA proposes to remove contingency from the IT cost category with an aggregate adjustment per year of 5 per cent. This results in a reduction of \$0.2 million in 2023 and \$0.3 million in 2024.
111. As a result, the ERA determines that a reduction of \$0.5 million is required from the AA5 IT cost category as this expenditure does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

ERA decision

112. The ERA has considered information provided by ATCO, public submissions and EMCA's report to determine the amount of capital expenditure that meets the requirements of the NGR.
113. Table 4.9 provides the ERA's draft decision amended conforming capital expenditure by cost driver and Table 4.10 provides the breakdown into asset classes which are used in the ERA's modelling of the capital base to depreciate over the respective assets' lives.

Table 4.9: ERA's amended conforming capital expenditure for AA5 by cost driver (\$ million real at 31 December 2023)

Cost Driver	2020	2021	2022	2023	2024	TOTAL
Network sustaining	37.7	41.9	43.7	40.6	41.7	205.5
Network growth	26.5	30.1	30.2	28.2	26.7	141.7
Information technology	2.9	8.2	7.6	7.4	4.9	31.0
Structures & equipment	4.8	3.7	2.9	3.2	5.2	19.8
Total	71.9	83.9	84.4	79.4	78.5	398.1

Source: ERA analysis.

Table 4.10: ERA's amended conforming capital expenditure for AA5 by asset class (\$ million real at 31 December 2023)

Asset Class	2020	2021	2022	2023	2024	TOTAL
High pressure mains – steel	4.4	4.7	4.3	2.2	2.7	18.3
High pressure mains – polyethylene (PE)	0.7	(0.2)	0.0	-	-	0.5
Medium pressure mains	-	-	-	-	-	-
Medium and low pressure mains	31.6	37.5	39.0	35.4	35.3	178.8
Low pressure mains	-	-	-	-	-	-
Regulators	1.6	1.2	1.7	2.2	1.7	8.4
Secondary gate stations	0.1	-	0.0	0.2	0.0	0.4
Buildings	0.4	0.3	0.8	0.7	0.6	2.8
Meter and services pipes	25.0	27.6	27.6	28.2	27.7	136.1
Equipment and vehicles	1.1	0.8	0.9	1.1	1.1	4.9
Vehicle	3.3	2.6	1.6	1.5	3.5	12.4
IT	2.9	8.2	7.6	7.4	4.9	31.0
Telemetry and monitoring	0.8	1.0	0.9	0.7	1.1	4.5
Full retail contestability	-	-	-	-	-	-
Land	-	-	-	-	-	-
Equity raising costs	-	-	-	-	-	-
TOTAL	71.8	83.9	84.4	79.4	78.6	398.1

Source: ERA analysis.

114. Table 4.11 contains the ERA's closing capital base for AA5, showing the adjustment for the benefit ATCO received for actual 2019 (final year of AA4) being below the forecast amount, and rolling forward the approved capital expenditure (noted above) less the forecast depreciation approved for the AA5 period.

Table 4.11: ERA's closing capital base for AA5 (\$ million real at 31 December 2023)

	2019	2020	2021	2022	2023	2024
Opening capital base 2019 before adjustment	1,499.2					
Benefit from the difference between the estimated and actual 2019 capital expenditure	(1.4)					
Opening capital base	1,497.8	1,518.8	1,535.7	1,553.9	1,571.1	1,582.2
Plus: Capital Expenditure	84.6	71.8	83.9	84.4	79.4	78.6
Less: Depreciation	(64.0)	(54.3)	(65.1)	(66.8)	(68.3)	(71.0)
Less: Asset disposals	(1.0)	(0.7)	(0.6)	(0.4)	-	-
Closing capital base	1,518.8	1,535.7	1,553.9	1,571.1	1,582.2	1,589.8

Source: ERA analysis.

Required Amendment

- 4.1 ATCO must amend its access arrangement information to revise its AA5 forecast capital expenditure to \$398.1 million (\$ real as at 31 December 2023).

Projected capital base

- 115.** ATCO's AA6 capital expenditure forecasts use a bottom-up approach for each driver of capital expenditure. ATCO submits the capital expenditure forecasts are consistent with the overarching Strategic Asset Management Plan, Asset Lifecycle Strategies, Risk Management Framework and Portfolio and Investment Governance Practice, which outline ATCO's planning, approval, and governance processes.
- 116.** The ERA assessed ATCO's proposed capital expenditure forecast for AA6 in accordance with the NGR using a three-step framework:
- Consider whether the expenditure satisfies the prudent service provider test set out in rule 79(1)(a) of the NGR.
 - Evaluate whether the expenditure is justifiable on the grounds set out in rule 79(2) of the NGR.
 - Assess whether forecasts or estimates comply with rule 74(2) of the NGR.
- 117.** The ERA considered information provided by ATCO, public submissions and EMCa's report to determine the amount of forecast capital expenditure that meets the requirements of the NGR.
- 118.** Table 4.12 below provides a summary of the AA6 forecast and draft decision expenditures.

Table 4.12: AA6 forecast and draft decision capital expenditure by driver
(\$ million real at 31 December 2023)

Category	Proposal	Draft decision	Difference (%)	Draft decision comments
Network sustaining	271.6	218.1	-19.7%	
Asset Replacement	214.0	196.0	-8.4%	For routine expenditure programs within the asset replacement category, while the underlying cost estimate based on historical unit costs is a reasonable estimate for the future, the addition of individual project contingencies results in an over estimation and hence considered non-conforming with the NGR.
Asset Performance and Safety	57.6	22.1	-61.6%	ATCO proposed to spend \$26.4 million to voluntarily reduce either its own or customers' carbon emissions. ATCO's proposals are not feasible under the current economic regulatory framework and ATCO has not sufficiently demonstrated that these proposals (if they were permitted under the legislative framework) are the most cost-efficient solutions that would be undertaken by a prudent gas service provider. The planned inline inspection expenditure (testing of the inside of the pipeline to confirm integrity to avoid leaks) associated with the Bunbury pipelines was considered by ATCO as requiring more work to finalise.
Network growth	157.4	177.9	13.1%	
Customer Initiated	157.4	177.9	13.1%	The proposed expenditure is considered as conforming capital expenditure. Given, the ERA's draft decision demand forecast is higher than ATCO proposal, the ERA has increased the amount ATCO forecast for growth capital expenditure. The ERA expects that ATCO will update its demand forecast in response to this draft decision and will amend the growth capital expenditure to be consistent with that forecast. The ERA has used the average connection costs for mains, meters and feeders to estimate the additional growth capital expenditure.
Demand Related	-	0		ATCO is not forecasting demand related mains installations that relate to increasing existing network capacity. ATCO has included capacity related projects under asset performance and safety that ensures minimum pressures are maintained within distinct networks.

Category	Proposal	Draft decision	Difference (%)	Draft decision comments
Information technology	13.0	23.3	79.8%	IT expenditure was reduced for the Enterprise Resource Planning (ERP) replacement as the option chosen was 30 per cent more expensive than the upgrade of the existing ERP and the benefits weren't demonstrated for this additional cost. A further change, adopted by the ERA, was to move the ERP related expenditure (\$17.6 million) from operating expenditure to capital expenditure. While ATCO's rationale for moving it to operating expenditure was noted, the uncertainty associated with this expenditure, given the early stages the project is in, necessitated the move to capital expenditure given the regulatory framework's treatment of operating expenditure. The move to capital expenditure allows the clawback of expenditure should the resultant expenditure outcome be lower than the draft decision approved expenditure.
Structures and equipment	23.9	23.7	-0.9%	In AA6, several minor facility improvement initiatives are planned for the seven facilities in the Perth metropolitan and regional areas. These initiatives are spread over AA6. Equipment is required to provide services to customers and includes replacing tools and equipment used by field staff.
Total	465.8	443.1	-4.9%	

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.3; ERA draft decision analysis.

119. Kleenheat expressed concern in its submission about ATCO's forecasting and considers that ATCO typically over-estimates expenditure (when compared to actual expenditure). Kleenheat is concerned that the history of over-estimation of expenditure has resulted in ATCO receiving excessive returns over the previous access arrangement, which is to the detriment of its customers. Kleenheat believes that access to the network should remain affordable for its customers and avoid exacerbating cost of living pressures in the community, while providing reasonable returns for the network operator.¹⁴

120. The ERA has addressed Kleenheat's concerns in its responses to the categories below.

Network sustaining capital expenditure

121. ATCO has proposed \$271.6 million for network sustaining capital expenditure which consists of asset replacement (\$214 million) and asset performance and safety (\$57.6 million) expenditure.

¹⁴ Kleenheat, *Public submissions to ERA issues paper*, 24 November 2024, pp. 1-2.

Asset replacement expenditure

Table 4.13: ATCO AA6 forecast capital expenditure – asset replacement programs
(\$ million real at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
Mains replacement program	28.2	28.1	29.8	28.1	27.5	141.7
Meter replacement program	6.3	6.1	5.7	5.7	5.2	29.1
Other asset replacement programs	10.6	7.7	8.2	8.1	8.6	43.2
Total	45.1	41.9	43.7	42.0	41.3	214.0

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.4.

Mains replacement program

ATCO's proposal

122. ATCO's mains replacement expenditure forecast includes service renewals, network rationalisation, and network reinstatement. ATCO replaces and upgrades identified assets to deliver the mains replacement program due to the safety and cost benefits, rather than as a stand-alone activity. ATCO states that this delivery approach is consistent with current accepted practice.
123. The mains replacement program is driven by asset condition and associated risk rating, identified through ATCO's Mains Replacement Prioritisation tool. The software considers asset specification (such as age), historical leak data (including from fittings and exposure criteria to estimate pipe condition), remaining useful life, and risk from each pipeline to the public.
124. The program has identified 290 km of mains to be replaced in AA6, with an average of 58 km of mains replaced per year. A total of \$141.7 million of network sustaining capital expenditure has been estimated for the mains replacement program for AA6.
125. ATCO has used NGR79(2)(c) to justify the expenditure under the headings of safety, network integrity and compliance with regulatory requirements. The project cost is calculated using unit rates for each mains type and an assessment of the costs resulting from the geographical characteristics of the mains' location. ATCO's forecast unit rates are based on the outcomes of a competitive tender process. ATCO states that it has also considered bundled efficiency, new delivery methods (such as the insertion method), mobilisation, disruption, and third-party combined works opportunities. ATCO mentions its unit rate forecasts ensure the forecast capital expenditure is a best estimate. The mains replacement expenditure accounts for 30 per cent of total capital expenditure over AA6.
126. The Mains replacement expenditure proposed in AA6 (\$141.7 million) is 6.2 per cent higher than the actual/forecast expenditure (\$133.4 million) in AA5.

Stakeholder comments

127. DEMIRS suggested that replacement of gas network components at the end of their operational lifespans is a crucial control measure used for maintaining the safety of a gas network as aged components pose an increased risks of leakage and/or failure. The timely replacement of these components ensures a gas network's reliability and

integrity are maintained. It also reduces the risk of potential incidents and improves the overall safety for the general public and network operator personnel and for improved protection for private property, the environment and the gas distribution network. In this vein, DEMIRS supports ATCO's capital expenditure submission as it relates to the replacement of gas network components reaching the end of their operational lifespans.¹⁵

Assessment of capital expenditure

128. The mains replacement cost of \$141.7 million comprises the following projects:

- 2025-29 - EOL Replacement - PVC mains [REDACTED]
- 2025-29 - EOL Replacement - PVC Ad-hoc – Coastal [REDACTED]
- 2024 - EOL Replacement - PVC mains [REDACTED]

129. The main driver for the AA6 program is stated by ATCO as:¹⁶

Potential asset failure of poor condition PVC mains with an unacceptable risk of an ignition event caused by a gas leak, impacting the safety of our customers and the public.

130. ATCO derives the risk of a fatality from individual pipe sections (expressed as fatality risk per km per year) using its Mains Replacement Prioritisation Tool. ATCO has assigned a severity class of Major assuming a single fatality. EMCa considered this a reasonable classification and concluded that the safety-risk mitigation (via gas leak reduction) benefit afforded by mains replacement is a reasonable basis for ATCO to consider continuation of the program in the AA6 period.¹⁷

131. ATCO considered five options for the mains replacement program.

¹⁵ DEMIRS, *Public submissions to ERA issues paper*, 21 November 2024, p. 3.

¹⁶ ATCO, 2025-29 AAI, 1 September 2023, p. 152.

¹⁷ EMCa, Technical Report, April 2024, p. 59.

Figure 4.1: ATCO's options evaluation – mains replacement program (\$ million, 2022)

Options	Present Cost ⁸⁸	Km pipeline replaced	Benefits	Residual risk rating	ATCO evaluation
1. Do nothing – no further EOL replacement of PVC mains	■	0 km	No extra cost	Intermediate (not ALARP)	<i>Not recommended</i>
2. Semi-Quantitative Risk Assessment (SQRA)	■	260	Replace highest risk pipe	Intermediate (not ALARP)	<i>Not recommended</i>
3. Suburb Based Replacement	■	290	Replace in highest risk areas. Highest efficiency	Intermediate (ALARP)	Recommended
4. Condition Based Replacement	■	1,163	Replaces high leak mains	Intermediate (not ALARP)	<i>Not recommended</i>
5. Proactive Fitting Replacement	■	290 ⁸⁹	Reduced excavations	Intermediate (not ALARP)	<i>Not recommended</i>

Source: Based on ATCO attachments. 10.045.00 – End of life replacement – PVC mains – Business Case.

132. ATCO's recommended Option 3 scope is based on a suburb-based replacement strategy which ATCO applied in the AA5 period to reduce costs, moving away from the assessment criteria it applied at the start of the AA5 period. The suburbs in which the PVC pipe will be replaced in the AA6 period have been selected based on the following criteria:¹⁸

- Risk rating is above the average risk of the Intermediate risk suburbs.
- Condition score is above the average for intermediate risk suburbs (poor condition rating).
- Recorded suburb leak rate is above the network average.

133. ATCO states that Option 3 offers three advantages over Option 2, being: (i) lower capital cost and higher present cost (PC), (ii) replaces 30km more pipeline and 43 per cent more customer services, and (iii) bundling of work reduces disruption to the public over the long term.¹⁹

134. EMCa considered that:²⁰

- The selection criteria applied to its options analysis is reasonable.
- The cost per kilometre of pipeline offered by Option 3 is significantly better than Option 2.

¹⁸ ATCO attachments. 10.045.00 – End of life replacement – PVC mains – Business Case.

¹⁹ ATCO attachments. 10.045.00 – End of life replacement – PVC mains – Business Case.

²⁰ EMCa, Technical Report, April 2024, p. 61.

- The resulting amount of PVC pipe and services being replaced does not appear to be an excessive proportion of the total PVC population.
135. The cost estimate for the majority of the AA6 program is derived from a bottom-up build including experience from the AA5 program, taking into account assumptions about (i) interconnectivity requirements, (ii) ground conditions, (iii) unit rates, (iv) service frequency, (v) construction methodology, (vi) night works and traffic management, and (vii) availability of materials, contractors, and internal resources. EMCa sought further information about the bases for the assumptions provided in the business case and, with the exception of inclusion of a contingency amount, EMCa was satisfied with ATCO's responses.²¹ EMCa is satisfied that ATCO has used unit costs which reasonably reflect the cost reduction strategies deployed in the AA5 period.
136. ATCO has based the cost estimate for the *ad-hoc* work on the 2020 to 2022 historical average spend. EMCa concluded that the underlying cost estimate is reasonable.²²
137. EMCa noted that while the need for project contingencies to be included as a part of internal project management governance is understood, the same does not apply to development of cost estimates for forecast of the aggregate capital expenditure portfolio. When viewed across a portfolio of capital expenditure, the aggregate of contingency amounts across all the projects/programs will lead to an excessive expenditure forecast, as not all risks will be realised. Moreover, it is considered reasonable to assume that:²³
- Some projects may require less expenditure in the AA6 period (for example, because of deferment or rescoping or lower unit costs) and some may require a higher level of expenditure.
 - Given what is understood to be the confidence level of the majority of the project/programs, across the whole portfolio underspends and overspends are likely to approximately balance out.
138. EMCa therefore considers that contingency amounts should be removed at the project/program level to help derive a capital expenditure forecast that is more likely to be set at the efficient level. This is further supported by the fact that:
- The majority of the work ATCO proposes undertaking is work that it is familiar with and therefore should be able to estimate the cost with a high degree of confidence.
 - The unit costs are derived from actual costs incurred, which when delivered by external suppliers, is generally established through competitive tender, which is good practice.²⁴
139. The removal of the contingency amounts, results in the mains replacement expenditure reducing from \$141.7 million to \$132.8 million.
140. The ERA concludes for this draft decision that \$132.8 million of ATCO's proposed mains replacement capital expenditure for AA6 satisfies the criteria for conforming capital expenditure set out in rule 79 of the NGR and represents the best forecast of expenditure (rule 74 of the NGR). Table 4.14 and Table 4.15 for the asset replacement

²¹ ATCO response to IR EMCa33 and EMCa58.

²² ATCO response to IR EMCa58.

²³ EMCa, Technical Report, April 2024, p. 26.

²⁴ EMCa, Technical Report, April 2024, p. 27.

category, show ATCO's proposed and the ERA's draft decision mains replacement capital expenditure for AA6.

Meter replacement program

141. The meter replacement program addresses ATCO's regulatory obligation under the *Gas Standard (Gas Supply and System Safety) Regulations 2000* (GSSSR) to manage the integrity of meters and ensure they operate within a prescribed tolerance band for metering accuracy.²⁵ This obligation is carried out through the routine replacement of domestic and commercial meters that have reached their prescribed life or when the accuracy of their measurements falls outside the prescribed tolerance band.
142. The meter replacement program is driven by the meter's lifecycle stage. Both domestic and commercial meters have an end-of-life stipulated by regulatory requirements within the Gas Standards to ensure their accuracy.
143. In AA6, ATCO forecasts approximately 110,116 domestic meters and 64 commercial meter replacements. Applying the domestic and commercial meter replacement unit rates, ATCO has estimated that the meter replacement program will cost \$29.1 million over AA6, which represents around 6 per cent of total capital expenditure.
144. The meters replacement expenditure proposed in AA6 (\$29.1 million) is 32.3 per cent higher than the actual/forecast expenditure (\$22 million) in AA5. The increased costs are mainly due to a lower number of meters being replaced in AA5 due to COVID restrictions and scope refinement (extension of in-service life for certain models to 25 years). The unit costs proposed in AA6 are equivalent to what was actually incurred in AA5.

