Draft Decision on Proposed Revisions to the Mid-West and South-West Gas Distribution Systems Access Arrangement for 2020 to 2024

Submitted by ATCO Gas Australia

18 April 2019

Economic Regulation Authority
WESTERN AUSTRALIA

DMS193260

Economic Regulation Authority

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Invitation to make submissions

Submissions are due by 4:00 pm WST, Wednesday, 3 July 2019

The ERA invites comment on this decision and encourages all interested parties to provide comment on the matters discussed in this decision.

We would prefer to receive your comments via our online submission form: https://www.erawa.com.au/consultation

You can also send comments through:

Email: publicsubmissions@erawa.com.au
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Please note that submissions provided electronically do not need to be provided separately in hard copy.

All submissions will be made available on our website unless arrangements are made in advance between the author and the ERA. This is because it is preferable that all submissions be publicly available to facilitate an informed and transparent consultative process. Parties wishing to submit confidential information are requested to contact us at records@erawa.com.au.

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Summary of Required Amendments

Required Amendment 1

ATCO must amend the gas distribution systems demand forecasts for the fifth access arrangement period in accordance with this draft decision, which includes updating the demand forecast to reflect 2018 actual data for all tariff classes.

Required Amendment 2

ATCO must amend the demand forecast for ancillary services for the fifth access arrangement period in accordance with this draft decision, which includes updating the demand forecasts to reflect 2018 actual data.

Required Amendment 3

ATCO must provide additional information to further explain its choice of asset health indicator for inclusion in the access arrangement information.

Required Amendment 4

ATCO must amend its expenditure key performance indicator targets in accordance with Table 20 of this draft decision.

Required Amendment 5

ATCO must amend the values for total revenue (nominal) to reflect the values set out in Table 22 of this draft decision.

Required Amendment 6

ATCO must amend the values for operating expenditure (real) to reflect the values set out in Table 41 of this draft decision.

Required Amendment 7

ATCO must amend the opening capital base (real) at 1 January 2020 to reflect the values set out in Table 53 of this draft decision.

Required Amendment 8

ATCO must amend the projected capital base (nominal) to reflect the values set out in Table 65 of this draft decision.

Required Amendment 9

ATCO must amend its rate of return estimate to be 5.70 per cent (vanilla nominal after-tax).

Required Amendment 10

ATCO must amend its proposed depreciation schedule in accordance with Table 71 of this draft decision.

Required Amendment 11

ATCO must amend its calculation of income tax and tax depreciation methods as follows:

- Amend the asset lives for regulators and secondary gate stations to be capped to 20 years from 1 January 2020 as set out in Table 76 of this draft decision.
- Amend the depreciation method to the diminishing value method for new assets from 1 January 2020.
- Amend the estimated cost of corporate income tax in accordance with Table 79 of this draft decision.

Required Amendment 12

ATCO must amend its return on working capital calculation to be consistent with this draft decision and as set out in Table 85.

Required Amendment 13

ATCO must amend the allocation of forecast total revenue (nominal) between reference services and other services in accordance with Table 87 of this draft decision.

Required Amendment 14

ATCO must amend Annexure A of the proposed revised access arrangement to reflect the tariffs set out in Table 101 of this draft decision.

Required Amendment 15

ATCO must delete the cost pass through item detailed in Annexure B, clause 2.1(e) of the proposed revised access arrangement.

Required Amendment 16

ATCO must delete the proposed Network Innovation Scheme (Part 12, Incentive Mechanisms) and associated cost pass through item (Annexure B, clause 2.1(e)) from the proposed revised access arrangement.

Required Amendment 17

ATCO must amend fixed principles 11.2 and 11.3 to include specific dates to remove any ambiguity over the period to which the fixed principle applies.

Required Amendment 18

ATCO must delete fixed principle 11.4 from the proposed revised access arrangement.

Required Amendment 19

ATCO must amend clause 10.1(a) of the template service agreement to correct the reference to clause "10.1(a)". The reference should be a reference to clause "10.1(c)".

Required Amendment 20

ATCO must amend clause 10.3(a) of the template service agreement to retain the 10 business day timeframe for a user to raise a payment dispute, or to provide that a payment dispute must be raised prior to the due date of the payment claim.

Required Amendment 21

ATCO must amend clause 15.2(a) of the template service agreement to retain the current (AA4) drafting.

ATCO must also amend clauses 15.1(d) and 15.2(a) to make the clauses expressly subject to the *ipso facto* regime by adding the words (at the beginning of each clause) "subject to the Ipso Facto Regime,".

ATCO must insert a definition of "Ipso Facto Regime" in clause 23.1 as follows:

Ipso Facto Regime means the amendments made to the Corporations Act 2001 (Cth) by Part 2 of the Treasury Laws Amendment (2017 Enterprise Incentives No. 2) Act 2017 (Cth).

Required Amendment 22

ATCO must amend clause 16.2(k) of the template service agreement to read:

If the Approved Security is to be provided by way of bank guarantee, the bank guarantee must be in the form set out in Annexure B (or such other form as is acceptable to <Service Provider>).

Required Amendment 23

ATCO must amend the time period in clause 19.3(d) of the template service agreement from 14 to 15 business days.

Required Amendment 24

ATCO must amend clause 17.1(b) of the template service agreement to replace the words "persons for whom the indemnity is held on trust" (as they appear at the end of the clause) with the words "each Indemnified Person".

ATCO must also amend clause 17.1(a) of the template service agreement to replace the reference to clause "17.1(b)" with a reference to clause "17.1(c)".

Required Amendment 25

ATCO must amend the definition of "insolvency event" in clause 23.1 of the template service agreement to delete paragraphs (g) and (h) from the definition.

Required Amendment 26

ATCO must amended clause 23.1 of the template service agreement to amend the definition of:

- "payment method" to replace the words "the Template Service Agreement" with the words "this Service Agreement", and
- "reference service terms and conditions" to replace the reference to clause "22.3" with a reference to clause "22.3(d)".

Required Amendment 27

ATCO must amend the template service agreement to delete proposed clause 9(c) of Schedule 3 and clause 12(c) in each of Schedules 4 and 5.

ATCO must also amend proposed clause 9 of Schedule 3 and proposed clause 12 in each of Schedules 4 and 5 to provide that the user is not required to pay the reference tariff if the service provider fails to undertake the meter reading as a result of an event or circumstance within its reasonable control, which the service provider could have prevented or overcome.

ATCO must further amend clause 9 in each of Schedules 1 and 2, clause 8 in Schedule 3 and clause 7 in each of Schedules 4 and 5 in the same manner as ATCO is required to amend the provisions relating to payments for special meter readings (refer to requirement immediately above).

Required Amendment 28

ATCO must amend clause 4.3 of the template service agreement to insert the words "Subject to clause 4.3A," (at the beginning of the clause).

ATCO must insert a new clause 4.3A as follows:

For the avoidance of doubt, <User> is not required to pay any applicable Charges and other amounts payable under this Service Agreement in accordance with clause 4.1 if an event or circumstance within the control of <Service Provider> prevented <Service Provider> from providing, undertaking or completing the Service.

ATCO must also redraft clause 4.3(a)(ii) of the agreement to make clear the intended effect of the clause.

Required Amendment 29

ATCO must amend clause 4.4(a) of the template service agreement to read as follows to clarify the time period in which a delivery point deregistration must occur.

<User> must pay all Charges and other amounts payable under this Service Agreement in respect of the Delivery Point, until such time as the Delivery Point is Deregistered, which time must not exceed the timeframe specified in clause 127 of the Retail Market Procedures;

Required Amendment 30

ATCO must amend clause 9.3(c) of the template service agreement to limit the service provider's discretion to require the user to pay an amount to cover its costs:

- by a requirement for it to act reasonably; and
- to circumstances where the user has not used reasonable endeavours.

The required wording is set out in paragraph 1051 of this draft decision.

Required Amendment 31

ATCO must amend clause 10.1(b) of the template service agreement to provide that the payment method or methods notified by the service provider must not be unduly onerous and where possible agreed with the user.

Required Amendment 32

ATCO must amend clause 14.5(a)(i) of the template service agreement to include the words "and such consent must not be unreasonably withheld" at the end of the clause.

Required Amendment 33

ATCO must delete clause 15.2(b) from the template service agreement and insert new clause 15.1(g) that reads:

if a party is in default ("defaulting party") under any other agreement with the other party under which the <Service Provider> provides Reference Services to <User>, and the non-defaulting party reasonably considers that the default under the other agreement will materially impact the non-defaulting party's ability to comply with its obligations under this Service Agreement; or

Current (AA4) clause 15.2(g) must be renumbered as new clause 15.2(h).

Required Amendment 34

ATCO must amend clauses 15.5(a) and 15.5(b) to include a time limit that is based on the remedy of the default by adding the words "until such time as all defaults have been remedied" at the end of each clause as follows.

(a) refuse to accept delivery of Gas from a Related Shipper of <User> at a Receipt Point until such time as all defaults have been remedied;

(b) wholly or partly Curtail Gas deliveries to the <User> at a Delivery Point until such time as all defaults have been remedied;

Required Amendment 35

ATCO must amend clause 16.1 of the template service agreement to insert the words *"acting as a reasonable and prudent network operator"* as follows.

<Service Provider>, acting as a reasonable and prudent network operator, may by written notice, from time to time under this clause 16.1 require …

Required Amendment 36

ATCO must amend the proposed revised access arrangement to introduce reduced cancellation charges for the following ancillary services that are cancelled with reasonable notice, which is taken to mean more than three business days prior to the scheduled service date.

- Special meter reading

- Applying a meter lock
- Removing a meter lock

Required Amendment 37

ATCO must delete section 7.5 (Development Rebate Scheme) from the proposed revised access arrangement.

Draft Decision

Background

1. The purpose of an access arrangement is to provide the terms and conditions, including price, upon which an independent third party user can gain access to a regulated pipeline to transport gas.

2. On 31 August 2018, ATCO Gas Australia (ATCO) submitted its proposed access arrangement revisions,[1] access arrangement information[2] and access arrangement supporting information for the Mid-West and South-West Gas Distribution System (GDS) to the Economic Regulation Authority.

3. The role of the ERA is to determine whether ATCO's proposal complies with the requirements of the *National Gas Law* (NGL) and *National Gas Rules* (NGR) as implemented *in Western Australia by the National Gas Access (WA) Act 2009*.

4. The ERA invited submissions from interested parties on ATCO's proposal by publishing an initiating notice on 18 September 2018.

5. On 11 October 2018, the ERA published an Issues Paper to assist interested parties to prepare submissions and understand some of the issues to be addressed by the ERA in determining whether to approve (or not approve) ATCO's proposal.[3] Interested parties were invited to make their submissions by 14 November 2018. Submissions were received from seven interested parties (these parties are listed in Appendix 4).