Assessment of capital expenditure

145. ATCO's AA6 meter replacement program is a continuation of a long-term program to replace meters at the EOL at a forecast capital cost of \$29.1 million, comprising:
 - Routine meter change – addressing 110,116 domestic meters (\$27.3 million).
 - EOL replacement – Billing commercial meters – addressing 64 billing commercial meters (\$1.8 million).
146. In accordance with the GSSSR, ATCO must ensure domestic gas master meters are accurate. The GSSSR also includes a proposed lifetime for different meter sizes and in the case of basic domestic meters, meter life must not exceed 18 years unless approval to extend the life is given based on evidence that the accuracy is within tolerance provided in the GSSSR.²⁶
147. ATCO has received approval from DMIRS to:²⁷

Extend the life of extend the life of [REDACTED] meter type and [REDACTED] meters at least equal in quality to [REDACTED] in service meters to 25 years, with older [REDACTED] meters maintaining a replacement interval of 18 years.

²⁵ As per Gas Standards (Gas Supply and Safety Systems) Regulations (GSSSR) 2000 (Part 3 – Metering: Section 16)

²⁶ ATCO, Attachment 10.044.00 - End of Life Replacement - Routine Meter Change - Business Case, p. 8.

²⁷ ATCO, Attachment 10.044.00 - End of Life Replacement - Routine Meter Change - Business Case, p. 9.

148. EMCa considers that ATCO has a reasonable basis for considering replacement of domestic and commercial meters that will not be compliant with the GSSSR in the AA6 period.
149. ATCO considered five feasible options for the routine meter change and EMCa considers that the option selected is reasonable.²⁸ ATCO also considered three options for the billing commercial meter EOL replacement. EMCa considers the option 2 strategy of meter refurbishment and, when necessary, meter replacement is the appropriate approach and has been tested as such throughout the AA5 period.
150. On the routine meter change cost, EMCa is satisfied that the use of the average of three years of historical data (2020 to 2022) actuals is likely to represent a reasonable basis for the estimate of the average annual cost for the AA6 period. However, ATCO has added contingency of 10 per cent which EMCa considers results in an inefficiently high cost forecast.²⁹ For the billing commercial meters, the cost estimate for replacement of 64 meters is based on a bottom-up build using the latest available contractor rates with 30 per cent contingency rate.³⁰ EMCa considers the underlying cost estimate to be reasonable, but not the addition of the contingency amount.
151. The removal of the contingency amounts, results in the meter replacement expenditure reducing from \$29.1 million to \$25.7 million.
152. The ERA concludes in its draft decision that \$25.7 million of ATCO's proposed meter replacement capital expenditure for AA6 satisfied the criteria for conforming capital expenditure set out in rule 79 of the NGR. Table 4.14 and Table 4.15 for the asset replacement category, show ATCO's proposed and the ERA's draft decision meter replacement capital expenditure for AA6.

Other asset replacement programs

153. The other asset replacement programs (EOL) are estimated by ATCO to cost \$43.2 million. The programs in this section are:
- **Risers and services (\$16.2 million):** Ageing risers connected to PVC services are susceptible to leaks. Historically, ATCO has identified approximately 1,500 leaks per year on risers and services via smell of gas, calls from the public or during routine maintenance. The AA6 capital expenditure program is forecast to replace approximately 1,850 assets. ATCO states that this forecast is based on actual AA5 volumes and unit rates for service and riser replacements.
 - **Regulator sets and metering facilities (\$12.5 million):** Regulator sets (including pits and lids) and commercial and industrial metering facilities (including pressure regulating, isolation equipment and meters) experience degradation in condition over time. ATCO assesses the condition of the assets during scheduled inspections. The investment driver for this capital expenditure is to ensure the safety and integrity of facilities that have reached a condition where maintenance is no longer effective, and risk is not as low as reasonably practicable (ALARP). The AA6 capital expenditure program forecasts the replacement of these assets based on replacement criteria set out in the Pressure Regulating Facilities Asset Lifecycle Strategy (ALS) (*Attachment 10.008*).

²⁸ EMCa, Technical Report, April 2024, p. 63.

²⁹ ATCO, Attachment 10.044.02 - End of Life Replacement - Routine Meter Change - Option 2 - Like to Like.

³⁰ ATCO, Attachment 10.038.02 - End of Life Replacement – Billing Commercial Meters – Cost estimate.

- **Telemetry equipment (\$6.0 million):** Telemetry equipment is used on the network to monitor pressures and proactively respond to developing circumstances before they result in outages. The investment driver for this capital expenditure is to maintain reliable data for decision-making in the network, ensure accurate and timely customer billing for industrial customers, and ensure continuous monitoring of network pressures, flows, and protection systems to optimise maintenance and operational response. The AA6 capital expenditure program forecasts the replacement of 3,403 items of equipment, such as data loggers, transducers, and flow computers.
- **Mechanical fittings (\$4.7 million):** Mechanical compression fittings were historically used on the PVC network to connect sections. The investment driver for this capital expenditure is mitigating the risk associated with leaks from disturbed mechanical fittings, based on renewal and replacement criteria in ATCO's ALS for mains and services. The program proposes to replace an average of 176 mechanical fittings annually, with 880 replacements in AA6.
- **Metallic mains (\$1.8 million):** ATCO introduced the program in AA4 to replace unprotected metallic mains under railway crossings that were identified to have deteriorated and reached end-of-life. The program was scheduled to be completed in AA5, however, the project was delayed due to the COVID-19 pandemic. Program completion has now been extended to the end of 2025.
- **Isolation valves (\$1.6 million):** High pressure isolation valves that cannot adequately isolate gas flows for emergencies or critical maintenance activities present a risk to the public and ATCO personnel. The AA6 capital expenditure program is forecast to replace 6 isolation valves that meet EOL replacement criteria.
- **Warning signs (\$0.4 million):** High Pressure Pipeline Warning Signs are installed on high pressure pipelines as a procedural control to mitigate the risk of third-party impacts on ATCO's assets. The investment driver for this capital expenditure is to maintain compliance with AS 2885.149 Section 4.4 Pipeline Markings, which requires warning signs to be located on the pipeline route that allows the pipeline route to be properly identified and to reduce the likelihood of a third-party impact on our high-pressure assets. ATCO estimates approximately 130 signs annually (650 for AA6) require replacement based on historical data.

154. The other asset replacement expenditure proposed in AA6 (\$43.2 million) is 27.4 per cent higher than the actuals/forecast expenditure incurred in AA5 (\$33.9 million). Increases are seen in the risers and services; regulator sets and metering facilities and telemetry equipment categories.

155. Each of the subcategories is addressed below.

Assessment of capital expenditure

Risers and services

156. The risers and services program began in 2015 with replacement of either the service riser only or the full service (inclusive of the riser), depending on the nature and location of the leak. The riser and/or services are replaced with a fully fused PE solution. The

proposed AA6 program is a continuation of the AA5 program and is proposed to incur \$26.2 million capital expenditure to replace leaky PVC services with PE services.³¹

157. ATCO's business case is predicated on reducing the risk of an undetected leak from a PVC service tracking into a building, potentially [REDACTED]. ATCO advises that 1,200 to 1,160 leaks from PVC services are identified annually.³² ATCO's risk assessment is largely qualitative, leading it to conclude that this poses an Intermediate (non-ALARP) safety risk. EMCa considers that it is reasonable for ATCO to consider actions to address the risk.
158. ATCO has considered three options in its business case. EMCa agrees with ATCO that Option 2, which is to replace leaking compression coupling fittings associated with the risers only and to replace the full service only when necessary, is the superior option.
159. On the forecast volume of replacements, ATCO has based the forecast volume of replacements on the three-year historical average with 10 per cent additional scope. EMCa has queried the basis for the contingent amount, and ATCO advised that it had:³³

Applied the contingency to the volume instead of the unit rate as the volume is likely to be more variable than the unit rate.

160. EMCa considered that ATCO has not provided sufficient compelling evidence to suggest the AA6 average will be higher than the three-year average over the period 2020 to 2022 and as such, does not consider that the additional scope has been justified.
161. The forecast unit rate for the AA6 period is determined from the average unit rate over the period 2020 to 2022.³⁴ EMCa noted that the reported unit rate in the business case for riser-only replacement had declined significantly from [REDACTED] in 2020 to [REDACTED] in 2022 (\$2022) and queried whether the three-year average was a representative basis for the forecast. ATCO advised that the 2020 unit rate and volume of riser replacements as reported in the business case were errors but that the unit rate used for the forecast was correct. EMCa also asked for the 2023 unit rate as a further check, and concludes that the basis for the cost estimate for the AA6 period is reasonable.³⁵
162. Based on the previous explanation on contingencies³⁶, the 10 per cent additional scope that ATCO advised was volume contingency, was considered non-conforming with the NGR.

Regulator sets and metering facilities

163. ATCO proposes replacing 50 medium pressure regulators that have reached their EOL based on a multi-parameter condition assessment, criticality and the cost of replacement. ATCO also proposes replacing 17 metersets which have reached a condition where ATCO considers that maintenance is no longer effective, and the risk

³¹ The program includes three sub-programs: SNR Re-lay Service / SNB; SNB Recon after Disc; and 2025-29 - SARA - SPY Transfers per Attachment 10.022 - AA6 Capex Model - Spreadsheet – Clean.

³² ATCO, Attachment 10.043.00 - End of Life Replacement - Service Replacement - Business Case, p. 7.

³³ ATCO response to IR EMCa30.

³⁴ Adjusted to a direct cost by removing overheads; the forecast volume multiplied by the unit rate determines the capex forecast excluding overheads. Overheads, CPI and labour escalation are applied to the total direct cost (per ATCO response to IR EMCa32).

³⁵ EMCa, Technical Report, April 2024, p. 65.

³⁶ EMCa, Technical Report, April 2024, p. 26.

is not ALARP. ATCO also includes replacement of facility equipment in this program. EMCa considers the definitions and overall approach to be reasonable.³⁷

164. EMCa considers that the option analysis and selection of the prudent option for the program above is reasonable.³⁸
165. On the cost estimates, EMCa found that while the underlying basis for the costs was reasonable and reflected historical unit costs, they were unable to reconcile costs with the addition of the contingency amounts.³⁹ The contingency was not considered reasonable.

Telemetry equipment

166. ATCO proposes proactive replacement of 3,403 telemetry equipment approaching EOL at a cost of \$6.0 million capital expenditure over the AA6 period.
167. ATCO states that the key drivers for the program are to “maintain reliable data for decision making in the GDS, ensure accurate and timely customer billing for industrial customers and continue operational efficiency.” EMCa considers that these are reasonable drivers to support investment to maintain the performance of the telemetry fleet.
168. ATCO analysed five options in its business case, including a condition-based replacement strategy, which would be preferable but is not technically feasible nor cost-effective given the small unit cost and high volume of equipment. ATCO considers that the selected option, which follows the same strategy as applied effectively in AA5, is the prudent choice.
169. The estimated cost has been derived from a bottom-up build using the most recent component costs from suppliers, labour hours from previous installation work, and the forecast volume based on asset age. An additional contingency has also been added. The ERA has taken EMCA’s recommendation into consideration and while the underlying cost basis is reasonable, the contingency is not.⁴⁰

Mechanical compression fittings

170. ATCO proposes proactive replacement of an estimated 176 mechanical fittings per year at a capital cost of \$4.7 million over the AA6 period. This is a continuation of a strategy deployed in the AA5 period to address the same risk.
171. ATCO advised that mechanical fittings are likely to leak if they experience deflection or movement which can happen during back-fill due to disturbance of the ground. ATCO rates the risk of leaving the mechanical fitting following the disturbance as ‘Intermediate not ALARP’ because of the possibility of leaks ignition leading to fatalities.⁴¹ EMCa considers that there is a case for investing in the AA6 period to continue to proactively address such mechanical fittings.
172. ATCO considers three options in its business case. EMCa considers that the selected option (Option 2), applying the same strategy as applied in AA5, is the prudent choice.

³⁷ EMCa, Technical Report, April 2024, p. 66.

³⁸ EMCa, Technical Report, April 2024, p. 66.

³⁹ EMCa, Technical Report, April 2024, p. 66.

⁴⁰ EMCa, Technical Report, April 2024, p. 67.

⁴¹ ATCO, Attachment 10.034.00 - Asset Replacement - Mechanical Fittings - Business Case.

173. ATCO has derived its AA6 forecast annual capital expenditure from an average unit rate of [REDACTED]. The volume is based on the average actual replacements over 2020 to 2022. However, the unit rate included in the cost estimate is based on a four-year average (2019 to 2022), which results in a slight increase in the rate compared to the three-year average, yet not materially significant.⁴² EMCa noted that in the business case, an additional 10 per cent contingency was added. This was not considered reasonable.⁴³

Metallic mains

174. ATCO has been replacing unprotected steel mains since the AA4 period. These pipes corrode relatively rapidly because the coatings are disintegrating and ineffective, leading to leaks. ATCO rated these as high-risk assets. ATCO initially forecast completing the replacement work within the AA5 period, however, due to various delays, some distribution mains under freeways and railways will not be replaced with PE pipe until 2025.⁴⁴ ATCO proposes a further \$1.8 million investment to conclude the AA5 metallic mains program in 2025.
175. EMCa considers this to be a well-established leak reduction program that should be completed as soon as practicable.⁴⁵
176. ERA agreed with EMCa's recommendation that while the underlying cost basis seemed reasonable, the additional 10 per cent was not.⁴⁶

Isolation valves and warning signs

177. ATCO proposes proactive replacement of six high pressure isolation valves over the AA6 period at a forecast capital cost of \$1.6 million. This is a continuation of a strategy deployed in the AA5 period.
178. Isolation valves installed on high pressure pipelines that have corroded, are leaking or are inoperable are deemed EOL by ATCO and are candidates for replacement. EMCa considers this to be a reasonable strategy.
179. ATCO considers three options in its business case. EMCa considers that the selected option (Option 2), which identifies six isolation valves for replacement, will reduce the risk from those valves to ALARP and is the prudent choice.
180. The estimated cost has been derived from expenditure in 2020 and 2021. In response to an information request, EMCa found that the actual expenditure in 2023 reveals a similar unit rate to that incurred previously. ERA based on EMCa's analysis, considers the unit rate to be reasonably based, but not the additional contingency.⁴⁷
181. Warning signs is a continuation of a long-term asset replacement project that EMCa considers should continue at the proposed volume over AA6. ERA based on EMCa's

⁴² ATCO, Attachment 10.034.01 – Asset Replacement – Mechanical Fittings – Cost Estimate.

⁴³ EMCa, Technical Report, April 2024, p. 67.

⁴⁴ ATCO, Attachment 10.007 – Asset Lifecycle Strategy - Distribution Mains and Services, p. 48.

⁴⁵ EMCa, Technical Report, April 2024, p. 67.

⁴⁶ EMCa, Technical Report, April 2024, p. 67.

⁴⁷ EMCa, Technical Report, April 2024, p. 68.

analysis, considers the unit rate to be reasonably based, but not the additional contingency.⁴⁸

Summary - assessment of other replacement expenditure

182. The removal of the contingency elements in categories of the other replacement expenditure, resulted in the expenditure reducing from \$43.2 million to \$37.5 million.
183. The ERA concludes in its draft decision that \$37.5 million of ATCO's proposed other asset replacement capital expenditure for AA6 satisfied the criteria for conforming capital expenditure set out in rule 79 of the NGR.
184. Table 4.14 and Table 4.15 for the asset replacement category, show ATCO's proposed and the ERA's draft decision on other asset replacement capital expenditure for AA6.

Table 4.14: ATCO AA6 forecast capital expenditure – Asset replacement programs (\$million real at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
Mains replacement program	28.2	28.1	29.8	28.1	27.5	141.7
Meter replacement program	6.3	6.1	5.7	5.7	5.2	29.1
Other asset replacement programs	10.6	7.7	8.2	8.1	8.6	43.2
Total	45.1	41.9	43.7	42.0	41.3	214.0

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.4.

Table 4.15: ERA draft decision AA6 forecast capital expenditure – Asset replacement programs (\$million real at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
Mains replacement program	26.6	26.4	27.9	26.2	25.7	132.8
Meter replacement program	5.7	5.4	5.1	5.1	4.5	25.7
Other asset replacement programs	9.3	6.7	7.1	7.0	7.4	37.5
Total	41.6	38.6	40.0	38.4	37.5	196.0

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.4, ERA draft decision analysis.

Asset performance and safety

185. This capital expenditure category ensures the efficient and safe operation of network assets.

⁴⁸ EMCa, Technical Report, April 2024, p. 68.

Table 4.16: ATCO AA6 forecast capital expenditure – Asset performance and safety programs (\$million real at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
Enabling renewable gases	4.5	2.7	2.7	2.8	2.8	15.5
Inline inspection	3.7	3.8	6.4	5.3	5.6	24.9
Network reinforcement	1.8	-	-	0.1	0.1	2.0
Other asset performance programs	3.1	4.7	2.5	2.5	2.3	15.1
Total	13.1	11.2	11.7	10.7	10.9	57.6

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.10.