ATCO's Proposal

6. ATCO is the natural gas distribution business within the Pipelines and Liquids Global Business Unit of the ATCO Group of global companies. The ATCO Group is engaged in structures and logistics, electricity (generation, transmission and distribution), pipelines and liquids (natural gas transmission, distribution and infrastructure development, energy storage and industrial water solutions) and retail energy.[4] ATCO owns and operates the GDS.

7. The GDS consists of gas reticulation networks servicing Geraldton, Bunbury, Busselton, Harvey, Pinjarra, Brunswick Junction, Capel and the Perth greater metropolitan area (including Mandurah). These combined networks supply approximately 750,000 customers through more than 14,000 kilometres of pipeline.[5]

8. ATCO's proposal covers the five year period from 1 January 2020 to 31 December 2024 (otherwise referred to as the fifth access arrangement period or AA5). ATCO's

1 ATCO, *Access Arrangement for the Mid-West and South-West Gas Distribution Systems*, 31 August 2018.

2 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018.

3 ERA, *Proposed Revisions to the Mid-West and South-West Gas Distribution Systems Access Arrangement for 2020 to 2024: Issues Paper*, 11 October 2018 (online) (accessed October 2018).

4 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 5.

5 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 5.

current access arrangement applies until a revised access arrangement is approved by the ERA.

9. ATCO has proposed:

- To increase haulage reference tariffs by inflation plus about 22 per cent in 2020 and then a further 2.3 per cent for each of the remaining years of AA5 for all industrial and commercial customers.
- To apply different tariff increases for B3 (residential) customers. Under ATCO's proposal, the average B3 customer will incur a 24.1 per cent real increase in its annual network bill in 2020 and about a one per cent real annual increase for the remaining years of AA5.[6]

10. ATCO has explained that some of this increase is a result of 2019 tariffs that were set below the expected cost of service for that year.[7] Other contributing factors to the real increase in haulage reference tariffs include increased proposed capital expenditure for AA5 and lower demand forecasts.

11. ATCO has proposed to spend:

- $357.4 million in operating expenditure during AA5. ATCO has utilised the base-step-trend method to estimate its operating costs, excluding unaccounted for gas and ancillary services, which are separately estimated.
- $509.3 million in capital expenditure during AA5. Over 50 per cent of this expenditure is for network asset replacement and performance. Around 34 per cent of capital expenditure is for network growth with the remaining expenditure for information technology and structures and equipment expenditure.

12. ATCO's proposed rate of return is 6.03 per cent (nominal after tax).

ERA's Draft Decision

13. The draft decision of the ERA is to not approve ATCO's proposed revisions to the GDS access arrangement for 2020 to 2024. The reasons for not approving ATCO's proposal are set out in the remainder of this document.

14. ATCO is required to make 37 amendments to the access arrangement before the ERA will approve it. The required amendments, listed on page iv of this draft decision, are also included in the reasons for this decision at the point where each relevant part of ATCO's proposal is considered.

15. Under rule 59(3) of the NGR, the ERA is required to fix a period (*revision period*) within which ATCO may, under rule 60, submit additions or other amendments to its

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6 The retail bill for a (B3) small use customer includes costs for the production of gas, transmission of that gas to the distribution network, distribution network charges and retail-related costs. The annual network bill is the amount that is charged to retailers for the use of ATCO's distribution network. ATCO notes that network charges represent about 30 per cent of the retail bill for small use customers.

The ERA has converted ATCO's nominal annual bill into *real terms* using ATCO's assumed inflation. The ERA has calculated the annual real changes using ATCO's proposed average B3 consumption for AA5.

7 The tariff path for the current access arrangement period was complicated as the 2013-14 tariffs continued until 1 October 2015 (15 months into the current period). This is because there was a delay in approving the access arrangement. As these tariffs were above the costs for that period, the tariffs for the remaining part of the period needed to be below the costs for that period to ensure that the allowed revenue equalled costs.

proposal to address the matters raised in this decision. The ERA fixes the revision period at 30 business days from the date of this decision. That is, ATCO may submit revisions to its proposal by 4.00 pm (WST) Wednesday, 5 June 2019.

16. Consistent with rule 59(5)(iii), the ERA has invited submissions on its draft decision for a period of 20 business days following the revision period fixed for ATCO. That is, submissions are due by 4:00 pm (WST) Wednesday, 3 July 2019. The ERA will consider any submissions received by this deadline and make a final decision to approve (or not approve) ATCO's proposal or revised proposal if submitted by ATCO.

Reasons

Decision Making Framework

Regulatory framework

17. The requirements for an access arrangement are established by the National Gas Law (NGL) and National Gas Rules (NGR) as enacted by the *National Gas (South Australia) Act 2008* and implemented in Western Australia by the *National Gas Access (WA) Act 2009*.

18. Under rule 100 of the NGR, all provisions of an access arrangement must be consistent with the national gas objective, which is specified in section 23 of the NGL.

> 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 price, quality, safety, reliability and security of supply of natural gas.

19. Sections 28(1) and (2) of the NGL specify the manner in which the ERA must perform or exercise its regulatory functions or powers.

> **28 Manner in which [ERA] must perform or exercise [ERA] economic regulatory functions or powers**
>
> (1) The [ERA] must, in performing or exercising an [ERA] economic regulatory function or power—
>
> (a) perform or exercise that function or power in a manner that will or is likely to contribute to the achievement of the national gas objective; and
>
> (b) …
>
> (2) In addition, the [ERA]—
>
> (a) must take into account the revenue and pricing principles—
>
> (i) when exercising a discretion in approving or making those parts of an access arrangement relating to a reference tariff; or
>
> (ii) when making an access determination relating to a rate or charge for a pipeline service; and
>
> (b) may take into account the revenue and pricing principles when performing or exercising any other [ERA] economic regulatory function or power, if the [ERA] considers it appropriate to do so.

20. Further to the NGL and NGR, the ERA must also take into consideration the *National Gas Access (WA) (Local Provisions) Regulations 2009*. These local regulations contain provisions, under Part 2, which deal with the effect of reference tariffs on small users (retailers) and small use customers.

Content of an access arrangement

21. ATCO is required to submit a "full access arrangement" for the Mid-West and South-West Gas Distribution System (GDS). Section 2 of the NGL specifies a full access arrangement to be an access arrangement that:

- Provides for price or revenue regulation as required by the NGR.
- Deals with all other matters for which the NGR require provisions to be made in an access arrangement.

22. The required content of a full access arrangement proposal is specified in rule 48 of the NGR. Table 1 summarises the required content and indicates where the ERA has given consideration to it in this decision document.

Table 1: Required content of a full access arrangement

National Gas Rule	Summary of Requirement	Document Reference
48(1)(a)	Identify the pipeline to which the access arrangement relates and include a reference to a website at which a description of the pipeline can be inspected.	Paragraph 25 (and following)
48(1)(b)	Describe the pipeline services the service provider proposes to offer to provide by means of the pipeline.	Paragraph 36 (and following)
48(1)(c)	Specify the reference services.	Paragraph 36 (and following)
48(1)(d)(i)	Specify for each reference service, the reference tariff.	Paragraph 821 (and following)
48(1)(d)(ii)	Specify for each reference service, the other terms and conditions on which the reference service will be provided.	Paragraph 955 (and following)
48(1)(e)	If the access arrangement is to contain queuing requirements, set out the queuing requirements.	Not applicable
48(1)(f)	Set out the capacity trading requirements.	Paragraph 1116 (and following)
48(1)(g)	Set out the extension and expansion requirements.	Paragraph 1122 (and following)
48(1)(h)	State the terms and conditions for changing receipt and delivery points.	Paragraph 1153 (and following)
48(1)(i)	If there is to be a review submission date, state the review submission date and the revision commencement date.	Paragraph 25 (and following)
48(1)(j)	If there is to be an expiry date, state the expiry date.	Not applicable

23. The NGR require ATCO to submit “access arrangement information” with its proposal. The NGR define access arrangement information as “information that is reasonably necessary for users and prospective users” to understand the background to the access arrangement, and the basis and derivation of various elements of the access arrangement.

24. The specific requirements for access arrangement information relevant to price and revenue regulation is set out in rule 72 of the NGR. Table 2 summarises the requirements.

Table 2: Requirements for access arrangement information relevant to price and revenue regulation

National Gas Rule	Summary of Requirement for Access Arrangement Information (AAI) [8]
72(1)(a)	If the access arrangement period commences at the end of an earlier access arrangement, AAI must include: • Capital expenditure (by asset) and operating expenditure (by category) over the earlier access arrangement period. • Usage of the pipeline over the earlier access arrangement period showing: – For a distribution pipeline: minimum, maximum and average demand and customer numbers in total and by tariff class. – For a transmission pipeline: minimum, maximum and average demand for each receipt or delivery point and user numbers for each receipt or delivery point.
72(1)(b)	AAI must include information on how the capital base is arrived at, and if the access arrangement period commences at the end of an earlier access arrangement, a demonstration of how the capital base increased or diminished over the previous period.
72(1)(c)	AAI must include the projected capital base over the access arrangement period, including: • A forecast of conforming capital expenditure for the period and the basis for the forecast. • A forecast of depreciation for the period, including a demonstration of how the forecast is derived on the basis of the proposed deprecation method.
72(1)(d)	To the extent it is practicable to forecast capacity and utilisation over the access arrangement period, AAI must include a forecast of pipeline capacity and utilisation of pipeline capacity over the period and the basis on which the forecast has been derived.
72(1)(e)	AAI must include a forecast of operating expenditure over the access arrangement period and the basis on which the forecast has been derived.
72(1)(f)	AAI must include the key performance indicators to be used by the service provider to support the expenditure to be incurred over the access arrangement period.
72(1)(g)	AAI must include the allowed rate of return for each regulatory year of the access arrangement period.
72(1)(h)	AAI must include the estimated cost of corporate income tax (calculated in accordance with rule 87A), including the allowed imputation credits.
72(1)(i)	If an incentive mechanism operated in the previous access arrangement period, the AAI must include the proposed carry over of increments or decrements for efficiency gains or losses, and a demonstration of how an allowance is to be made for any such increments or decrements.
72(1)(j)	AAI must include the proposed approach to setting tariffs including:

[8] On 8 April 2019, the binding rate of return instrument came into operation in Western Australian. There were a number of consequential changes to the National Gas Rules. Rule 72(1)(g) and rule 72(1)(h) were amended and rule 72(1)(ga) was deleted. The summary in this table reflect the current wording in the rules and not when ATCO submitted its access arrangement information.