Enabling renewable gases

186. The enabling renewable gas program relates to the capital expenditure that ensures that the network can accept and distribute renewable gases.
187. ATCO's program includes constructing gate stations to inject renewable gases into the network, installing control systems to ensure accurate measurement of energy content, and replacing a small portion of meters with hydrogen compatible metering.
188. ATCO's proposed enabling renewable gas capital expenditure of \$15.5 million includes:
- Renewable gas injections (\$14.3 million):
 - Construct six gate stations to inject around 100-200 TJ of renewable gas per site per year into the network, with two stations in 2025 and one per year over the remaining years of AA6.
 - Network blending control systems (\$0.6 million):
 - Expenditure for interconnection management controls to ensure a system accurately measures delivered energy in the network with dynamic renewable gas blends. This will support the accurate billing of energy delivered from the network.
 - Meter changes for hydrogen blending (\$0.6 million):
 - Replacement of a small proportion of metering assets in parts of the network where renewable gas blending will occur.
189. ATCO considers that its enabling renewable gas program aligns with government climate objectives and with good industry practice for reducing greenhouse emissions. Further, it considers that the \$15.5 million investment delivers an overall positive economic value by reducing unaccounted for gas (UAFG) costs in the long term, reducing environmental emissions, providing greater energy choice for customers and enabling solutions for industry to reduce scope 1 emissions, and that the investment is required for Australia to meet its obligations under the *Climate Change Act 2022* to reduce emissions by 43 per cent below 2005 levels by 2030.⁴⁹

⁴⁹ ATCO, 2025-29 Plan, 1 September 2023, p. 163.

190. The renewable gas expenditure proposed in AA6 (\$15.5 million) is significantly higher than the actuals/forecast expenditure incurred in AA5 (\$0.6 million).

Stakeholder comments

191. Alinta does not consider that ATCO's proposed investments in renewable gases are in the long-term interests of consumers. Alinta submits:⁵⁰
- The risk profile of renewable gases is currently such that there is not a reasonably probable expectation of attaining suitably high benefits for consumers (that is, benefits that would justify the risks incurred) in terms of price, quality, safety, reliability, security of supply or emissions reduction.
 - ATCO has not made the case that its proposed investments in renewable gases would provide benefits to consumers by expanding their options of cost-effective, lower-emissions energy sources. Other renewable energy choices currently offer greater benefits relative to their costs and are more efficient choices for investment. The future competitiveness of renewable gases is highly uncertain and particularly so in the case of hydrogen.
192. The WA Expert Consumer Panel submits that there is insufficient evidence that allowing ATCO to recover from consumers the costs of renewable gas blending will promote efficient investment in, and use of, services. The Panel's view is that the capital and operating expenditure ATCO has proposed in this regard is non-conforming. It is open to ATCO to include this type of capital expenditure in its speculative capital expenditure account, for recovery from end-users if and when the benefits of the investment become more certain. Government policies are not contemplating renewable gas blending for small use customers as a priority use for green hydrogen. The Panel believes that, given the costs and risks associated with renewable gas blending, there will not be demand from small users for renewable gases.⁵¹
193. WACOSS does not consider it appropriate for ATCO to be able to recover any of the costs associated with its hydrogen blending trials and enabling renewable gas program through the access arrangement. WACOSS is concerned that this proposal seeks to push unnecessary and inefficient costs onto customers. WACOSS suggests that recent analysis shows that when considering relative warming impacts from continuous emissions in the near term, hydrogen is 100 times more potent than CO2 emissions over a 10-year period. As such, this is of significant concern due to the unintended leakage that occurs across the entire hydrogen gas value chain, as well as where it is deliberately purged and vented.⁵²
194. Origin Energy submits that, given the supporting legislation has not been enacted in Western Australia and uncertainty over the supply availability and cost effectiveness or renewable alternatives, they do not support the proposed expenditure. Any proposed expenditure should be contingent on the introduction of legislation supporting the use of these alternatives and demonstration of the viability and customer benefits. Origin is concerned that the supply availability of alternative gas fuels such as biomethane and hydrogen, and the technical requirements and cost effectiveness remains uncertain.⁵³

⁵⁰ Alinta Energy, *Public submissions to ERA issues paper*, 30 November 2024, p. 10.

⁵¹ ECP, *Public submissions to ERA issues paper*, 27 November 2024, pp. 3, 13-17.

⁵² WACOSS, *Public submissions to ERA issues paper*, 27 November 2024, p. 3.

⁵³ Origin Energy, *Public submissions to ERA issues paper*, 27 November 2024, p. 3.

195. Synergy supports the ERA's approach to review the AA6 proposal and agrees that it should not speculate on whether legislative amendments are likely to occur or not including whether proposed investments based on potential legislative amendments should be approved. In addition, Synergy also supports the ERA's approach to consider the implications of potential legislative amendments and ensure stakeholders are provided sufficient time and opportunity to provide comments if these legislative amendments were to occur between the publication of the draft and final decisions. Synergy also requests the ERA to review whether the proposed levels of new investment, in relation to the network, is required including determining whether it is necessary and consistent with the national gas objective and the long-term interests of consumers, and in particular, ATCO's proposed investment in its renewable gas delivery strategy, hydrogen blending program and proposed recovery of \$0.4 million.⁵⁴
196. Stewart Lee suggested that hydrogen strategies established by Commonwealth, State, and Territory governments have rightly focussed on large-scale hydrogen production for industrial purposes. ATCO's proposal to use hydrogen in the reticulated gas network is not backed by any credible scientific evidence.⁵⁵
197. AGL is supportive of ATCO starting the processes to allow renewable gases to be included as part of the service offering. AGL has participated in two different discussions with the State Government on the future of renewable gases and sees this as part of the near future. The question of uptake and use for renewable gases is still in the infant stage in Australia, with many businesses and governments developing products and services for this source of energy. However, there are trial projects with hydrogen appliances, which are available in other countries such as Japan, and newly developed appliances being tested for renewable gas usage. AGIG has stated their goal is to be 100 per cent hydrogen by 2040.⁵⁶
198. The CME suggests that ATCO's proposed AA6 will help facilitate a pathway to decarbonisation in the short to medium term. CME provides in principle support to ATCO's investment of \$26.4 million to facilitate the introduction of renewable gases into the distribution network. Any investment proposed by ATCO should be reasonable and cost efficient, clearly aligning with Western Australian Government's Energy Transformation Strategy, Renewable Hydrogen Strategy, forthcoming sectoral emissions reduction strategies, and proposed climate change bill. CME supports the recovery of capital and operating costs related to renewable gas distribution.⁵⁷
199. DEMIRS notes that as compared to a switch to 100 per cent hydrogen distribution, ATCO's approach raises fewer technical and safety issues and does not necessitate substantial asset modifications. DEMIRS notes that any alterations to gas quality supplied through a GDS, commissioning of new facilities or adjustments to GDS operating parameters will require amendments to ATCO's safety case, which will need to be assessed by DEMIRS before implementation.⁵⁸
200. UDIA is supportive of moves by ATCO to create a cleaner source of energy to provide residential consumers with a range of options and choice when considering the sources of energy and associated appliances they will opt to use in their homes. There is a shifting sentiment in consumers towards wanting cleaner sources of energy, as evidenced in ATCO's survey data. ATCO's proposal to increase their capabilities in

⁵⁴ Synergy, *Public submissions to ERA issues paper*, 27 November 2024, pp. 1, 2.

⁵⁵ Stewart Lee, *Public submissions to ERA issues paper*, 27 November 2024, pp. 1, 2.

⁵⁶ AGL, *Public submissions to ERA issues paper*, 27 November 2024, p. 5.

⁵⁷ CME, *Public submissions to ERA issues paper*, 27 November 2024, p. 1.

⁵⁸ DMIRS, *Public submissions to ERA issues paper*, 21 November 2024, p. 2.

injecting renewables into the system is a positive step for sustainability and choice for consumers in the development industry.⁵⁹

201. The HIA suggests that investment in renewable gases is indeed timely and appropriate, which if implemented should forego the need for flat or inclining block tariffs to discourage use. User demand is unlikely to abate or 'switch off' simply because renewable energy sources are being used, even if there is some additional (albeit unfavourable) expense for generation and supply. It also further highlights the improving place of gas as a transitional energy source in line with Western Australian energy policy. It is reasonable to assume, provided customer expectations and emissions intensity aims are managed, that the State's future of gas is a mix of an Energy Hybrid and Hydrogen Future and Western Australia is facing a reasonably certain, quantifiable increasing gas volume requirement for the medium to long term. The security of Australia's energy network to ensure both homeowners and businesses have access to consistent and affordable power supply has become a key policy issue for the foreseeable future. Any cost increases for the generation and supply of gas to the residential housing market will remain a political issue.⁶⁰

Assessment of capital expenditure

202. On 19 May 2023, Australian Energy Ministers agreed to amendments to the national energy laws to incorporate an emissions reduction objective into the national electricity, gas and energy retail objectives.
203. The reform to include emission reductions has already been adopted for both the gas and electricity sector as a result of the *Statutes Amendment (Emission Reductions) Act 2023*. The Act amends the national gas objective as follows:

The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to

- (a) price, quality, safety, reliability and security of supply of natural gas; and (b) the achievement of targets set by a participating jurisdiction—
 - (i) for reducing Australia's greenhouse gas emissions; or
 - (ii) that are likely to contribute to reducing Australia's greenhouse gas emissions.

204. This updated national gas objective was adopted in Western Australia on 25 January 2024.
205. The Australian Energy Market Commission (AEMC) has since published the Natural Gas Amendment (Harmonising the national energy rules with the updated national energy objectives) Rule 2024.
206. The transitional provision in the amendment addresses ERA's review of the Western Australian access arrangement proposals:

When the ERA is considering an *access arrangement proposal* that a service provider submitted to the ERA before the rule start date, the ERA may apply either the old expenditure rules or the new expenditure rules.

⁵⁹ UDIA, *Public submissions to ERA issues paper*, 21 November 2024, p. 2.

⁶⁰ HIA, *Public submissions to ERA issues paper*, 27 November 2024, p. 2.

Note:

The relevant *access arrangement proposals* are those for the Mid-West and South-West Gas Distribution System and the Goldfields Gas Pipeline, for the *access arrangement period* commencing in 2025.

207. The above supports the incorporation of emissions reduction in the energy regulatory framework by allowing network and pipeline operators to propose expenditure for activities that would contribute to achieving emissions reduction targets. However, there are other laws such as the “other gases legislation” that have not yet been passed in WA.⁶¹
208. ATCO proposes building six gate stations to each inject around 100TJ to 200TJ of renewable gas into the network (per site per year). ATCO forecasts building two injection points in 2025 (to be used to inject renewable gas for UAFG) and then one per year over the remaining years of AA6 (to inject the amount of renewable gas needed to address customer demand).
209. Further expenditure is proposed for network blending and control systems in year one, and meter changes for hydrogen blending in each year of the AA6 period.
210. The ERA recognises the importance of carbon emissions reduction strategies across the economy to reduce Australia’s carbon emissions and meet legislated government targets. The Australian Government has recently revised legislation requiring businesses with high carbon emissions to reduce emissions each year. Businesses captured by the scheme are set targets to reduce their emissions, consistent with the Australian Government’s emissions reduction targets.
211. ATCO will not be subject to the Australian Government’s Safeguard Mechanism as it is below the 100,000 tonnes of carbon dioxide annual equivalent threshold for the AA6 period and is expected to remain so over the AA6 period. Therefore, it will not be required to buy Australian Carbon Credit Units or to further reduce its emissions under this scheme.^{62,63} ATCO has not provided any evidence of other regulatory obligations that would require it to reduce its carbon emissions over AA6.
212. Additionally, EMCa has reviewed the renewable expenditure in light of the regulatory changes above and notes that the renewable expenditure has not been addressed by adequate economic analysis of the options versus the counterfactual that demonstrate that the proposed expenditure is the most efficient option in accordance with the NGR. Namely that:⁶⁴
 - ATCO has not effectively demonstrated that injection of renewable gas for UAFG (unaccounted for gas) is the most efficient cost option. EMCa finds that based on current market prices the lowest cost option is for ATCO to continue using natural gas to meet its UAFG.
 - ATCO has not effectively demonstrated that there is sufficient customer demand to require the additional gate stations. The market in Western Australia is relatively immature. EMCa has not seen evidence to confirm customer demand for renewable gases, or that distribution using the GDS is more efficient than via

⁶¹ <https://www.energy.gov.au/energy-and-climate-change-ministerial-council/working-groups/gas-working-group/gas/extending-national-gas-regulatory-framework-hydrogen-and-renewable-gases>

⁶² ATCO, AA6 Renewables Program – ERA workshop, 20/02/2024, p. 10.

⁶³ <https://www.cleanenergyregulator.gov.au/NGER/The-Safeguard-Mechanism>

⁶⁴ EMCa, Technical Report, April 2024, pp. 71,72.

road transport for transportation of these gases, such that the economic value is positive from this investment.

- Additionally, the question arises as to whether ATCO is the appropriate party to establish the infrastructure, or will it become a “taker” of whatever blend of covered gases a customer wants to deliver into the network, whether from a transmission pipeline or from a production facility. The proposed facilities would be for the benefit of a party wishing to develop renewable gas production facilities and as such this party would therefore need to meet the cost of any investment needed for the associated connection and blending facilities.

213. The ERA concludes in its draft decision that none of ATCO’s enabling renewable gases capital expenditure for AA6 is feasible under the current economic regulatory framework and ATCO has not sufficiently demonstrated that these proposals (if they were permitted under the legislative framework) are the most cost-efficient solutions that would be undertaken by a prudent gas service provider. Table 4.17 and Table 4.18 for the asset performance and safety category, show ATCO’s proposed and the ERA’s draft decision enabling renewable gases capital expenditure for AA6.

In-line inspection

214. The investment driver for this capital expenditure is to ensure the safe operation of the high-pressure pipeline infrastructure and to meet regulatory requirements (Australian Standard 2885.3) by conducting regular and thorough integrity inspections.⁶⁵ ATCO notes that relying solely on external coating inspections using direct current variance gradient techniques and manual inspection is not in line with industry accepted practice, necessitating a more comprehensive approach. Due to the requirement to maintain the security of supply, these pipelines must be inspected without interrupting the operation of the pipelines. The detailed knowledge derived from the integrity signatures ensures the implementation of targeted and prudent measures, ensuring the security of supply to ATCO’s customers.
215. The expenditure is to modify five pipelines and install facilities to enable inline inspection (ILI) of these pipelines, which provides data for any mitigation activities. The proposed AA6 capital expenditure for this category is \$24.9 million. The inspection costs fall under the operating cost category.
216. ATCO uses NGR 79(2)(c) to justify this expenditure as it improves safety by enhancing the ability to detect potential pipeline leakage locations; the investment maintains (or improves) network integrity by providing the capability to detect a comprehensive range of pipeline defects and complies with the inline inspection requirements of AS2885.3.⁶⁶
217. The inline inspection expenditure (\$24.9 million) proposed in AA6 is 228 per cent higher than the actual/forecast expenditure (\$7.6 million) in AA5.

Assessment of capital expenditure

218. ATCO commenced a program to demonstrate integrity compliance with AS 2885.3 in 2017 by pipeline in-line inspection using a pipeline inspection gauge tool, in a process commonly referred to as “pigging”. In AA6, ATCO has included \$24.9 million to modify

⁶⁵ ATCO is obligated to comply with AS 2885.3, a result of regulations 18,20,27 and 37 of the Gas Standards (Gas Supply and System Safety) Regulations 2000.

⁶⁶ ATCO is obligated to comply with AS 2885.3 a result of regulations 18, 20, 27 and 37 of the Gas Standards (Gas Supply and System Safety) Regulations 2000.

pipeline configurations to accommodate the in-line inspection process, referred to as pigging infrastructure.

219. Part of the capital expenditure forecast is to provide the necessary pigging infrastructure to enable in-line inspections of three pipelines in the Bunbury region that were deferred from AA5 to the first two years of the AA6 period. The estimated cost of the Bunbury pipelines work is \$7.6 million. ATCO proposes undertaking works to enable in-line inspections for five other high-pressure pipelines in the balance of the AA6 period at an estimated cost of \$17.3 million.
220. ATCO has presented a sound case for investigating the scope of works and investment required in the AA6 period to make modification to its pipeline, where prudent, to achieve compliance and to help maintain the overall safety of the pipelines in question.
221. ATCO identifies five options, of which it considers three to be technically feasible and capable of addressing the compliance requirement. Two other options were deemed to be infeasible. ATCO's evaluation of the three feasible options is summarised in Figure 4.2.

Figure 4.2 Options considered by ATCO – ILI program – AA6 pipelines (\$ million, 2023)

Option	Present cost ¹³⁶	Cost estimate		Residual risk rating
		capex	opex	
1. Continue with the current situation	n/a	\$0.0	\$0.15	<i>Intermediate (not ALARP)</i>
2. Modifications to enable Inline Inspection	-\$16.3	\$17.3	\$2.6	<i>Intermediate (ALARP)</i>
3. Increase direct assessment	n/a	\$0.0	\$0.3	<i>Intermediate (not ALARP)</i>

Source: EMCa analysis of ATCO Attachment 10.041.00 - Facility Upgrade - Pigging Infrastructure - Business Case, Tables 2-1, 2-4, 2-7.

222. ATCO prefers Option 2, which involves modifying the AA6 pipelines to accommodate in-line inspections. The estimated average cost per pipeline is \$3.5 million capital expenditure for the modifications and \$0.5 million operating expenditure (for the actual inspection) per pipeline.
223. EMCa asked ATCO to provide an explanation of its approach to applying the historical average of two pigging facilities as a basis for forecasting future costs for the AA6 pipelines. EMCa is satisfied with the explanation provided by ATCO of why it selected the particular two historical examples, and therefore ATCO's proposed in-line inspection expenditure on its AA6 pipelines, with the exception of the contingency provision.⁶⁷
224. ATCO deferred the pigging infrastructure work proposed for Bunbury pipelines (HP104, HP089, and HP047) from AA5 to AA6. The pipelines have a maximum allowable operating pressure rating that requires in-line inspection or some other means to demonstrate compliance to AS2885 to assure ongoing safe operation. However, the

⁶⁷ EMCa, Technical Report, April 2024, p. 74.

pipelines are currently operated at pressure of 1850kPa, which does not require in-line inspection.⁶⁸

225. In response to an EMCa request for information, ATCO has also confirmed that there are gaps/discrepancies in available pipeline design information, requiring “dig-ups” to confirm design parameters. This casts a level of doubt as to whether the pipelines are “piggable” or whether other rectification work may be entered into by ATCO, which it is currently investigating. ATCO concludes that:⁶⁹

There is significant risk however, that this expenditure may not be required, or revised based on the outcomes of items 1 and 2 above upon further investigation. ATCO endeavour to have a further clarified view of the above at the time of final submission.