National Gas Rule	Summary of Requirement for Access Arrangement Information (AAI) [8]
	• The suggested basis of reference tariffs, including the method used to allocate costs and a demonstration of the relationship between costs and tariffs. • A description of any pricing principles employed, but not otherwise disclosed.
72(1)(k)	AAI must include the service provider's rationale for any proposed reference tariff variation mechanism.
72(1)(l)	AAI must include the service provider's rational for any proposed incentive mechanism.
72(1)(m)	AAI must include the total revenue to be derived from pipeline services for each regulatory year of the access arrangement period.

Key Dates and Identification of the Pipeline

25. The National Gas Rules (NGR) require an access arrangement to:

- Identify the pipeline to which the access arrangement relates and to make reference to a website where a description of the pipeline can be inspected (rule 48(1)(a)).
- Contain a review submission date and a revision commencement date (rule 49(1)(a)). The NGR define these dates to mean:
  - Review submission date means a date on or before which an access arrangement revision proposal is required to be submitted.
  - Revision commencement date for an applicable access arrangement means the date fixed in the access arrangement as the date on which revisions resulting from a review of an access arrangement are intended to take effect.

26. Rule 50 of the NGR details further provisions for a review submission date and revision commencement date.

- As a general rule:
  - A review submission date will fall four years after the access arrangement takes effect or the last revision commencement date (rule 50(1)(a)).
  - A revision commencement date will fall five years after the access arrangement takes effect or the last revision commencement date (rule 50(1)(b)).
- Where a proposed date is fixed in accordance with the general rule, the ERA must accept the proposed date (rule 50(2)).

27. The ERA may approve dates that do not conform with the general rule if the dates are consistent with the national gas objective and the revenue and pricing principles of the NGR (rule 50(4)).

ATCO's Proposal

28. Part 3 of the access arrangement identifies the pipeline to which the access arrangement relates to as "the Mid-West and South-West Gas Distribution System (formally known as the WAGN GDS) owned by ATCO Gas Australia Pty Ltd", or the "AGA GDS". A description of the AGA GDS is available at: www.atcogas.com.au

29. ATCO has proposed a five year period for the fifth access arrangement period (AA5), which compares with a five-and-a-half year period for the fourth access arrangement that was adopted to align the regulatory years with ATCO's calendar year financial reporting. ATCO has proposed:

- review submission date of 1 September 2023
- revision commencement date of 1 January 2025.

Submissions

30. No public submissions to the ERA addressed the identification of the pipeline or ATCO's proposed review submission and revision commencement dates.

Draft Decision

31. The NGR require ATCO to identify the pipeline to which the access arrangement relates, and to reference a website where a description of the pipeline can be inspected. ATCO has satisfied these requirements in Part 3 of the access arrangement by making reference to the ATCO Gas Australia website (www.atcogas.com.au).

32. The ERA has identified two webpages that provide descriptions of the pipeline.[9] While it may be beneficial for ATCO to provide a specific *URL* to the webpage where the description of the pipeline is for the purpose of the access arrangement, a generic website reference accommodates future updates and/or upgrades to ATCO's website that may occur during the access arrangement period.

33. ATCO's proposed review submission date and revision commencement date were specified in Part 2 of the access arrangement.

- The proposed review submission date of 1 September 2023 is less than four years after the last revision commencement date (being 1 January 2020).
- The proposed revision commencement date of 1 January 2025 is five years after the last revision commencement date (being 1 January 2020).

34. ATCO's review submission date did not conform to the general rule of being four years after the last revision commencement date. However, the proposed date is consistent with national gas objective and revenue and pricing principles because it allows more realistic timeframes for the consideration of proposed revisions to the access arrangement. For this reason ATCO's proposed review submission date is approved.

35. ATCO's proposed revision commencement date conforms to the general rule of being five years after the last revision commencement date. For this reason, the ERA must accept ATCO's proposed date.

[9] The following webpages provide some context of the pipeline:

- http://www.atcogas.com.au/About-Us/Access
- http://www.atcogas.com.au/About-Us/Coverage-Maps

Pipeline and Reference Services

36. The National Gas Rules (NGR) require an access arrangement proposal to describe the pipeline services the service provider proposes to offer by means of the pipeline and to specify the reference services.

- "Pipeline service" is defined in Part 1 (section 2) of the National Gas Law (NGL) as a service that is provided by means of a pipeline including a haulage service, an interconnection service, or an ancillary service. It does not include the production, sale or purchase of natural gas.
- "Reference service" is defined in rule 101 of the NGR as pipeline service that is likely to be sought by a significant part of the market.

ATCO's Proposal

37. ATCO has proposed to retain its existing reference services for the fifth access arrangement period (AA5) with the addition of a new "special meter reading" service. The reference services comprise haulage reference services and ancillary reference services and are detailed in Part 4 of the access arrangement.

38. Haulage reference services are primarily the transportation of gas from the transmission pipeline to the customer. Haulage services also include the installation and maintenance of a standard meter, meter reading and associated data collection and reporting. ATCO's proposed haulage services are shown in Table 3.