226. Based on the information currently provided, EMCa does not consider that ATCO has sufficiently justified the requirement to proceed with in-line inspection, or the pigging infrastructure proposed for the Bunbury pipelines.
227. The removal of the expenditure related to the Bunbury pipelines and the contingency amount for the other pipeline expenditure results in the inline inspection expenditure reducing from \$24.9 million to \$13 million.
228. The ERA concludes in its draft decision, that \$13 million of ATCO’s proposed inline inspection capital expenditure for AA6 satisfies the criteria for conforming capital expenditure set out in rule 79 of the NGR. Table 4.17 and Table 4.18 for the asset performance and safety category, show ATCO’s proposed and the ERA’s draft decision inline inspection capital expenditure for AA6.

Network reinforcement

229. The network must maintain adequate capacity to deliver gas safely to customers. As the demand for gas services grows due to new connections or increased use, the existing network might face limitations in providing sufficient gas flow. Network reinforcement involves expanding the infrastructure, such as installing additional gas mains or pipelines, to accommodate higher gas volumes. This increased capacity ensures that the network can meet peak demand without compromising pressure levels.
230. ATCO uses an industry-standard software package known as ‘SynerGi’60 to model network capacity and optimise network utilisation as it grows. This software identifies when projects are required to maintain security of supply and sufficient capacity.
231. The major network reinforcement projects for AA6 include the installation of medium-pressure regulator sets and mains extensions. Each project is planned for the year prior to the network reaching minimum system pressure to maintain continuous gas supply to customers. The reinforcement projects are:
- Network Reinforcement – Secret Harbour (begins in 2024, AA5)
 - Network Reinforcement – Inglewood
 - Network Reinforcement – Pearsall.
232. The proposed AA6 capital expenditure for this category is \$2.0 million.

⁶⁸ EMCa, Technical Report, April 2024, p. 74.

⁶⁹ EMCa, Technical Report, April 2024, p. 74.

233. ATCO proposes that the investment driver for this capital expenditure is prioritising network safety, ensuring a continuous gas supply to existing gas customers, and maintaining the network pressure above its minimum system requirements.
234. The network reinforcement expenditure proposed in AA6 (\$2.0 million) is 32.3 per cent higher than the actual/forecast expenditure (\$1.4 million) in AA5. The reason for the increase is due to some projects which have been previously classed as network growth being reclassified as network reinforcement as ATCO believes the main driver for these is safety risk reduction.

Assessment of capital expenditure

235. ATCO has not provided a business case to support inclusion of the Secret Harbour project in the capital expenditure forecast. In absence of a business case and cost estimate, there is insufficient justification for the proposed \$1.3 million capital expenditure in 2025.⁷⁰
236. For reinforcement at Inglewood, ATCO identifies four options, with Option 2 (1km of mains extension and a new medium pressure regulator (MPR)) selected by ATCO for reinforcement at Inglewood because it is marginally the least cost, technically feasible option to address the identified issue. EMCa considers this to be the prudent choice, and the cost estimate of \$0.5 million to be reasonable, with the exception of the included contingency amount.⁷¹
237. ATCO identified four options, with Option 2 (install 800m mains extension) at a cost of \$0.25 million selected by ATCO for reinforcement at Pearsall because it offers the lowest cost to maintain the safety and reliability of gas services over the next 10 years. EMCa considers this to be the prudent choice, with the exception of the included contingency amount.⁷²
238. The removal of the expenditure associated with the Secret Harbor network reinforcement and the reduction of contingency amounts in the remaining projects, results in the network reinforcement expenditure reducing from \$2.0 million to \$0.6 million.
239. The ERA concludes in its draft decision, that \$0.6 million of ATCO's proposed network reinforcement capital expenditure for AA6 satisfies the criteria for conforming capital expenditure set out in rule 79 of the NGR. Table 4.17 and Table 4.18 for the asset performance and safety category, show ATCO's proposed and the ERA's draft decision network reinforcement capital expenditure for AA6.

Other asset performance and safety programs

240. The other asset performance and safety program expenditure in AA6 is \$15.1 million. This expenditure is further categorised as below.
- **“Step and Touch’ hazard mitigation (\$7.5 million):** This program aims to ensure the safety of field personnel and individuals near high pressure steel pipelines. The program entails a thorough evaluation of 40 pipelines with [REDACTED], as classified by AS 4853, with respect to step and touch voltage hazards. The evaluation will identify the necessary remediation measures to reduce the risk to ALARP. The AA6 capital expenditure program forecast is

⁷⁰ EMCa, Technical Report, April 2024, p. 75.

⁷¹ EMCa, Technical Report, April 2024, p. 75.

⁷² EMCa, Technical Report, April 2024, p. 75.

based on the AA5 program. In AA6, ATCO is forecast to upgrade approximately 10 sites per year.

- **Vehicle protection (\$1.9 million):** The expenditure is for installing bollards and barriers to prevent risk of impact where an above ground asset is not adequately protected. The sites are identified by field personnel during routine maintenance. This AA6 program is forecast to upgrade 46 locations (approximately nine per year).
- **Corrosion protection (\$1.4 million):** High pressure steel pipelines are at risk of corrosion that could lead to pipeline failure and loss of containment events. Metallic pipelines are protected from corrosion primarily by an anti-corrosion coating such as yellow jacket or dual-layer fusion-bonded epoxy. The AA6 corrosion protection scope includes replacing depleted anodes, upgrading cathodic protection enclosures to minimise third-party damage, resistance probes to identify active corrosion, and insulation joints and surge diverters to prevent damage in the event of an electrical surge.
- **Corrosion protection monitoring (\$0.7 million):** This project includes installing monitoring devices on corrosion protection assets to provide remote data capture to ensure pipelines always have adequate corrosion protection and not waiting for manual maintenance visits to find that corrosion protection is not effective.
- **Pressure monitoring devices (\$0.8 million):** The project involves installing 50 pressure monitoring devices to enable fast identification and response to emergencies, trend analysis to identify critical pressure areas and manage network capacity and verify the hydraulic models.
- **Gate station metering (\$0.8 million):** The program is to install three ultrasonic meters to ensure accurate gas flow measurement data into the ATCO network from third-party-owned gate stations.
- **Other performance programs (\$2.0 million):** Costs are for the Picarro leak survey device, which allows the operator to drive over the distribution networks and remotely identify leaks and for the confined space program which is for maintenance of assets in confined spaces.

241. ATCO proposes that the investment driver for this capital expenditure is safety and network integrity.
242. The other asset safety and replacement expenditure proposed in AA6 (\$15.1 million) is 6.2 per cent lower than the actual/forecast expenditure (\$16.1 million) in AA5.

Stakeholder comments

243. DEMIRS supports ATCO's initiative to incorporate the use of a vehicle-mounted Picarro leak survey detection technology into their operations, which is aimed at enhancing the effectiveness of the leak survey program. The proposed new technology provides the capability and precision to detect leaks not only on gas mains but also at gas services and meter positions, providing analytical insight that can be leveraged to enhance leak detection, operational efficiency, and replacement processes.⁷³

⁷³ DMIRS, Public submissions to ERA issues paper, 21 November 2024, p. 2.

Assessment of capital expenditure

Step and touch hazard mitigation

244. ATCO identified three options. The preferred option 2 involves applying one or more of the following remedies:⁷⁴
- Eliminating the risk through asset relocation.
 - Mitigating risk through design and installation of earthing (or equivalent).
 - Providing protection to workers using personal protective equipment as well as altering work practices in some cases.
245. ATCO has proposed replacing 50 sites over the five-year period, which is based on the historical number of sites that required remediation. EMCa queried the rationale for the proposed volume of sites and is satisfied with ATCO's response.⁷⁵
246. EMCa considered the underlying cost basis reasonable, with the exception of the contingency amount.⁷⁶

Vehicle protection

247. ATCO proposes installing bollards and barriers to protect above-ground gas infrastructure against vehicular impact.
248. ATCO has identified 46 high pressure regulator locations for which it considers there is an Intermediate (non-ALARP) risk to the public, personnel, and network integrity from vehicle impact. The estimated capital cost of the work is \$1.9 million.
249. In comparison, ATCO had barriers at 13 sites in the AA5 period that were identified through hazard reports from ATCO personnel. ATCO also advised that there have been four incidents of ATCO assets being struck by a vehicle, necessitating replacement. The proposed AA6 volume of 46 potential sites has been derived from a preliminary desktop analysis with further investigation and detailed assessment required to confirm the requirement for and scope of the work at each site.⁷⁷
250. EMCa considers that while ATCO's analysis of options is reasonable, the analysis is insufficient to conclude that vehicle protection barriers are required at all proposed sites. Also, ATCO may identify a lower cost alternative for some sites. As such, EMCa considers that a program based on its AA5 program is more likely a prudent level of activity.
251. ATCO has based its cost estimate for this program on the latest available historical cost incurred in 2023, which at [REDACTED] per unit, is significantly higher than the average of the preceding three years [REDACTED]. No explanation was given by ATCO for assuming that the 2023 figure is likely to be representative of the average costs to address the AA6 sites, despite EMCa's request for further information.⁷⁸

⁷⁴ ATCO, Attachment 10.037.00 - Facility Upgrade - Step and Touch Mitigation - Business Case, p. 12.

⁷⁵ EMCa, Technical Report, April 2024, p. 76.

⁷⁶ EMCa, Technical Report, April 2024, p. 76.

⁷⁷ ATCO, Attachment 10.028.00 - Facility Upgrade - Vehicle Protection - Business Case, p. 8.

⁷⁸ EMCa, Technical Report, April 2024, p. 77.

252. In the absence of additional compelling information, there is insufficient justification for an increase to the unit costs above that reflective of the three-year historical average.⁷⁹

Corrosion protection

253. ATCO proposes addressing corrosion-related issues at 63 sites p.a. over the AA6 period at an estimated capital cost of \$1.5 million. The scope of works for its corrosion protection program includes a combination of replacement of anodes, upgrades of corrosion probes, upgrading cathodic protection enclosures (test points), insulation joints, and surge protectors.⁸⁰
254. ATCO states that corrosion protection systems maintain safety of the steel pipelines by reducing the risk of corrosion, which can lead to pipeline failure and uncontrolled release of gas. ATCO is also required to ensure its corrosion protection systems comply with the requirements of AS 2885.3 section 6.4 and AS/NZS 4645.2 section 3.1.⁸¹
255. EMCa considers there is a compelling case for ATCO to ensure that necessary work is undertaken in the AA6 period to address the safety and compliance drivers caused by degradation and/or damage to its corrosion protection systems over time.
256. ATCO is essentially continuing similar work and volumes from the AA5 program.⁸² Notably, it includes the introduction of 10 alternating current corrosion probes per year, in addition to 10 resistance probes per year, which the ERA, based on EMCa's recommendation, considers to be prudent.⁸³
257. EMCa considered the underlying cost basis reasonable, with the exception of the contingency amount.⁸⁴

Corrosion protection monitoring

258. ATCO proposes to install monitoring devices on corrosion protection assets at a capital cost of \$0.7 million to provide remote data capture to ensure adequate corrosion protection at all times (that is, rather than wait for maintenance visits).
259. ATCO has not provided a business case for this project, which appears to be a discretionary project.⁸⁵ EMCa considers ATCO has not provided sufficient justification for including this project in the capital expenditure forecast.⁸⁶

Pressure monitoring devices

260. ATCO proposes a continuation of the existing pressure monitoring device (PMD) installation program, installing 30 PMDs on new areas of the network and installing an additional 20 PMDs on the outlets of medium pressure regulators. The total forecast capital expenditure is \$0.8 million.

⁷⁹ EMCa, Technical Report, April 2024, p. 77.

⁸⁰ ATCO, 2025-29 AAI, p. 170.

⁸¹ ATCO, Attachment 10.039.00 - Facility Upgrade - Cathodic Protection Systems - Business Case, p. 6.

⁸² 20 anodes, 15 test point enclosures (up from 10 pa in AA5, which we consider to be reasonable based on the explanation provided), 8 surge protectors (down from 13 pa in AA5).

⁸³ EMCa, Technical Report, April 2024, p. 78.

⁸⁴ EMCa, Technical Report, April 2024, p. 78.

⁸⁵ ATCO response to EMCa106.

⁸⁶ EMCa, Technical Report, April 2024, p. 78.

261. ATCO describes the function of a PMD as:

PMD's are critical to enable timely identification and response to emergency situations, trend analysis to identify critical pressure areas and manage network capacity and verify the hydraulic models.⁸⁷

262. Historically, ATCO has installed six new PMDs annually (totalling 30 PMDs) to monitor growth in the network and existing unmonitored areas with pockets of low pressure.

263. EMCa considers that continuation of the accepted practice to inform network hydraulic modelling is prudent, which is to install 30 new PMDs.

264. ATCO's option 2 is to install a further 20 PMDs (total 50 PMD's) in the AA6 period on the outlets of medium pressure regulators to enable:

Timely identification of MPR performance issues, thus reducing significant network impacts that could be associated with MPR failure. Benefits have been assessed qualitatively.⁸⁸

265. ATCO has provided a qualitative analysis of its Option 2, however, EMCa considers it has not sufficiently demonstrated that the additional 20 PMDs are likely to generate a net benefit on top of the \$8.6 million investment proposed for replacement of medium pressure regulators.⁸⁹ The ERA's decision is to approve the expenditure based on 30 PMD's with the removal of the contingency amounts.

Gate station metering

266. ATCO proposes installing three ultrasonic meters downstream of third-party owned gate stations at a capital cost of \$0.8 million to enable check measurement of the third parties' metering accuracy of gas flow into ATCO's networks. ATCO states that this is critical for hydraulic modelling verification, UAFG calculation, and network analysis.⁹⁰

267. EMCa asked ATCO to explain its position, noting that responsibility for metered flow data accuracy is the responsibility of the gate station owners and not ATCO. EMCa reviewed ATCO's response and does not accept ATCO's risk analysis that there will be severe reputational damage accruing to ATCO in the case of inaccurate meter data from the third-party gate station owners.⁹¹ Further, EMCa considers that any financial damages to ATCO arising from gate station metering inaccuracy should be recoverable from the gate station owners.

268. The ERA's decision based on EMCa's recommendation is that the ultrasonic meters downstream of third-party owned gate stations are not required, and hence no capital expenditure is required.⁹²

Other performance programs

269. ATCO proposes expenditure of \$1.8 million in the AA6 period to acquire Picarro gas leak detection equipment following a successful trial in 2022. ATCO did not provide

⁸⁷ ATCO, Attachment 10.033.00 - Asset Performance - New PMD Installation - Business Case, p. 7.

⁸⁸ ATCO response to IR EMCa36.

⁸⁹ EMCa, Technical Report, April 2024, p. 78.

⁹⁰ ATCO 2025-29 AAI, p. 184.

⁹¹ ATCO response to IR EMCa34.

⁹² EMCa, Technical Report, April 2024, p. 79.

either the results of the trial nor a business case for EMCa's review. The cost estimate is based on a quote from the vendor in April 2023. Whilst the initiative may have merit, EMCa considers there is insufficient information provided by ATCO to demonstrate that the proposed expenditure is likely to satisfy the capital expenditure criteria.⁹³

270. ATCO states that it is implementing a new approach to remediate selected confined spaces at a cost of \$0.2 million. Whilst the initiative may have merit, EMCa considers that there is insufficient information provided by ATCO to demonstrate that the proposed expenditure is likely satisfy the capital expenditure criteria.⁹⁴

Summary - assessment of other asset performance and safety expenditure

271. Based on the reductions highlighted in the categories under the other asset performance and safety programs, the capital expenditure has been reduced from \$15.1 million to \$8.5 million.
272. The ERA concludes in this draft decision, that \$8.5 million of ATCO's proposed other asset performance capital expenditure for AA6 satisfies the criteria for conforming capital expenditure set out in rule 79 of the NGR.
273. Table 4.17 and Table 4.18 for the asset performance and safety category, show ATCO's proposed and the ERA's draft decision for other asset performance capital expenditure for AA6.

Table 4.17: ATCO AA6 forecast capital expenditure – asset performance and safety programs (\$ million real at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
Enabling renewable gases	4.5	2.7	2.7	2.8	2.8	15.5
Inline inspection	3.7	3.8	6.4	5.3	5.6	24.9
Network reinforcement	1.8	-	-	0.1	0.1	2.0
Other asset performance programs	3.1	4.7	2.5	2.5	2.3	15.1
Total	13.1	11.2	11.7	10.7	10.9	57.6

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.10.

⁹³ EMCa, Technical Report, April 2024, p. 79.

⁹⁴ EMCa, Technical Report, April 2024, p. 79.

Table 4.18: ERA draft decision AA6 forecast capital expenditure – asset performance and safety programs (\$ million real at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
Enabling renewable gases	-	-	-	-	-	-
Inline inspection	-	-	4.8	4.0	4.2	13.0
Network reinforcement	0.4	-	-	0.1	0.1	0.6
Other asset performance programs	1.7	1.7	1.7	1.7	1.7	8.5
Total	2.1	1.7	6.5	5.8	6.0	22.1

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.10, ERA draft decision analysis

Network growth

Customer initiated: New customer connections

274. ATCO's proposed network growth expenditure is driven by the number of new customers expected to connect to the network in AA6. Most of the growth capital expenditure forecast is focused on the cost of connecting customers in new subdivisions bordering existing areas of the network. A portion of the growth capital expenditure is driven by the obligation under the distribution licence to offer to connect residential customers within 20 metres of an existing gas main.⁹⁵

275. Based on the demand forecast, ATCO forecasts connecting:

- 274 new commercial (B1) customer connections.
- 1,239 new commercial (B2) customer connections.
- 66,265 new domestic (B3) customer connections with the associated new services, mains extension and new domestic meters.

276. The number of installations used within the forecast is based on CORE's (ATCO's consultant) demand forecast. For A1 and A2 customers, ATCO forecasts no new connections in AA6.

⁹⁵ ATCO is obligated to offer to connect certain residential customers within its licence area as a result of clause 3, Schedule 1 of its Distribution Licence. The offer to connect applies only for connections requiring 20 meters of less of service pipe and where the gas main is so located that it is practicable in accordance with good industry practice to connect the relevant premises to the main.

Table 4.19: ATCO AA6 forecast capital expenditure – network growth
(\$ million real at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
Growth domestic forecast	23.7	26.8	28.7	29.9	30.4	139.6
Growth commercial forecast	4.9	3.6	3.7	3.9	4.0	20.1
Growth development	1.1	0.8	0.8	0.8	0.8	4.3
Sub-total	29.7	31.2	33.2	34.6	35.2	164.0
Less capital contribution	- 2.5	- 1.0	- 1.0	- 1.0	- 1.0	- 6.6
Total	27.3	30.2	32.2	33.5	34.2	157.4

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.20, noting small changes in the table so that it aligns with Attachment 10.022 – AA6 capex model – spreadsheet - clean

277. ATCO has forecast capital expenditure on a unit cost approach. The unit rate is based on a three-year average, including contractor and material costs from 2020 to 2022. ATCO submits that the costs incurred over this period can be considered efficient and reasonable to forecast AA6 costs because they reflect competitively tendered main-laying rates and material costs.
278. Growth development capital expenditure includes the cost to connect customers or subdivisions located away from the existing gas network and will require a network extension. ATCO notes that it assesses these cases individually to ensure the investment is prudent. The forecast for growth development capital expenditure is offset by capital contributions and only the net capital expenditure is added to the capital base. The forecast is based on historical expenditure and capital contributions.
279. ATCO justifies the growth capital expenditure costs on the basis of NGR 79 by either ensuring that the present value of the expected incremental revenue exceeds the present value of the expenditure or its obligation to connect certain customers.
280. Alinta had the following comments related to network growth capital expenditure:
- ATCO states that: ‘Reinforcement projects have historically been classified as Growth, Demand Capex and this was the case in the AA5 FD. However, on review of the drivers for projects of this nature, from 2023, these are classified as Sustaining, Performance capex. This is being done as the key driver for these projects is safety risk reduction. Presumably then, ATCO’s network growth capex, as measured following this reclassification, would be smaller than it would be if measured using the previous classification.
281. Alinta requested that the ERA consider whether ATCO’s reasoning for this reclassification of some part of its capital expenditure is sound and whether the proposed network growth capital expenditure might in fact be higher than stated in its proposal.⁹⁶
282. The Expert Consumer Panel noted that the forecast capital and operating expenditure associated with overly optimistic projections of new Greenfields connections should not be rolled into the capital base:

⁹⁶ Alinta Energy, Public submissions to ERA issues paper, 30 November 2024, p. 22.

ATCO proposes \$157.4 million in capital expenditure on customer initiated new connections. It says most of this is to connect customers in new subdivisions bordering existing areas of the network, with the forecast volume of new connections underpinned by Core Energy's demand forecasts. As discussed in the demand forecast section, we think the volume of new B3 customer connections proposed by ATCO is too high. A more realistic forecast would lower the amount of capital expenditure on new B3 customer connections. We also think the disconnection rate ATCO has used in its Net Present Value analysis is too low. The disconnection rate has been increasing over time and will likely continue to do so. Even if ATCO's highest assumption of a 0.54% disconnection rate were an acceptable estimate for AA6, it is unlikely to be so for the subsequent five-year period. We would like to see the Net Present Value analysis for new B3 customer connections revised using more realistic inputs before we are convinced the associated capital expenditure meets the test in rule 79(2)(b). At this stage, we do not think the proposed capital expenditure is conforming.⁹⁷

283. WACOSS notes that it is critical that as part of this access arrangement, that ATCO is not taking measures to increase demand on the network. Consumers need to be shielded from gas network asset risk they are unable to manage or respond to effectively. This should include avoiding investment that accommodates network growth. Asset stranding risk may be more appropriately managed by requiring new customers to fully fund any works to expand the network. Increases to overall operational costs should also be avoided.⁹⁸

Assessment of capital expenditure

Greenfields customer connections forecast (includes both growth domestic and commercial forecasts)

284. ATCO has presented a business case which includes two options:

- Option 1, Do nothing – do not progress with greenfield connections.
- Option 2, Continue with connection of greenfield customers.

285. Option 1 essentially responds to the stranding risk by not progressing greenfield connections. ATCO identifies several assumptions and disadvantages which lead it to conclude that this option is not preferable. EMCa considers that adoption of Option 1 would limit customer choice.

286. Further, EMCa considered ATCO's representation of stakeholder feedback through its consultation process:

- There is customer support for ongoing access to gas for the time being, providing energy choice to households.
- There is no immediate threat to continuing connection of customers for natural gas service from a government policy decision as has occurred recently in Victoria.

287. Given the above, EMCa considers that provided ATCO's preferred Option 2 satisfies or is likely to satisfy the incremental revenue test, while Option 1 is likely to be inferior to it.⁹⁹

⁹⁷ ECP, Public submissions to ERA issues paper, 27 November 2024, p. 19.

⁹⁸ WACOSS, Public submissions to ERA issues paper, 27 November 2024, p. 1.

⁹⁹ EMCa, Technical Report, April 2024, p. 82.

288. ATCO has provided a business case and supporting net present value analysis with B2 and B3 greenfield results summarised in Figure 4.3.

Figure 4.3 Summary of ATCO's NPV analysis – B2 & B3 greenfield connections (\$ million, Dec 23)

NGR 79(2)(B) TEST	CAPEX (\$M)	NPV (\$M)	PAYBACK PERIOD	NPV SENSITIVITIES		
				CAPEX +10%	OPEX +10%	DEMAND -10%
B2 & B3 greenfield capex	133.0	23.3	20	11.8	18.5	5.2

Source: ATCO 2025-29 AAI, p. 178.

289. EMCa queried the cost assumptions underpinning the net present value calculations and found that the average unit costs and the maintenance costs per customer used was reasonable.¹⁰⁰
290. EMCa also considered the 25-year study period is reasonable.¹⁰¹
291. For the tariff assumption, ATCO has applied the prevailing 2023 tariffs per the tariff variation adopted on 1 January 2023 in its model which is consistent with the requirement to adopt the prevailing reference tariffs under NGR 79(4)(a).
292. On incremental operating expenditure, ATCO has used its output growth escalation value of \$10.4 million to derive its incremental operating expenditure per customer for the five tariff classes. EMCa proposed no change to the output growth escalation figure and so no changes are proposed to ATCO's proposed incremental operating expenditure per customer per tariff class.¹⁰²
293. The results show that the net present value and payback period is very sensitive to unfavourable cost and demand variations:
- With ATCO's assumptions and inputs, a payback period of 20 years and an NPV of \$23.3 million are reasonable results given the declining demand and disconnection assumptions inherent in the CORE forecast. This result supports the adoption of Option 2 over Option 1 with the demand forecast provided.¹⁰³
294. However, it is noted that the result is very sensitive to negative variances, as illustrated in Figure 4.3 in which the positive net present value is more than halved for just a 10 per cent increase in costs and reduced by 80 per cent in response to a 10 per cent reduction in demand. This indicates that the economic case for ongoing connections is not particularly robust and if there are unfavourable variances, ATCO may need capital contributions or higher tariffs to satisfy NGR 79(2)(b).
295. Given, the ERA's draft decision demand forecast¹⁰⁴ is higher than ATCO's proposal, the ERA has increased the amount ATCO forecast for growth capital expenditure. The ERA has used the average connection costs for mains, meters and feeders to estimate the additional growth capital expenditure which is reflected in the total network growth

¹⁰⁰ EMCa, Technical Report, April 2024, p. 82.

¹⁰¹ EMCa, Technical Report, April 2024, p. 82.

¹⁰² EMCa, Technical Report, April 2024, p. 83.

¹⁰³ EMCa, Technical Report, April 2024, p. 84.

¹⁰⁴ ERA draft decision, Attachment 2.

expenditure in Table 4.21.¹⁰⁵ The ERA expects that ATCO will update its demand forecast in response to this draft decision and will amend the growth capital expenditure to be consistent with that forecast.

Brownfields customer connections forecast

296. On the brownfields customer connections capital expenditure, EMCa focussed on the reasonableness of ATCO's cost forecasts. ATCO advises that its cost estimate is based on historical averages and that these costs are supported by long-term commercial agreements, such as the Kaizen contractor rates.¹⁰⁶ EMCa is generally satisfied with the historical averaging approach. Nonetheless, to ensure that the average costs are likely to be representative of what might be incurred during the AA6 period, EMCa asked ATCO for further information. Based on further information provided by ATCO, EMCa is satisfied that the unit cost estimates are reasonable.¹⁰⁷

Growth development capital expenditure

297. Developers sometimes develop tracts of land so far from the existing gas network that the cost of the infrastructure required to connect to the new developments needs to be offset by a developer capital contribution to achieve a positive project net present value. ATCO proposes capital expenditure of \$4.3 million in the AA6 period. Forecasting the volume is performed by a combination of factors, predominantly collaboration with developers. The cost estimate is developed using defined contractual rates. EMCa has reviewed this and considers the approach to be reasonable and that the proposed expenditure, in conjunction with capital contributions, is likely to satisfy the capital expenditure criteria.
298. ATCO has allowed \$6.6 million of capital contributions in its capital expenditure forecast towards commercial developments to achieve economically justified investments, with the amount based on historical ratios. EMCa considers this approach reasonable.¹⁰⁸
299. The ERA concludes in this draft decision, that \$177.9 million of ATCO's proposed network growth capital expenditure for AA6 satisfies the criteria for conforming capital expenditure set out in rule 79 of the NGR.
300. Table 4.20 and Table 4.21 for the network growth category, show ATCO's proposed and the ERA's draft decision network growth capital expenditure for AA6.

¹⁰⁵ ERA draft decision analysis.

¹⁰⁶ ATCO, Attachment 10.047.00 - Growth - Brownfield New Connection - Business Case.

¹⁰⁷ EMCa, Technical Report, April 2024, p. 84.

¹⁰⁸ EMCa, Technical Report, April 2024, p. 85.

Table 4.20: ATCO AA6 forecast capital expenditure – Network growth (\$ million real at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
Growth domestic forecast	23.7	26.8	28.7	29.9	30.4	139.6
Growth commercial forecast	4.9	3.6	3.7	3.9	4.0	20.1
Growth development	1.1	0.8	0.8	0.8	0.8	4.3
Sub-total	29.7	31.2	33.2	34.6	35.2	164.0
Less capital contribution	- 2.5	- 1.0	- 1.0	- 1.0	- 1.0	- 6.6
Total	27.3	30.2	32.2	33.5	34.2	157.4

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.20, noting small changes in the table so that it aligns with Attachment 10.022 – AA6 capex model – spreadsheet – clean.

Table 4.21: ERA draft decision AA6 forecast capital expenditure – Network growth (\$ million real at 31 December 2023)¹⁰⁹

Programs	2025	2026	2027	2028	2029	TOTAL
Total	31.2	34.3	36.3	37.7	38.4	177.9

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.20, noting small changes in the table so that it aligns with Attachment 10.022 – AA6 capex model – spreadsheet – clean, ERA draft decision analysis.

Information technology

301. IT capital expenditure will enable ATCO to efficiently manage gas network assets through their lifecycles, enhance information access opportunities for customers, and enable the workforce to retrieve relevant information. For most of the programs, there is a corresponding operational expenditure – Software as a Service (SaaS). The table below shows the AA6 forecast IT capital expenditure of \$13.0 million.

¹⁰⁹ ATCO's AA6 capital model does not allow an easy segregation of the total network growth expenditure into subcategories. ERA's draft decision and model therefore reflects the change in the total expenditure.

Table 4.22: ATCO AA6 forecast capital expenditure – Information technology
(\$ million real at 31 December 2023)

Category and Programs	2025	2026	2027	2028	2029	Total
IT capital expenditure						
ERP replacement	0.4	1.9	1.9	-	-	4.2
IT sustainability Programs	1.8	0.2	0.2	0.2	0.2	2.5
IT Upgrades						
HR and payroll upgrade	0.2	-	-	-	-	0.2
Geographic information system upgrade	1.0	1.0	-	-	-	2.0
webMethods upgrade	-	-	-	1.1	-	1.1
IT business capability improvements						
Continuous improvement program	0.1	0.1	0.1	0.1	0.1	0.6
Digital improvement program	0.3	0.3	0.3	0.3	0.3	1.5
Data and analytics program	0.2	0.2	0.2	0.1	0.1	0.8
Total	4.0	3.7	2.7	1.9	0.7	13.0

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.21.

Enterprise resource planning (ERP) replacement

302. ERP software integrates various business processes and functions within ATCO into a single system, allowing for the flow of information and data across departments, facilitating better communication, collaboration, and decision-making.
303. ATCO's current ERP system (SAP ECC6) will reach end of support in 2027. The system will not be able to provide all the capabilities ATCO requires to support its business, particularly to support digital transformation and sustainability activities as well as new business operations such as enabling the introduction of renewable gases.
304. ATCO has chosen to replace the current ERP system with a "best-of-breed" solution that would be implemented as a composite ERP solution.^{110,111} ATCO considers this solution meets its needs and is in line with good industry practice. Completion of the planning, scoping, and selection phase in 2025 will provide further detail on software specifics, project schedule, and costs.
305. ATCO's proposed AA6 capital expenditure forecast for ERP replacement is shown below. The total cost (capital expenditure and operating expenditure) is \$28.3 million,

¹¹⁰ Enterprises can purchase software from different vendors to obtain the "best-of-breed" offering for each application area. For example, enterprises may purchase a human-resource package from one vendor and an accounting package from another.

¹¹¹ Gartner "Predicts 2023: In a Period of Global Upheaval, Will ERP Come to the Rescue?", Denis Torii, Tim Faith, Neha Ralhan, 5 April 2023.

however, \$24.0 million of the total cost is considered operating expenditure under the SaaS accounting standards, resulting in a capital expenditure forecast of \$4.2 million.

Table 4.23: ATCO AA6 forecast capital expenditure – enterprise resource planning replacement (\$ million real at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
ERP replacement (total capital expenditure and operating expenditure)	2.9	12.7	12.7	-	-	28.3
Less SaaS adjustment (opex)	- 2.5	- 10.8	- 10.8	-	-	- 24.0
Total (capital expenditure)	0.4	1.9	1.9	-	-	4.2

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.22.

306. ATCO justifies the ERP replacement capital expenditure on the basis on NGR 79(2) as the expenditure is necessary to maintain the integrity of services. SAP is a critical application supporting key business processes across the organisation. A replacement ERP system will enable ATCO to maintain the required service levels by minimising the risk of prolonged outages to SAP, which will reach EOL in 2027. The capital expenditure is also necessary to comply with the Gas Retail Market Procedures (WA) as governed by the Australian Energy Market Operator (AEMO) for daily gas market operations.¹¹²

Assessment of expenditure

307. ATCO advises that SAP was implemented in 2008, with the last major upgrade implemented in 2017 and that the system will reach EOL in 2027 (after allowing for a period of extended support). EOL is commensurate with end of vendor support and is typically a trigger for upgrade or replacement - a number of utilities in Australia are proposing replacement of the SAP ECC6 systems for the same reason.¹¹³

308. ATCO summarised seven options as shown in Table 4.24.

¹¹² Australian Energy Market Operator (2022) "Market Procedures Western Australia".

¹¹³ EMCa, Technical Report, April 2024, p. 89.

Table 4.24: Options evaluated

Description	Differentiating features (what makes this option different to the alternatives)
Option 1: Retain Current SAP System	Increased risk of failure due to software bugs, cybersecurity vulnerability, or changes made to comply with regulatory or business requirements. Software will be out of support within the 2025 to 2029 period.
Option 2: [REDACTED]	[REDACTED]
Option 3: [REDACTED]	[REDACTED]
Option 4: Upgrade/Change to 'Best-of-Breed' ERP Solutions	This is the most likely option to meet all of ATCO's ERP functional requirements.
Options considered not feasible	
Option 5: Upgrade to two (2) new core ERP systems	
Option 6: Upgrade to another Integrated ERP	
Option 7: Upgrade to a Custom Developed ERP Solution	

Source: ATCO, 10.052.00 - IT - ERP Replacement Program - Business Case, Table 2.1

309. ATCO prefers Option 4 because “it is the only option that meets all business requirements and stakeholder expectations,” that addresses the key investment drivers including supporting its digital transformation and sustainability activities as well as new business operations such as enabling renewable gases.¹¹⁴
310. ATCO engaged a consultant to assist with the evaluation of ERP system options. It concludes that Option 4 would provide the greatest flexibility for the future needs of the non-gas businesses. However, ATCO's consultant's analysis led it to conclude that Option 2 was best overall, advising, among other things, that:
- The ATCO core ERP solution should [REDACTED]
 - The core ERP solution should be provided by [REDACTED]
 - Non-core ERP functionality should [REDACTED]¹¹⁵
311. The consultant's analysis aligns with EMCa's experience, which is that “best-of-breed” solutions have been considered by a number of utilities and rejected for the following key reasons:
- The higher complexity and extent of business disruption when compared to retaining an integrated suite.

¹¹⁴ ATCO, 10.052.00 - IT - ERP Replacement Program - Business Case, p. 6.

¹¹⁵ Attachment 09.006 - ATCO R&S - ERP Strategy Recommendations and Roadmap, pp. 19-20.