Table 3: ATCO's proposed haulage reference services for AA5

Reference Service	Description
A1	A1 is a pipeline service under which ATCO delivers gas to a user at a delivery point on the network, where the following preconditions were met at the time the user (then a prospective user), submitted an application for the service: • The prospective user is reasonably expected to take delivery of 35 terajoules (TJ) or more of gas during each year of the haulage contract; and • The prospective user is reasonably expected to require a contracted peak rate of 10 GJ or more per hour; and • The prospective user requests user-specific delivery facilities.
A2	A2 is a pipeline service under which ATCO delivers gas to a user at a delivery point on the network, where the following preconditions were met at the time the user (then a prospective user), submitted an application for the service: • Either (or both): – The prospective user is reasonably expected to take delivery of 10 TJ or more of gas, but less than 35 TJ of gas, during each year of the haulage contract, or is reasonably expected to require a contracted peak rate of less than 10 GJ per hour; and – An Above 10 TJ Determination was, or was likely to have been, made under the Retail Market Procedures (WA); and • The prospective user requests user specific-delivery facilities.
B1	B1 is a pipeline service under which ATCO delivers gas to a user at a delivery point on the network, where the following preconditions were met at the time the user (then a prospective user), submitted an application for the service: • Either the prospective user is reasonably expected to take delivery of less than 10 TJ of gas during each year of the haulage contract, or is reasonably expected to require a contracted peak rate of less than 10 GJ per hour; and • The prospective user requests user-specific delivery facilities or standard delivery facilities that include a standard meter with a badged capacity of 18 cubic meters per hour (m3/h) or more.
B2	B2 is a pipeline service under which ATCO delivers gas to a user at a delivery point on the medium pressure and low pressure parts of the network using standard delivery facilities that include a standard meter with a badged capacity of greater than or equal to 12 m3/h and less than 18 m3/h.
B3	B3 is a pipeline service under which ATCO delivers gas to an end-use customer at a delivery point on the medium pressure and low pressure parts of the network using standard delivery facilities that include a standard meter with a badged capacity of less than 12m3/h. End-use customers who receive B3 reference services consume less than 1 TJ of gas per year and are small use customers as defined in the *National Gas Access (WA) (Local Provisions) Regulations 2009*.

Source: ATCO, 2020-24 Plan (Access Arrangement Information), pp. 49-50, Table 8.2.

39. ATCO's proposed ancillary reference services are shown in Table 4. The ancillary services are the same as those applying in the fourth access arrangement period (AA4), with the addition of a special meter reading service.

40. A special meter reading is a gas meter reading that occurs outside of the regular reading cycle. ATCO has reclassified the special meter reading service from a

non-reference service to a reference service for AA5 because the service is likely to be sought by a larger proportion of the market in AA5.

Table 4: ATCO's proposed ancillary reference services for AA5

Reference Service	Description
Applying a meter lock	A lock is applied to a valve that comprises part of the delivery facility to prevent gas from being received at the relevant delivery point. This service is available for reference service B2 and B3 users, subject to the suitability of the meter control valve.
Removing a meter lock	A lock that was applied to a valve to prevent gas from being received at the relevant delivery point is removed. This service is available for reference service B2 and B3 users.
Deregistering a delivery point	A delivery point is permanently deregistered by removing the delivery facility permanently, removing the delivery point in accordance with the Retail Market Procedures (WA) and removing the delivery point from the delivery point register. This service is available for all reference service users.
Disconnecting a delivery point	A delivery point is physically disconnected and prevents gas from being delivered to the delivery point. This service is available in respect of delivery points at which a user is provided with reference service B2 or B3.
Reconnecting a delivery point	The delivery point is reconnected to allow gas to be delivered to the delivery point. This service is available in respect of delivery points at which a user is provided with reference services B2 or B3.
Special meter reading	An out of cycle reading of a standard meter at the relevant delivery point. This service is available in respect of delivery points at which a user is provided with reference service B1, B2 or B3 with a manually read meter.

Source: ATCO, 2020-24 Plan (Access Arrangement Information), p. 50, Table 8.3.

41. ATCO has proposed to continue to offer the following non-reference services:

- upgrading meter size
- disconnecting service in the street
- after-hours priority restoration of gas supply
- special meter reading at an appointed time.

42. These non-reference services are additional services that do not form part of ATCO's reference services. As such, ATCO has proposed to continue to negotiate the price for these services directly with the retailer/user.

Submissions

43. Several submissions to the ERA addressed ATCO's proposal to retain the existing (AA4) reference services for AA5, with the addition of a new special meter reading service.

- AGL Energy supported the introduction of a special meter reading service. AGL submitted that "this service is a key to competitive churn within a market

and a clear price and service standard will support competition between retailers within Western Australia".[10] AGL also:

  - Reviewed the proposed charge for the special meter reading ($12.82) and said that the charge was consistent with the charges of other gas distribution providers.
  - Recommended that the special meter reading service (like other ancillary services) should have a clear cancellation window which incurred no charge.

- Alinta Energy agreed with ATCO's proposal to retain the existing haulage reference services and supported the inclusion of a new special meter reading reference service. Alinta submitted that "there has been a significant increase in special meter reading requests over the past few years related to customer transfers and this trend is expected to continue".[11]
- Kleenheat supported the introduction of a special meter read as a reference ancillary service. Kleenheat submitted that while it welcomed a decrease in the proposed tariff for the service (from $18.33[12] excluding GST to $12.82 excluding GST), it questioned the reasonableness of the proposed tariff when compared with other gas distribution networks. Kleenheat compared ATCO's proposed tariff to other network operators in Victoria (Multinet, Ausnet), New South Wales (Jemena) and Australian Gas Network in Victoria, New South Wales and South Australia. Based on the interstate comparison on tariff charge, Kleenheat noted that ATCO's proposed tariff would be the second highest across those network operators.[13]

44. No submissions to the ERA suggested that there were other pipeline services that should be classified as reference services. However, AGL provided comments on an enhanced street disconnection service and other negotiated services.[14]

- AGL noted that ATCO proposed to directly negotiate various non-reference services, such as meter upgrades and street disconnections, with users. AGL's preference was for a published price list for such services (as opposed to negotiated prices).
- AGL wanted the introduction of an enhanced street disconnection service. AGL submitted that the cost to undertake a street disconnection was substantial – retailers only make requests for a street disconnection where there are operational reasons preventing the disconnection of a meter and the debt owing is substantial.
  - An enhanced street disconnection service would involve the installation of a street valve. Once the initial excavation works are completed, the customer can be disconnected or reconnected from the street valve, rather than by excavation.
  - While the initial cost of an enhanced street disconnection service would be higher (than a standard street disconnection), the restoration

[10] AGL Energy submission, 14 November 2018, p. 4.