- The much greater cost to implement compared to an integrated suite. In EMCa's view, ATCO's 30 per cent contingency allowance (approximately \$5 million) due to the additional complexity of configuring and integrating the solutions together in the Cloud Ecosystem is significantly understated. The additional cost could be as high as three times this amount.¹¹⁶
312. The cost estimate for Option 4 is approximately \$5.0 million more than its Option 2. However, in selecting Option 4, ATCO has not demonstrated that the additional cost of Option 4 is likely to deliver a net benefit compared to Option 2. ATCO's net present value analysis does not include any quantified benefits.¹¹⁷
313. Absent a compelling benefits analysis, EMCa does not consider that ATCO has adequately justified the selection of Option 4 over Option 2. When considering that the cost of a best-of-breed solution is likely to far exceed the cost indicated by ATCO as part of its preliminary analysis, EMCA considers that this further underpins the need for greater justification.
314. Based on EMCa's recommendation, the ERA considers that while it is reasonable for ATCO to replace its current ERP within the AA6 period, it should remove the 30 per cent premium included for Option 4 over Option 2 and the contingency allowance. This results in an adjusted capital cost of \$2.5 million, which the ERA considers is likely to satisfy the Rules. This represents a capital expenditure reduction of \$1.7 million compared to ATCO's \$4.2 million capital expenditure estimate, and a consequently lower operating cost requirement, which is covered under Attachment 5, operating expenditure.¹¹⁸
315. A further change, adopted by the ERA, was to move the ERP related expenditure from operating expenditure to capital expenditure. While ATCO's rationale for moving the ERP expenditure to operating expenditure was noted as complying with the accounting rules, the uncertainty associated with this expenditure, given the early stages the project is in, necessitated the move to capital expenditure given the regulatory frameworks treatment of operating expenditure. The move to capital expenditure allows the clawback of expenditure should the resultant expenditure outcome be lower than the draft decision approved expenditure. As such, the \$17.6 million draft decision approved operating expenditure for ERP replacement, has been moved into the AA6 forecast capital.¹¹⁹
316. As a result of the decisions above, the resulting ERP replacement expenditure increases from \$4.2 million to \$20.1 million.

IT sustainability programs

317. ATCO submitted that its sustainability reporting system serves to align reporting with business processes and assist in developing its practices to support continuous sustainability improvement.

¹¹⁶ Attachment 10.052.00 - IT - ERP Replacement Program - Business Case, p. 22.

¹¹⁷ Att 10.052.06 - IT - ERP Replacement - Best of Breed - NPV Assessment - Option 4.

¹¹⁸ EMCa, Technical Report, April 2024, p. 92.

¹¹⁹ ERA draft decision, Attachment 5 Operating expenditure.

318. ATCO is seeking to invest in several systems to ensure it maintains compliance with its multiple legislative requirements and ensure system and data integrity, including:¹²⁰

- **Sustainability reporting system:** To address governmental and National Greenhouse and Energy Reporting (NGER) framework reporting requirements. This project will deliver a solution to collate required environmental inputs and reports in the format required by various agencies with ongoing operational support.
- **Energy regulator reporting amendments:** Introducing renewable gas, associated higher heating value changes, and gate injection point locations will require measurement system changes. ATCO's customer billing systems and reporting to AEMO must be adjusted via the Network Management Information System (NMIS). This project will review, scope, and implement changes to the existing System to address these changes.
- **System modelling amendments:** The proposed addition of gas injection points will alter the flow of gases through the system, and the change to higher heating value will require new billing zones to be defined. To validate the billing zones or the consequence areas of these changes, new modelling tools will need to be implemented. This project will review, scope, and implement changes to the existing Synergi modelling system to address these changes.

319. ATCO's AA6 forecast capital expenditure for IT sustainability programs is detailed in the table below. The total cost (capital expenditure and operating expenditure) is \$3.6 million, the SaaS adjustment is \$1.2 million, resulting in a capital expenditure forecast of \$2.5 million.

Table 4.25: ATCO AA6 forecast capital expenditure – IT sustainability programs (\$ million real at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
Energy regulator reporting amendments – NMIS	0.9	0.1	0.1	0.1	0.1	1.4
Network modelling amendments - Synergi	1.6	0.1	0.1	0.1	0.1	1.8
Sustainability reporting system	0.1	0.1	0.1	0.1	0.1	0.5
Total (capital expenditure and operating expenditure)	2.5	0.3	0.3	0.3	0.3	3.6
less SaaS adjustment (opex)	- 0.8	- 0.1	- 0.1	- 0.1	- 0.1	- 1.2
Total (capital expenditure)	1.8	0.2	0.2	0.2	0.2	2.5

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.23.

320. ATCO justifies the IT sustainability programs replacement capital expenditure on the basis on NGR 79(2) as the expenditure is necessary to maintain the integrity of services and integration with systems such as the AEMO gas retail market systems.

¹²⁰ ATCO, 2025-29 Plan, 1 September 2023, p. 185.

Assessment of expenditure

321. On the energy regulator reporting amendments to the NMIS, ATCO has not provided a business case, or other sufficiently compelling information to confirm the need, scope and estimated cost of the changes it proposes to make to the NMIS. ATCO has also identified the need to update the NMIS in response to its plans for introduction of renewable gas to the GDS. EMCa has separately assessed the proposed expenditure for pipeline infrastructure, including injection points previously, concluding that the proposed expenditure is not conforming. Therefore, any expenditure to update the NMIS for this purpose is similarly considered to be non-conforming.¹²¹
322. EMCa assessed that ATCO's Synergi modelling system project is also dependent on the introduction of gas injection points.¹²² Absent clear and compelling justification for this project separate to the introduction of the gas injection points, any expenditure for network modelling amendments is similarly not likely to be conforming.¹²³
323. ATCO's submission for the sustainability reporting system project did not include sufficient information to confirm that reference to governmental and NGER framework requirements would be a new regulatory obligation, and when that regulatory obligation would apply to ATCO. EMCa therefore asked a clarifying question of ATCO, but the response did not provide compelling additional information to confirm that this was the case.¹²⁴ In the absence of sufficient information of a new obligation, ATCO has not demonstrated that the proposed expenditure is justified.¹²⁵
324. As a result of the conclusions above, the IT sustainability expenditure of \$2.5 million has been removed.

Information technology upgrade projects

325. ATCO's IT upgrade programs are detailed below:
- Human Resource and Payroll Upgrade: ATCO's payroll and employee management functions are currently managed within the SAP system. Due to shortfalls in the capabilities of this system, it has implemented additional systems and processes to meet changing business needs and legislative reporting requirements. The considerable number of systems with limited integration between them provides a disjointed end-to-end solution requiring large amounts of manual processing by the HR function. The project is currently in the tender process with vendors, with pre-work forecast to commence in September 2023, and implementation in September 2024. As this timing coincides with the transition between AA5 and AA6, ATCO has forecast AA6 costs as \$0.9 million, less SaaS of \$0.7 million, returning a capital expenditure forecast of \$0.2 million.
 - Geographic Information Systems (GIS) Upgrade: The GIS locates and creates spatial pictures of data in maps, globes, reports, and charts. This data is needed when locating assets for maintenance and emergency response. Post 2025, the current GIS will receive limited support from the vendor due to the age of the current version. In 2025, ATCO will undertake the first of two planned upgrades

¹²¹ EMCa, Technical Report, April 2024, p. 92.

¹²² ATCO, 2025-29 AAI, p. 185.

¹²³ EMCa, Technical Report, April 2024, pp. 92,93.

¹²⁴ ATCO's response to Information Request EMCa54, referred us to Attachment 09.011.00 which EMCa had already considered.

¹²⁵ EMCa, Technical Report, April 2024, p. 93.

during AA6. The second upgrade will take place in 2029, based on Esri's current product lifecycle support policy.

- **Webmethods Upgrade:** ATCO currently uses Software AG's webMethods 10.5 platform as its integration platform, a centralised integration transport layer to exchange data between systems. The webMethods upgrade will maintain vendor support and make available any new features as they become available to maintain the availability of ATCO's core business systems and assist with mitigating cyber security risks.

326. ATCO's AA6 forecast capital expenditure for IT upgrade programs is shown below. The total capital expenditure is \$4.1 million, with the only SaaS adjustment (\$0.7 million) for HR and payroll upgrade, resulting in a capital expenditure forecast of \$3.4 million.

Table 4.26: ATCO AA6 forecast capital expenditure – IT upgrade programs
(\$ million real at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
HR and payroll upgrade	0.9	-	-	-	-	0.9
Geographic information system upgrade	1.0	1.0	-	-	-	2.0
webMethods upgrade	-	-	-	1.1	-	1.1
Total (capital expenditure and operating expenditure)	1.9	1.0	-	1.1	-	4.1
less SaaS - HR and payroll upgrade (opex)	- 0.7	-	-	-	-	- 0.7
Total (capital expenditure)	1.2	1.0	-	1.1	-	3.4

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.24.

327. ATCO justifies the IT upgrade programs capital expenditure on the basis of NGR 79(2) as the expenditure is necessary to maintain critical IT applications that are necessary to maintain safety and integrity of services that ATCO delivers.

Assessment of expenditure

HR and payroll upgrade project

328. The forecast \$0.2 million capital expenditure in 2025 is for Phase 2 of a project to upgrade ATCO's HR and payroll system. This follows discovery, planning and scoping, and Phase 1 in the period 2022 to 2024. ATCO states that it intended to provide a business case for Phase 2 during the AA6 review process, however, this has not been provided for review. Absent justification for including this project in the capital expenditure forecast, there is no basis on which to determine whether the proposed expenditure is likely to satisfy the capital expenditure criteria.¹²⁶

¹²⁶ EMCA, Technical Report, April 2024, p. 93.

GIS upgrade project

329. ATCO's GIS captures, displays and maps locational data associated with the GDS. ATCO proposes to upgrade its GIS to version 11.0 in 2025 to retain vendor support following two years of extended support for its current version.¹²⁷
330. EMCa considers that ATCO's IT strategy of upgrading its software to retain vendor support, taking account of vendor version cycles and extended support options, is prudent practice for core systems such as the GIS.
331. The cost estimate for each upgrade of \$1.0 million is a bottom-up estimate using information from (i) previous standard upgrades, (ii) quotes from IBM to manage and implement the project, and (iii) previous estimates for internal labour to undertake project and change management activities of upgrade projects of a similar size and nature. EMCa considers that this is a reasonable basis for developing the cost estimate.¹²⁸

WebMethods upgrade project

332. ATCO uses webMethods 10.5 platform as its integration platform. ATCO states that:
- webMethods releases new versions every 6 months and provides standard maintenance and support for each version for three years, followed by optional End of Maintenance extension (EOM) for a 30% increase in the annual maintenance costs.¹²⁹
333. ATCO proposes upgrading from version 10.5 in 2024 and operating that version until 2028 when it will upgrade to the available version at a cost of \$1.13 million capital expenditure to retain vendor support.
334. EMCa considers that it is prudent practice to maintain updated vendor support for important systems such as the webMethods, consistent with ATCO's IT strategy.
335. The cost estimate is derived from a bottom-up build and EMCa considers it to be a reasonable cost estimate.¹³⁰
336. As a result of the conclusions above, the expenditure for the IT upgrade programs has reduced from \$3.4 million to \$3.2 million.

IT business capability improvement programs

337. To streamline the approval of small IT business capability improvement projects (ranging from \$1,000 to less than \$50,000), ATCO has a dedicated online governance process. A request is prepared and approved to draw down on the approved allocated expenditure for IT business capability improvement.¹³¹
- IT – continuous improvement program: Continuous IT improvements provide a flexible approach to enabling small-scale systems changes and implementing changes as demand arises. These improvements are often for regulatory changes and business operational changes that are needed without delay.

¹²⁷ Attachment 10.053.00 - IT - GIS (Geographic Information System) Upgrade Program - Business Case, p. 2.

¹²⁸ EMCa, Technical Report, April 2024, p. 94.

¹²⁹ ATCO, ISTP (2025 to 20-29), p. 34.

¹³⁰ EMCa, Technical Report, April 2024, p. 94.

¹³¹ ATCO, 2025-29 Plan, 1 September 2023, pp. 190-192.

- IT – digital improvement program: This is an IT initiative to enhance business workflows, customer satisfaction, and dynamic inter-team decision-making. This program is designed to enable ATCO to adapt to changing market dynamics and customer expectations while focusing on simplifying processes and continuous improvement.
- IT – data and analytics program: This ensures that ATCO can continually identify new analytical models, reporting, and dashboard opportunities. The benefits of investing in this program have resulted in increased data accuracy, increased data security, and access to a richer data history.

338. ATCO's proposed capital expenditure forecast for IT business capability programs is shown below. The total cost (capital expenditure and operating expenditure) is \$4.9 million, the SaaS adjustment is \$2.0 million resulting in a capital expenditure forecast of \$2.9 million.

Table 4.27: ATCO AA6 forecast capital expenditure – IT business capability programs (\$million real as at 31 December 2023)

Programs	2025	2026	2027	2028	2029	Total
IT continuous improvement program (total)	0.4	0.4	0.4	0.4	0.4	2.0
Digital improvement program (total)	0.4	0.4	0.4	0.4	0.4	1.9
Data and analytics program (total)	0.2	0.2	0.2	0.2	0.2	1.0
Total (capital expenditure and operating expenditure)	1.0	1.0	1.0	1.0	1.0	4.9
Less SaaS - IT continuous improvement (opex)	- 0.3	- 0.3	- 0.3	- 0.3	- 0.3	- 1.4
Less SaaS - digital improvement (opex)	- 0.1	- 0.1	- 0.1	- 0.1	- 0.1	- 0.4
Less SaaS - data and analytics	- 0.0	- 0.0	- 0.0	- 0.0	- 0.0	- 0.2
Total	0.6	0.6	0.6	0.6	0.6	2.9

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.26.

339. ATCO justifies the IT business capability capital expenditure on the basis on NGR 79(2) as an efficient method of improving systems and services that are necessary to maintain safety and integrity of services that ATCO delivers.

Assessment of expenditure

340. On the IT continuous improvement program, ATCO describes the approach of using an allocation to reduce time and effort required for governance related processes and documents, and achieve internal efficiencies, where:

Typically benefits of continuous improvement initiatives help the business reduce cost, comply with regulatory requirements, or mitigate risk.¹³²

341. EMCa considers that expenditure for initiatives designed to deliver internal efficiencies to ATCO, should be matched with a mechanism to pass benefits on to consumers. Absent such a mechanism, the expenditure should be offset by the benefits delivered, which requires improvement related projects such as this program to be self-funding.
342. EMCa does not consider that the proposed total expenditure has been sufficiently justified, in absence of the scope or benefits of the program having been identified. As such, the case for the proposed expenditure has not been sufficiently justified.¹³³
343. The digital improvement program is similar in scope and objective to the continuous improvement program. The digital improvement program similarly includes an allowance for un-specified projects with a focus on improvement opportunities through adoption and accessibility of digital capabilities. ATCO describes the program as intended to deliver digital enhancement projects to improve customer and business processes.¹³⁴
344. Unlike the continuous improvement program, ATCO states that the benefit from the AA6 program is likely to be similar to the AA5 program for which it realised a reasonable return. It expects therefore to realise a positive net present value over the AA6 period from the proposed program.
345. For the same reasons stated in the assessment of the continuous improvement program, EMCa considers the expenditure should be offset by the benefits delivered, which requires improvement related projects such as this program proposed by ATCO should be self-funding.¹³⁵
346. For the data and analytics program, ATCO states that the specific investments under this program are currently not known, but that:

This program commenced in AA5 and will continue in AA6 to ensure that ATCO can continually identify new analytical models, reporting, and dashboard opportunities. The benefits of investing in this program have resulted in increased data accuracy, increased data security, and access to a richer data history.¹³⁶
347. For the reasons stated above, EMCa finds that the data and analytics program has not been sufficiently justified. Specifically, that the expenditure should be offset by the benefits delivered, which requires improvement related projects such as this program to be self-funding.¹³⁷
348. As a result of the conclusions above, the expenditure for the IT business capability programs of \$2.9 million has been removed.

¹³² Attachment 10.049.00 - IT - Continuous Improvement Program - Business Case, p. 13.

¹³³ EMCa, Technical Report, April 2024, p. 95.

¹³⁴ Attachment 10.051.00 - IT - Digital Program - Business Case, p. 4.

¹³⁵ EMCa, Technical Report, April 2024, p. 96.

¹³⁶ ATCO, 2025-29 AAI, p. 192.

¹³⁷ EMCa, Technical Report, April 2024, p. 96.

Summary - assessment of IT expenditure

349. Based on the changes and reductions highlighted in the categories under the information technology programs, the capital expenditure has increased from \$13 million to \$23.3 million.

350. The ERA concludes in this draft decision, that \$23.3 million of ATCO's proposed information technology capital expenditure for AA6 satisfies the criteria for conforming capital expenditure set out in rule 79 of the NGR.

351. Table 4.28 and Table 4.29 show ATCO's proposed and the ERA's draft decision information technology capital expenditure for AA6.

Table 4.28: ATCO AA6 forecast capital expenditure – information technology
(\$ million real at 31 December 2023)

Category	2025	2026	2027	2028	2029	Total
ERP Replacement	0.4	1.9	1.9	-	-	4.2
IT Sustainability	1.8	0.2	0.2	0.2	0.2	2.5
IT Upgrade	1.2	1.0	-	1.1	-	3.4
IT Business Capability	0.6	0.6	0.6	0.6	0.6	2.9
Total	4.0	3.7	2.7	1.9	0.7	13.0

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.21.

Table 4.29: ERA draft decision AA6 forecast capital expenditure – information technology
(\$ million real at 31 December 2023)

Category	2025	2026	2027	2028	2029	Total
ERP Replacement	2.1	9.0	9.0	-	-	20.1
IT Sustainability	-	-	-	-	-	-
IT Upgrade	1.1	1.0	-	1.1	-	3.2
IT Business Capability	-	-	-	-	-	-
Total	3.2	10.0	9.0	1.1	-	23.3

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.21, ERA draft decision analysis.

Structures and equipment

352. ATCO's structures and Equipment expenditure consists of the following categories.

- Fleet
- Property, Plant and Equipment (PPE)

Table 4.30: ATCO AA6 forecast capital expenditure – structures and equipment (\$ million real at 31 December 2023)

Category	2025	2026	2027	2028	2029	Total
Fleet	3.8	2.3	1.4	2.4	2.8	12.6
Property and plant	1.6	3.7	0.5	0.4	0.5	6.7
Equipment	0.9	0.9	0.9	0.9	0.9	4.6
Total	6.3	6.9	2.8	3.7	4.2	23.9

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.27, Table 10.28.

Fleet

353. ATCO submits that its fleet assets play a vital role in enabling the work crews to undertake network maintenance activities, respond to network incidents promptly, connect new customers to the network, extend gas mains to support network growth and provide a broad range of services. ATCO's current fleet assets include:

- Motorcycles.
- Passenger vehicles.
- Light commercial vehicles (utility vehicles and vans).
- Heavy vehicles.
- Larger plant and equipment (trailers, mobile message boards, excavators, and compressors).

354. ATCO forecasts the long-term replacement of fleet assets using age-based requirements, and then each year, it refines the annual replacement schedule based on:

- Usage data (kilometres travelled, or engine hours metered).
- The vehicle's condition (through visual inspection and the vehicle's maintenance history).
- The vehicle's ongoing operational suitability.

355. ATCO states that it has developed its fleet replacement criteria in line with industry practice. The criteria are based on the recommended replacement timing for trucks (as published by the Institute of Public Works Engineering Australia in its Plant and Vehicle Management Manual) and the replacement criteria from other network operators.

356. The fleet expenditure proposed in AA6 (\$12.6 million) is 5 per cent higher than the actual/forecast expenditure (\$12.0 million) in AA5.

357. ATCO justifies the fleet expenditure on the basis on NGR 79(2) as the expenditure is necessary to ensure the fleet is fit for purpose, fully operational and in good condition to maintain safety and integrity of services that ATCO delivers.

Assessment of capital expenditure

358. EMCa is satisfied that ATCO's replacement criteria have been developed in line with industry practice and is consistent with its practices applied in the AA5 period. During the AA5 period, the replacement criterion for replacement of light vehicles was extended from five years to six years, which based on advice from ATCO is the only change to the replacement criterion made for the AA6 period.¹³⁸
359. EMCa considers the volume of replacements appears to be reasonable when compared to the volume of vehicles replaced/forecast to be replaced in the AA5 period (that is, 156 vehicles in AA5 versus 158 vehicles in AA6), given that there will be variations in the replacements depending on the lifecycles of the individual plant items.
360. ATCO's average fleet cost per unit for the AA6 period is \$80,000, compared to the average cost of \$77,000 actual average unit cost in the AA5 period.¹³⁹ ATCO has provided a breakdown of the volume and cost for each of the vehicle classes. ERA based on EMCa's recommendation, considers the average unit cost for each vehicle class is reasonable.¹⁴⁰

Property, plant and equipment (PPE)

361. This asset class comprises PPE, which are non-network assets used to support ATCO's daily operations, including its operational customer service and network maintenance teams. Below are the categories of assets within PP&E:¹⁴¹
- **Property and plant:** These include real estate properties owned or leased by ATCO as depots and offices, workshops, warehouses, and associated assets such as air conditioning units, furniture, and fittings. ATCO has nine operational facilities, with the head operations centre at Jandakot, three depots in the Perth metro region, and another five regional depots. The three metro depots are in Mandurah, Malaga, and Joondalup. Regional depots are in Geraldton, Bunbury, and Busselton, and there are two further depots in Kalgoorlie and Albany to support the unregulated gas network (not included in the AA6 submission).
 - **Equipment:** These are tangible assets used by the business for network construction, operation, and maintenance, such as flow-stopping equipment, equipment that requires servicing, and calibration and hand tools.
362. Demand for new facilities is driven by forecast network activities, staff and accommodation requirements, and future network expansions. Facilities like depots are refurbished based on their condition and operational suitability. Most of ATCO's equipment that are non-critical assets are run to failure.
363. ATCO states that, how assets are operated and maintained is a key factor in how they perform and how long they remain serviceable. ATCO's AA6 PP&E capital expenditure program includes property (facilities and plant) improvement initiatives for the facilities in the Perth metropolitan area and the acquisition of equipment aligned with the Strategic Delivery and Resource Plan, (see Attachment 10.025).

¹³⁸ Passenger vehicles, and light commercial vehicles (ATCO, Attachment 5.014.00 – Fleet – Compliance Summary, p. 8).

¹³⁹ ATCO, Att 5.014.00 – Fleet – Compliance Summary, p. 5.

¹⁴⁰ EMCa, Technical Report, April 2024, p. 97.

¹⁴¹ ATCO, 2025-29 Plan, 1 September 2023, p. 195.

364. ATCO's criteria for replacement and further detail regarding the PP&E assets are provided in the Asset Lifecycle Strategy (ALS) - Property, Plant and Equipment (see Attachment 10.005)
365. The PPE expenditure proposed in AA6 (\$11.3 million) is 25.6 per cent higher than the actual/forecast expenditure (\$9 million) in AA5.
366. ATCO justifies the expenditure on NGR 79(2) as necessary to maintain the safety and integrity of services. These are achieved by ensuring the PP&E remains fit for purpose, fully functional, and in a good condition.

Assessment of capital expenditure

Property and plant

367. ATCO has developed an ALS – Property, Plant and Equipment (PPE) which guides its PPE expenditure. EMCa looked for evidence of how ATCO has addressed each of its drivers in its supporting documentation, and where improvements to its property were likely to provide additional benefits to ATCO and/or its customers and is satisfied that adequate justification has been provided.
368. ATCO's preferred option is to implement its ALS with minor capital expenditure based on the asset's condition, performance and operational suitability (that is, according to ATCO's facilities management team). ATCO's project list is based on its facilities condition assessments, expected asset lifecycle, BAU initiatives and planned facilities improvements.¹⁴² EMCa has reviewed and found this to be a prudent approach.
369. The costing covers two areas:
- Depot minor capital works (\$2.4 million): ATCO has provided a detailed bottom-up cost estimate for each year of the AA6 period. The cost estimate covers 24 individual minor works over a five-year period. EMCa considers that the line items appear to be reasonable, but not the loading for "time sheeting", which EMCa considered to be equivalent to a contingency allowance.
 - New Malaga depot (\$4.3 million): For the new Malaga depot, the ATCO-approved capital expenditure is \$6.4 million. It has incurred \$2.1 million in AA5 to acquire a vacant block of industrial land in Malaga and for design costs, leaving the remainder \$4.3 million for the depot infrastructure/fit-out in the AA6 period. EMCa notes that the establishment of the new depot remains consistent with its long-term plan and that ATCO intends to retest the market and ensure that building the depot is the best value for money compared to continuing to lease its current depot. EMCa considered the estimated cost reasonable.
370. The ERA, based on EMCa's analysis has removed the loading for "time sheeting" in the depot minor capital works program and approved the new Malaga depot expenditure; but expects that ATCO in its response will provide an update on its plan which the ERA will consider in its final decision.

Equipment

371. ATCO has identified 20 line items in its capital expenditure model for equipment purchases. The net forecast capital expenditure is \$4.6 million.

¹⁴² ATCO, Attachment 10.055.00 - Depots - Minor Capital Works - Coastal - Business Case, p. 9.

372. ATCO has a run-to-failure strategy for its equipment asset category and has provided a 20-item forecast with flat individual expenditure profiles that amount to a little less than its AA5 actual/expected expenditure. As a recurrent line of expenditure, EMCa considers the estimate is reasonable.¹⁴³
373. The ERA concludes in this draft decision, that \$23.7 million of ATCO's proposed structures and equipment capital expenditure for AA6 satisfies the criteria for conforming capital expenditure set out in rule 79 of the NGR.
374. Table 4.31 and Table 4.32 show ATCO's proposed and the ERA's draft decision structures and equipment capital expenditure for AA6.

Table 4.31: ATCO AA6 forecast capital expenditure – Structures and equipment (\$ million real at 31 December 2023)

Category	2025	2026	2027	2028	2029	Total
Property, plant & equipment	2.6	4.6	1.4	1.4	1.4	11.3
Fleet	3.8	2.3	1.4	2.4	2.8	12.6
Total	6.3	6.9	2.8	3.8	4.2	23.9

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.27, Table 10.28.

Table 4.32: ERA draft decision AA6 forecast capital expenditure – Structures and equipment (\$ million real at 31 December 2023)

Category	2025	2026	2027	2028	2029	Total
Property, plant & equipment	2.5	4.6	1.3	1.3	1.4	11.1
Fleet	3.8	2.3	1.4	2.4	2.8	12.6
Total	6.3	6.8	2.7	3.7	4.2	23.7

Source: ERA draft decision analysis.

Overhead costs

375. Capital overheads are the necessary indirect costs of delivering the capital expenditure program, except for the labour and materials costs that can be directly allocated.
376. ATCO is forecasting to capitalise overhead costs of \$64.4 million in AA6.

¹⁴³ EMCa, Technical Report, April 2024, p. 99.

**Table 4.33: Capitalised portion of overhead expenditure
(\$ million real at 31 December 2023)**

Categories	2025	2026	2027	2028	2029	Total
Base year	11.4	11.4	11.4	11.4	11.4	57.2
Recurrent step changes	0.5	0.5	0.5	0.4	0.4	2.2
Non-recurrent step changes	-	0.0	0.1	0.3	0.2	0.6
Forecast growth	0.3	0.4	0.5	0.6	0.7	2.3
Forecast price growth	0.2	0.3	0.4	0.5	0.6	2.0
Total	12.4	12.6	12.9	13.2	13.3	64.4

Source: ATCO, 2025-29 Plan, 1 September 2023, Table 10.27, Table 10.32.

377. Overheads are applied to all the asset classes other than non-network assets such as IT, fleet or PP&E.
378. Overheads relating to the forecast capital expenditure include the indirect costs associated with:
- Network construction: Includes indirect costs associated with establishing and maintaining pipeline assets including the internal labour cost (and associated fleet, IT and telecommunications costs) of management and administration support. It also includes the costs of training staff, planning teams and inspection teams whose hours cannot be directly attributed to projects and activities but are indirectly driven by network construction.
 - Customer and corporate services: Relate to the portion of services provided by corporate departments such as finance, HR, regulatory, legal and risk that relate to the capital expenditure program but cannot be directly allocated to projects or activities via timesheets or invoices. Most of these costs are internal labour and the associated employee costs of fleet, IT, and telecommunications.
 - Asset management: Includes the indirect costs of technical support services, compliance and risk departments, and asset services. Most of these costs are internal labour and associated costs of staff whose hours cannot be allocated directly to projects and activities but arise because of incurring directly attributable costs.¹⁴⁴
379. ATCO has adopted the base-step-trend method to calculate overheads to be capitalised. ATCO is of the view that the base-step-trend method is suitable because the nature of overhead costs is largely fixed. For consistency, ATCO has used the step changes and trends assumed for its forecast operating expenditure (ATCO Chapter 9) for the forecast overhead calculation.¹⁴⁵
380. Using the base-step trend approach means using overhead costs in the efficient base year to forecast AA6 overheads. By using 2022 costs to predict future overheads, ATCO submits that a prudent approach is applied to the overhead estimate for AA6 and

¹⁴⁴ ATCO, 2025-29 Plan, 1 September 2023, p. 198.

¹⁴⁵ ATCO, 2025-29 Plan, 1 September 2023, Chapter 9.

achieves the lowest sustainable overhead cost to support the capital expenditure program.

Establish the efficient base year for overheads¹⁴⁶

381. ATCO has used its actual overheads from the most recent complete calendar year (2022) as representative overhead costs for AA6. ATCO has assumed that any efficiency savings made in 2022 are recurrent and will continue to apply in the future. ATCO has adjusted the base overhead costs to remove any 2022 non-recurrent expenditure. ATCO submits that the use of a base level of overhead, based on its actual overhead, reflects that overheads are recurrent. The AA6 base overhead forecast is \$57.2 million.

Adjusting overheads for step changes in recurrent and non recurrent expenditure¹⁴⁷

Recurrent expenditure

382. The activities during AA6 that are not reflected in ATCO's base year are known as step changes. Step changes include the additional costs of associated safety, compliance, and regulatory activities typically driven by a change in obligation. For example, the step change relating to enabling renewable gases includes labour costs to deliver the project. Although a portion of labour costs are time-written and capitalised to the project directly, the portion relating to administration, support, and management costs associated with this project have been determined as indirect capital expenditure.

Non-recurrent expenditure

383. Several non-recurrent costs will occur during AA6 that are not reflected in ATCO's base year. As with the recurrent step changes, the overhead component has been calculated based on the proportion of costs that will not be directly attributable to the step change activity.

Trend to account for forecast growth, price growth and productivity growth

Forecast growth

384. ATCO incurs additional expenditure as the number of customers connected to the network increases and as the size of the network increases; most of this additional expenditure is directly allocated to capital expenditure. ATCO is of the view that it is appropriate to escalate its base year overhead by the forecast growth in customer numbers and the increased size of its distribution network (measured in km of mains). The AA6 overhead associated with forecast growth is \$2.3 million and is calculated by applying a cumulative growth factor to the overhead value in the efficient base year.

Forecast price growth

385. Forecast price growth typically accounts for price increases in labour and non-labour (for example, materials). ATCO's forecast price growth results in an additional \$2.0 million of overhead in AA6. ATCO uses a resource mix of 62 per cent labour and 38 per cent non-labour costs based on benchmark weights. ATCO submitted that

¹⁴⁶ ATCO, 2025-29 Plan, 1 September 2023, p. 199.

¹⁴⁷ ATCO, 2025-29 Plan, 1 September 2023, pp. 199 - 201.

labour cost escalation over AA6 is based on the forecast annual growth rate in the wage price index determined by an independent expert.

Productive growth

386. As with base operating expenditure, ATCO has not applied a productivity adjustment on the basis that it is of the view that its benchmark performance is already considered efficient compared to its peers.

Assessment of capitalised overheads

387. For AA6, ATCO has applied the base-step-trend method, similar to that applied for AA5 to determine the level of capitalised overheads. ATCO has relied on the base year capitalised overheads incurred in 2022, being its base year for forecasting operating expenditure. EMCa's view is that since it is a continuation of the method that ATCO used in AA5, it is appropriate to use this method.¹⁴⁸
388. EMCa notes comments made by Cutler Merz (ATCO's consultant) in its review of individual cost centre codes, and share the concerns raised by Cutler Merz regarding the high rate of capitalisation of call centre and control room activities. However, there is insufficient information to review the impact of changes to individual cost centres, or the treatment of executive level staff in the determination of these percentages as claimed by ATCO.
389. ATCO's AA6 forecast of overhead expenses of \$64.4 million represents an increase compared to the AA5 period, based on an increasing capital expenditure program. However, the AA6 forecast is only 15 per cent on average of the forecast qualifying capital expenditure over the 2025 to 2029 period, compared with the rate of 20 per cent on average used during AA5.
390. In its report to ATCO, Cutler Merz concludes that:¹⁴⁹
- The allocation rate of overheads has declined since AA5, given widespread use of timesheeting labour which has led to more accurate allocation of direct costs and less costs smeared over capital projects as overheads.
391. For AA6, EMCa has reviewed the calculation steps for ATCO's base-step trend model for capitalised overhead costs. Given the relationship between the input assumptions adopted by ATCO in its model and the quantum of overheads to be capitalised, any downward adjustments to the operating cost base-step trend input assumptions also result in a consequent adjustment to the level of overheads to be capitalised.
392. In the assessment of ATCO's forecast operating expenditure, EMCa concluded that ATCO's forecast expenditure is overstated due to understatement of base year adjustments and a degree of overstatement of some trend parameters and some operating cost steps. EMCa derived an alternative operating expenditure forecast that adjusted for these findings and as such, have made a parallel and equivalent adjustment to ATCO's proposed capitalised overheads.
393. EMCa's adjustments to ATCO's base-step-trend model result in a reduction to the total overhead capitalisation amount of \$8.7 million over the AA6 period. The ERA has

¹⁴⁸ EMCa, Technical Report, April 2024, p. 33.

¹⁴⁹ ATCO, Attachment 10.024, p. 8.

decided to apply EMCa's proposed overhead reduction to the AA6 capital expenditure.¹⁵⁰

394. In addition to the EMCa recommended changes, the ERA has made changes to the labour price escalation, demand and staff incentives which has resulted in the overheads reduction increasing from \$8.7 million to \$9.6 million.¹⁵¹ This has been applied in the draft decision.

ERA decision

395. The ERA has considered information provided by ATCO, public submissions and EMCa's report to determine the amount of capital expenditure that meets the requirements of the NGR.

396. Table 4.34 shows ERA's draft decision capital expenditure by regulatory asset category for AA6. As specified in the details of this decision, in comparison to the proposal, there is a reduction of \$60.7 million in the various categories. There has also been an increase of \$37.9 million due to the increased demand specified in this decision and due to the transfer of SaaS operating expenditure to capital expenditure. As a result, the draft decision AA6 capital expenditure of \$443.1 million is \$22.8 million (4.9 per cent) lower than ATCO's proposed capital expenditure.

Table 4.34: ERA draft decision AA6 forecast capital expenditure by regulatory asset category (\$ million real at 31 December 2023)

Category	2025	2026	2027	2028	2029	Total
Network Sustaining	43.7	40.3	46.5	44.1	43.5	218.1
Asset Replacement	41.6	38.6	40.0	38.4	37.6	196.0
Asset Performance and Safety	2.1	1.7	6.5	5.8	6.0	22.1
Network Growth	31.2	34.3	36.3	37.7	38.4	177.9
Customer Initiated	31.2	34.3	36.3	37.7	38.4	177.9
Demand Related	-	-	-	-	-	-
Information Technology	3.2	10.0	9.0	1.1	-	23.3
Structures and Equipment	6.3	6.8	2.7	3.7	4.2	23.7
Total	84.4	91.4	94.6	86.6	86.1	443.1

Source: ERA draft decision analysis

397. Table 4.35 provides the breakdown of conforming capital expenditure into asset classes which are used in the ERA's modelling of the capital base to depreciate over the respective asset lives.

¹⁵⁰ EMCa, Technical Report, April 2024, p. 34.

¹⁵¹ ERA draft decision, Attachment 5; ERA draft decision analysis.

Table 4.35: ERA's amended conforming capital expenditure for AA6 by asset class (\$ million real at 31 December 2023)

Asset Class	2025	2026	2027	2028	2029	Total
High pressure mains – steel	1.6	1.4	6.2	5.4	5.6	20.3
High pressure mains – polyethylene (PE)	-	-	-	-	-	-
Medium pressure mains	-	-	-	-	-	-
Medium and low pressure mains	37.8	36.8	38.8	37.6	37.2	188.2
Low pressure mains	-	-	-	-	-	-
Regulators	2.5	1.8	1.8	1.8	1.8	9.7
Secondary gate stations	-	-	-	-	-	-
Buildings	1.6	3.6	0.4	0.4	0.4	6.5
Meter and services pipes	31.9	33.4	34.3	35.5	35.7	170.7
Equipment and vehicles	0.9	0.9	0.9	0.9	0.9	4.6
Vehicle	3.8	2.3	1.4	2.4	2.8	12.6
IT	3.2	10.0	9.0	1.1	-	23.3
Telemetry and monitoring	1.2	1.2	1.6	1.6	1.6	7.1
Full retail contestability	-	-	-	-	-	-
Land	-	-	-	-	-	-
Equity raising costs	-	-	-	-	-	-
Total	84.4	91.4	94.6	86.6	86.1	443.1

Source: ERA draft decision analysis.