[11] Alinta Energy submission, 14 November 2018, p. 7.

[12] The price was $18.33 for a special meter read in 2018. This was mentioned by Alinta in its submission and confirmed by ATCO. The price for 2019 is $18.83 (ATCO response to Information Request ERA 12, 7 March 2019).

[13] Kleenheat submission 13 November 2018.

[14] AGL Energy submission, 14 November 2018, pp. 5-6.

cost and future disconnection costs would be more aligned with the regulated apply meter lock charge.

Draft Decision

45. As stated by ATCO, the proposed new special meter reading reference service is currently a non-reference service in the AA4 access arrangement. ATCO reclassified the service from a non-reference service to a reference service for AA5 because increased retail competition in the residential gas market has increased the volume of special meter readings. ATCO submitted that the volume of special meter readings increased from 12,457 in 2013 to over 119,000 in 2017 and it expected this volume to continue into AA5.[15]

46. ATCO's reason for reclassifying the special meter reading service from a non-reference service to a reference service satisfies the definition for a reference service. That is, the service is likely to be sought by a significant part of the market. The increase in the number of special meter reads between 2013 and 2017 is significant and the volume of reads is expected to continue to grow during AA5.

47. While all submissions to the ERA that addressed the matter of pipeline and reference services supported ATCO's proposal to reclassify the special meter reading service, there were differing opinions about the corresponding proposed tariff. AGL said that the tariff was consistent with the charges of other gas distribution providers, while Kleenheat disagreed. The ERA has addressed the proposed tariff for the special meter reading service as part of its considerations on ATCO's proposed reference tariffs (see paragraph 821). AGL's comment about pricing for other negotiated services is also addressed in this section.

48. AGL recommended that the special meter reading service should have a clear cancellation window which incurs no charge. The ERA has addressed this recommendation as part of its considerations of ATCO's proposed terms and conditions that are set out in the schedules to the template service agreement, which applies to each of the reference services (see paragraph 1089).

49. AGL indicated its preference for the introduction of:

- Published price lists for non-reference services (such as meter upgrades and street disconnections) rather than negotiated prices.
- An enhanced street disconnection service that used an installed street valve to disconnect or reconnect a customer, rather than excavation.

50. As highlighted by AGL, the volume of and demand for such services is likely to be small and would be inconsistent with the NGR definition of a reference service (being a pipeline service that is likely to be sought by a significant part of the market). These services are, and should remain as, non-reference services.

51. The opportunity for customers to directly negotiate with ATCO to determine the price for a non-reference service, and negotiate the nature of the service itself, allows unique operational circumstances to be considered. Such price and service negotiations are consistent with the national gas objective. While a published price list for non-reference services may provide price certainty to some customers, there is no requirement for ATCO to publish any such prices. Conversely, if ATCO decides

[15] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 51.

to publish prices for non-reference services, these prices would fall outside the regulatory provisions of the access arrangement.

Demand Forecasts

52. Rule 72 of the National Gas Rules (NGR) contains requirements for access arrangement information relevant to demand forecasts, including:

> **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:
>
> …
>
> (iii) usage of the pipeline over the earlier access arrangement period showing:
>
> (A) For a distribution pipeline, minimum, maximum and average demand…
>
> (B) For a distribution pipeline, customer numbers in total by tariff class…
>
> …
>
> (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; …

53. Rule 74 of the NGR contains specific requirements for the provision of forecasts and estimates:

> **74 Forecasts and estimates**
>
> (1) Information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate.
>
> (2) A forecast of estimate:
>
> (a) must be arrived at on a reasonable basis; and
>
> (b) must represent the best forecast or estimate possible in the circumstances.