398. The ERA's draft decision closing capital base for AA6 is \$1,685.5 million using the capital expenditure approved above and the straight line depreciation of these values over their economic lives (see Attachment 6).

Table 4.36: ERA's closing capital base for AA6 (\$ million real at 31 December 2023)

	2025	2026	2027	2028	2029
Opening capital base	1,589.8	1,613.6	1,635.1	1,658.0	1,671.8
Plus: Capital Expenditure	84.4	91.4	94.6	86.6	86.1
Less: Depreciation	60.6	70.0	71.6	72.8	72.4
Less: Asset disposals	-	-	-	-	-
Closing capital base	1,613.6	1,635.1	1,658.0	1,671.8	1,685.5

Source: ERA analysis

Required Amendment

- 4.2 ATCO must amend its access arrangement information to revise its AA6 forecast capital expenditure to \$443.1 million (\$ real as at 31 December 2023).

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Appendix 3 National Gas Rules

The National Gas Law (NGL) and National Gas Rules (NGR), as enacted by the *National Gas (South Australia) Act 2008*, establish the legislative framework for the independent regulation of certain gas pipelines in Australia. The *National Gas Access (WA) Act 2009* implements a modified version of the NGL and NGR in Western Australia.

The legislative framework for the regulation of gas pipelines includes a central objective, being the national gas objective, which is:

... to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to—

- (a) price, quality, safety, reliability and security of supply of natural gas; and
- (b) the achievement of targets set by a participating jurisdiction—
 - (i) for reducing Australia’s greenhouse gas emissions; or
 - (ii) that are likely to contribute to reducing Australia’s greenhouse gas emissions.

Note—

The AEMC must publish targets in a targets statement: see section 72A.¹⁵²

The following extracts of the NGR, as they apply in Western Australia, are provided for information to assist readers.

71 Assessment of compliance

- (1) In determining whether capital or operating expenditure is efficient and complies with other criteria prescribed by these rules, the [ERA] may, without embarking on a detailed investigation, infer compliance from the operation of an incentive mechanism or on any other basis the [ERA] considers appropriate.
- (2) The [ERA] must, however, consider, and give appropriate weight to, submissions and comments received when the question whether a relevant access arrangement proposal should be approved is submitted for public consultation.

72 Specific requirements for access arrangement information relevant to price and revenue regulation

- (1) The access arrangement information for a full access arrangement proposal (other than an access arrangement variation proposal) must include the following:
 - (a) if the access arrangement period commences at the end of an earlier access arrangement period:
 - (i) capital expenditure (by asset class) over the earlier access arrangement period; and

¹⁵² NGL, section 23.

The national gas objective has changed since the last review of ATCO’s access arrangement. The amended objective came into effect in Western Australia on 25 January 2024. See: *Western Australian Government Gazette 24 January 2024 No.8* ([online](#)) (accessed April 2024).

- (ii) operating expenditure (by category) over the earlier access arrangement period; and
- (iii) usage of the pipeline over the earlier access arrangement period showing:
 - (A) for a distribution pipeline, minimum, maximum and average demand and, for a transmission pipeline, minimum, maximum and average demand for each receipt or delivery point; and
 - (B) for a distribution pipeline, customer numbers in total and by tariff class and, for a transmission pipeline, user numbers for each receipt or delivery point;
- (b) how the capital base is arrived at and, if the access arrangement period commences at the end of an earlier access arrangement period, a demonstration of how the capital base increased or diminished over the previous access arrangement period;
- (c) the projected capital base over the access arrangement period, including:
 - (i) a forecast of conforming capital expenditure for the period and the basis for the forecast; and
 - (ii) a forecast of depreciation for the period including a demonstration of how the forecast is derived on the basis of the proposed depreciation method;
- (d) to the extent it is practicable to forecast pipeline capacity and utilisation of pipeline capacity over the access arrangement period, a forecast of pipeline capacity and utilisation of pipeline capacity over that period and the basis on which the forecast has been derived;
- (e) a forecast of operating expenditure over the access arrangement period and the basis on which the forecast has been derived;
- (f) [Deleted];
- (g) the allowed rate of return for each regulatory year of the access arrangement period;
- (h) the estimated cost of corporate income tax calculated in accordance with rule 87A, including the allowed imputation credits referred to in that rule;
- (i) if an incentive mechanism operated for the previous access arrangement period—the proposed carry-over of increments for efficiency gains or decrements for efficiency losses in the previous access arrangement period and a demonstration of how allowance is to be made for any such increments or decrements;
- (j) the proposed approach to the setting of tariffs including:
 - (i) the suggested basis of reference tariffs, including the method used to allocate costs and a demonstration of the relationship between costs and tariffs; and
 - (ii) a description of any pricing principles employed but not otherwise disclosed under this rule;
- (k) the service provider's rationale for any proposed reference tariff variation mechanism;
- (l) the service provider's rationale for any proposed incentive mechanism;

- (m) the total revenue to be derived from pipeline services for each regulatory year of the access arrangement period.
- (2) The access arrangement information for an access arrangement variation proposal related to a full access arrangement must include so much of the above information as is relevant to the proposal.
- (3) Where the [ERA] has published financial models under rule 75A, the access arrangement information for a full access arrangement proposal must be provided using the financial models.

...

77 Opening capital base

- (1) When a pipeline first becomes a covered pipeline, or the opening capital base for a pipeline is first calculated, the opening capital base is to be as follows:
 - (a) if the pipeline was commissioned before the commencement of these rules, the opening capital base is to be determined by reference to the relevant provisions of the Gas Code;
 - (b) if the pipeline was commissioned after the commencement of these rules, the opening capital base is to be:
 - (i) the cost of construction of the pipeline and pipeline assets incurred before commissioning of the pipeline (including the cost of acquiring easements and other interests in land necessary for the establishment and operation of the pipeline);

plus:

 - (ii) the amount of capital expenditure since the commissioning of the pipeline;

less:

 - (iii) depreciation; and
 - (iv) the value of pipeline assets disposed of since the commissioning of the pipeline.
- (2) If an access arrangement period follows immediately on the conclusion of a preceding access arrangement period, the opening capital base for the later access arrangement period is to be:
 - (a) the opening capital base as at the commencement of the earlier access arrangement period adjusted for any difference between estimated and actual capital expenditure included in that opening capital base. This adjustment must also remove any benefit or penalty associated with any difference between the estimated and actual capital expenditure;

plus:

- (b) conforming capital expenditure made, or to be made, during the earlier access arrangement period;

plus:

- (c) any amounts to be added to the capital base under rule 82, 84 or 86;

plus:

- (c1) in relation to any existing extension specified in the extension and expansion requirements in accordance with rule 104(2), the following value:

- (i) the cost of construction of the extension;

plus

 - (ii) capital expenditure on the extension since construction of the extension;

less:

 - (iii) depreciation of the extension since the date the extension was commissioned; and
 - (iv) the value of pipeline assets constituting the extension disposed of since commissioning of the extension;

less:

 - (d) depreciation over the earlier access arrangement period (to be calculated in accordance with any relevant provisions of the access arrangement governing the calculation of depreciation for the purpose of establishing the opening capital base); and

Note:

See rule 90.

 - (e) redundant assets identified during the course of the earlier access arrangement period; and
 - (f) the value of pipeline assets disposed of during the earlier access arrangement period.
- (3) If a period intervenes between access arrangement periods during which the pipeline is not subject to a full access arrangement, the opening capital base for the later access arrangement period is to be:
 - (a) the opening capital base determined in accordance with these rules for a notional access arrangement taking effect at the end of the access arrangement period for the last full access arrangement (the relevant date);

plus:

- (b) the amount of capital expenditure since the relevant date;

plus:

- (b1) in relation to any existing extension specified in the extension and expansion requirements in accordance with rule 104(2), the following value:
 - (i) the cost of construction of the extension;

plus

- (ii) the amount of capital expenditure on the extension since construction of the extension;

less:

- (iii) depreciation of the extension since the date the extension was commissioned; and
 - (iv) the value of pipeline assets constituting the extension disposed of since commissioning of the extension;

less:

- (c) depreciation since the relevant date; and
- (d) the value of pipeline assets disposed of since the relevant date.

78 Projected capital base

The projected capital base for a particular period is:

- (a) the opening capital base;
- plus:
- (b) forecast conforming capital expenditure for the period;
- less:
- (c) forecast depreciation for the period; and
 - (d) the forecast value of pipeline assets to be disposed of in the course of the period.

79 [Prior to 1 February 2024] capital expenditure criteria

- (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; and
 - (b) the capital expenditure must be justifiable on a ground stated in subrule (2); and
 - (c) the capital expenditure must be for expenditure that is properly allocated in accordance with the requirements of subrule (6).
- (2) Capital expenditure is justifiable if:
 - (a) the overall economic value of the expenditure is positive; or
 - (b) the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; or
 - (c) the capital expenditure is necessary:
 - (i) to maintain and improve the safety of services; or
 - (ii) to maintain the integrity of services; or
 - (iii) to comply with a regulatory obligation or requirement; or
 - (iv) to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity); or
 - (d) the capital expenditure is an aggregate amount divisible into 2 parts, one referable to incremental services and the other referable to a purpose referred to in paragraph (c), and the former is justifiable under paragraph (b) and the latter under paragraph (c).
- (3) In deciding whether the overall economic value of capital expenditure is positive, consideration is to be given only to economic value directly accruing to the service provider, gas producers, users and end users.
- (4) In determining the present value of expected incremental revenue:
 - (a) a tariff will be assumed for incremental services based on (or extrapolated from) prevailing reference tariffs or an estimate of the reference tariffs that would have been set for comparable services if those services had been reference services; and

- (b) incremental revenue will be taken to be the gross revenue to be derived from the incremental services less incremental operating expenditure for the incremental services; and
 - (c) a discount rate is to be used equal to the rate of return implicit in the reference tariff.
- (5) If capital expenditure made during an access arrangement period conforms, in part, with the criteria laid down in this rule, the capital expenditure is, to that extent, to be regarded as conforming capital expenditure.
- (6) Conforming capital expenditure that is included in an access arrangement revision proposal must be for expenditure that is allocated between:
 - (a) reference services;
 - (b) other services provided by means of the covered pipeline; and
 - (c) other services provided by means of uncovered parts (if any) of the pipeline,
 in accordance with rule 93.

79 [Post 1 February 2024] capital expenditure criteria¹⁵³

- (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 in a manner consistent with the achievement of the national gas objective; and
 - (b) the capital expenditure must be justifiable on a ground stated in subrule (2); and
 - (c) the capital expenditure must be for expenditure that is properly allocated in accordance with the requirements of subrule (6).
- (2) Capital expenditure is justifiable if:
 - (a) the overall economic value of the expenditure is positive subject to subrule (3); or
 - (b) the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; or
 - (c) the capital expenditure is necessary:
 - (i) to maintain and improve the safety of services; or
 - (ii) to maintain the integrity of services; or
 - (iii) to comply with a regulatory obligation or requirement; or
 - (iv) to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity); or
 - (v) to contribute to meeting emissions reduction targets through the supply of services; or

¹⁵³ NGR, Rule 79, as applicable post 1 February 2024 ([AEMC NGR Amendment Rule 2024](#))

- (d) the capital expenditure is an aggregate amount divisible into 2 parts, one referable to incremental services and the other referable to a purpose referred to in paragraph (c), and the former is justifiable under paragraph (b) and the latter under paragraph (c).
- (3) In deciding whether the overall economic value of capital expenditure is positive, consider the sum of:
 - (a) the economic value, other than of changes to Australia's greenhouse gas emissions, directly accruing to the service provider, producers, users and end users; and
 - (b) the economic value of changes to Australia's greenhouse gas emissions, whether or not that value accrues (directly or indirectly) to the service provider, producers, users or end users.
- (4) In determining the present value of expected incremental revenue:
 - (a) a tariff will be assumed for incremental services based on (or extrapolated from) prevailing reference tariffs or an estimate of the reference tariffs that would have been set for comparable services if those services had been reference services; and
 - (b) incremental revenue will be taken to be the gross revenue to be derived from the incremental services less incremental operating expenditure for the incremental services; and
 - (c) a discount rate is to be used equal to the rate of return implicit in the reference tariff.
- (5) If capital expenditure made during an access arrangement period conforms, in part, with the criteria laid down in this rule, the capital expenditure is, to that extent, to be regarded as conforming capital expenditure.
- (6) Conforming capital expenditure that is included in an access arrangement revision proposal must be for expenditure that is allocated between:
 - (a) reference services;
 - (b) other services provided by means of the covered pipeline; and
 - (c) other services provided by means of uncovered parts (if any) of the pipeline,
 in accordance with rule 93.

80 [ERA's] power to make advance determination with regard to future capital expenditure

- (1) The [ERA] may, on application by a service provider, make a determination to the effect that, if capital expenditure is made in accordance with proposals made by the service provider and specified in the determination, the expenditure will meet the new capital expenditure criteria.
- (2) The [ERA] may (but is not required to) engage in public consultation before making a determination under subrule (1).
- (3) A determination under subrule (1) is binding on the [ERA] but a decision not to make such a determination creates no presumption that future expenditure will not meet the relevant criteria.

81 Non-conforming capital expenditure

A service provider may make, during an access arrangement period, capital expenditure that is, in whole or in part, non-conforming capital expenditure.

82 Capital contributions by users to new capital expenditure

- (1) A user may make a capital contribution towards a service provider's capital expenditure.
- (2) Capital expenditure to which a user has contributed may, with the [ERA's] approval, be rolled into the capital base for a pipeline but, subject to subrule (3), not to the extent of any such capital contribution.
- (3) The [ERA] may approve the rolling of capital expenditure (including a capital contribution made by a user, or part of such a capital contribution) into the capital base for a pipeline on condition that the access arrangement contain a mechanism to prevent the service provider from benefiting, through increased revenue, from the user's contribution to the capital base.

83 Surcharges

- (1) When the service provider makes non-conforming capital expenditure, it may notify the [ERA] that it proposes to recover the amount, or part of the amount, of the expenditure by means of a surcharge.

Note:

A surcharge may be proposed even where the non-conforming capital expenditure has been funded in whole or part by a user.

- (2) A surcharge is a charge, approved by the [ERA], in addition to a reference tariff (or other tariff):
 - (a) to be levied on users of incremental services; and
 - (b) designed to recover non-conforming capital expenditure or a specified portion of non-conforming capital expenditure.
- (3) To the extent that non-conforming capital expenditure is, or is to be, recovered by means of the surcharge, it can never be rolled into the capital base.
- (4) The [ERA] must not approve a surcharge unless satisfied that the amount to be recovered from the surcharge does not exceed (in present value terms) the amount of the non-conforming capital expenditure that 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.
- (5) The [ERA] may (but is not required to) engage in public consultation before approving a surcharge.
- (6) The [ERA's] approval of a surcharge is binding on an arbitrator in an access dispute.

84 Speculative capital expenditure account

- (1) A full access arrangement may provide that the amount of non-conforming capital expenditure, to the extent that it is not to be recovered through a surcharge on users or a capital contribution, is to be added to a notional fund (the speculative capital expenditure account).
- (2) The balance of the speculative capital expenditure account must be adjusted annually by applying to the balance a rate that is the same as the allowed rate of return for the regulatory year in which the adjustment is made.
- (3) If at any time the type or volume of services changes so that capital expenditure that did not, when made, comply with the new capital expenditure criteria becomes compliant, the relevant portion of the speculative capital expenditure account (including the return referable to that portion of the account) is to be withdrawn from the account and rolled into the

capital base as at the commencement of the next access arrangement period.

85 Capital redundancy

- (1) A full access arrangement may include (and the [ERA] may require it to include) a mechanism to ensure that assets that cease to contribute in any way to the delivery of pipeline services (redundant assets) are removed from the capital base.
- (2) A reduction of the capital base in accordance with such a mechanism may only take effect from the commencement of the first access arrangement period to follow the inclusion of the mechanism in the access arrangement or the commencement of a later access arrangement period.
- (3) An applicable access arrangement may include a mechanism for sharing costs associated with a decline in demand for pipeline services between the service provider and users.
- (4) Before requiring or approving a mechanism under this rule, the [ERA] must take into account the uncertainty such a mechanism would cause and the effect the uncertainty would have on the service provider, users and prospective users.

86 Re-use of redundant assets

- (1) Subject to the new capital expenditure criteria, if, after the reduction of the capital base by the value of assets identified as redundant, the assets later contribute to the delivery of pipeline services, the assets may be treated as new capital expenditure of an amount calculated by taking their value as at the time of their removal from the capital base and increasing it annually at the rate of return implicit in the reference tariff.
- (2) To the extent the new capital expenditure criteria allow, the amount arrived at under subrule (1) will be returned to the capital base in accordance with those criteria.

...

93 Allocation of total revenue and costs

- (1) Total revenue is to be allocated between reference and other services in the ratio in which costs are allocated between reference and other services.
- (2) Costs are to be allocated between reference and other services as follows:
 - (a) costs directly attributable to reference services are to be allocated to those services; and
 - (b) costs directly attributable to pipeline services that are not reference services are to be allocated to those services; and
 - (c) other costs are to be allocated between reference and other services on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the [ERA].
- (3) The [ERA] may, however, permit the allocation of the costs of rebateable services, in whole or part, to reference services if:
 - (a) the [ERA] is satisfied that the service provider will apply an appropriate portion of the revenue generated from the sale of rebateable services to reduce the reference tariff in accordance with rule 97; and
 - (b) any other conditions determined by the [ERA] are satisfied.
- (4) A pipeline service is a rebateable service if:

- (a) the service is not a reference service; and
- (b) substantial uncertainty exists concerning the extent of the demand for the service or of the revenue to be generated from the service.