ATCO's Proposal

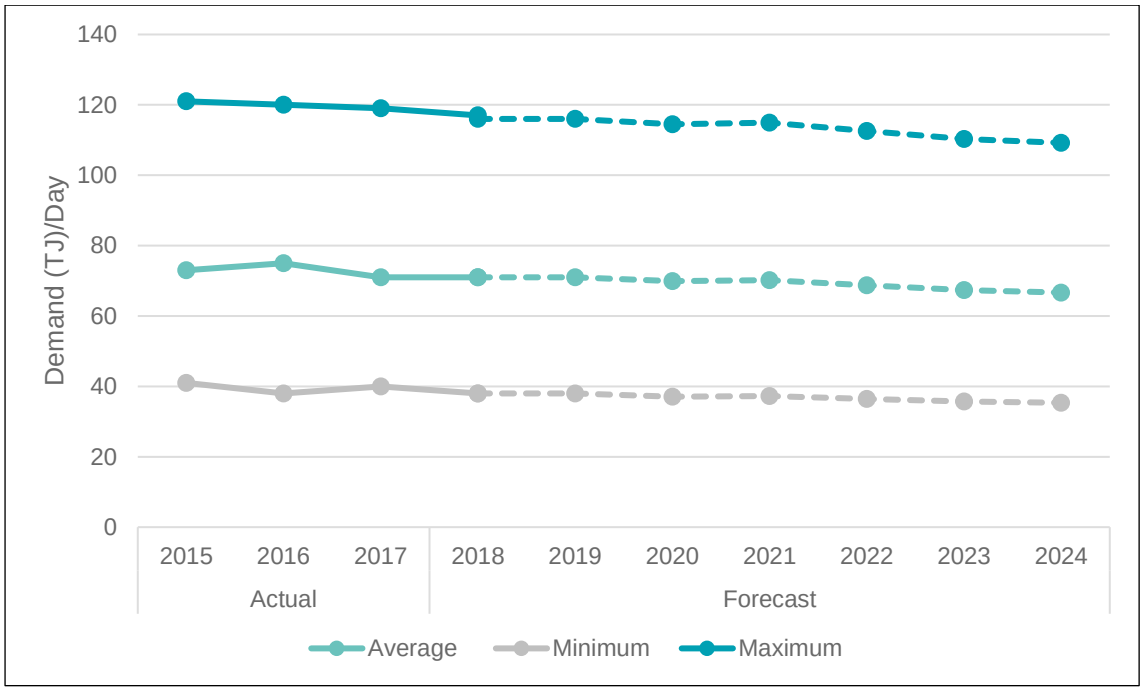
54. ATCO developed demand forecasts for its haulage references services and its ancillary references services for the fifth access arrangement period (AA5).

Haulage Reference Services

55. ATCO forecast the total demand and average customer numbers by tariff class (A1, A2, B1, B2, B3) for each year of AA5.[16]

56. ATCO forecast the total gas demand to decrease by 1.1 per cent over AA5.[17] In its proposal, ATCO expected the minimum, maximum and average demand to gradually decrease over the AA5 period (see Figure 1). The average use of the capacity of the network is forecast to decline over AA5.

Figure 1 Actual and forecast average demand per day (TJ) (2014 to 2024)



Source: ATCO, Access Arrangement Information, p. 60, Figure 9.8.

57. ATCO developed its demand forecast method based on advice from its consultant, Core Energy Group, by:

- surveying A1 Tariff customers to forecast consumption
- replacing annual weather normalisation with daily weather normalisation
- including the most recent customer consumption data for 2017 year.

58. ATCO continued to use an *effective degree day method* to estimate forecast gas consumption. The method aims to normalise the effect of weather on demand and increase consumption forecasting accuracy by incorporating climatic variables into the demand forecast (for example, sunshine hours, wind chill, seasonality).

59. ATCO forecast total consumption to decrease by 1.1 per cent over AA5.[18] The total usage of A1 and A2 (industrial) customers is forecast to decrease by 1.8 per cent and

16 ATCO, *Access Arrangement Information*, p. 59, Table 9.7.
17 ATCO, *Access Arrangement Information*, p. 59, Table 9.7.
18 ATCO, *Access Arrangement Information*, p. 59, Table 9.7.

2.3 per cent respectively. ATCO forecast A1 average customer numbers to decrease due to a business shutdown scheduled for 2022 and 2023, and forecast A2 average customer numbers to remain unchanged during AA5. ATCO expected the volume per connection of space and water heating industrial customers to decrease over the AA5 period.[19]

60. ATCO forecast the total gas consumption of B1 and B2 commercial customers to increase by 1.3 per cent per year over AA5. The increase in total gas consumption is primarily driven by B1 customer connection growth, which offsets a decrease in demand per connection.[20]

61. The forecast connection growth of commercial customers is slower than the fourth access arrangement (AA4) period, due to ATCO's forecast of lower gross state product growth over AA5. ATCO indicated two events had contributed to the strong commercial connections in the early years of AA4: the mining construction boom, and new retail market competition with the entry of Kleenheat, AGL Energy and Origin Energy.

62. ATCO forecast the total gas consumption of B3 residential customers to decrease by 1.2 per cent over AA5. ATCO attributed the decline in average usage per B3 customer to increasingly efficient appliances, reducing dwelling size, movement towards other energy sources (for example, electricity, solar) instead of gas appliances, and a lower level of connections growth due to the following assumptions for the Western Australian economy over AA5:

- ATCO expected population growth to decline steadily over AA5, decreasing from 2.11 per cent in 2018/19 to 1.95 per cent from 2020 onwards.[21] This followed the downward trend in population growth between 2014 and 2016 after high economic growth between 2008 and 2013. ATCO used the Department of Planning's forecast of greater Perth population.[22] This contrasts with the Department of Treasury, which forecast population growth of the State to increase from 1.2 per cent in 2018/19 to 1.8 per cent in 2021/2022.[23]
- Dwelling completions have declined in recent years. In its proposal, ATCO expected dwelling completions to increase slightly over AA5 once the current oversupply of dwellings was cleared.[24]

63. ATCO forecast total consumption of industrial (A1 and A2 Tariff) and residential (B3 Tariff) customers to decrease over AA5 while commercial customers (B1 and B2 Tariff) will consume more gas over AA5 (see Table 5).

19 Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 14.

20 Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 17.

21 Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 41.

22 Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 41. The Australian Bureau of Statistics uses the term 'Greater Perth' to describe Perth's Greater Capital City Statistical Area, which is a geographical area designed to represent the functional extent of Western Australia's capital city.

23 Department of Treasury Western Australia, *Government Mid-year Financial Projections Statement December 2018*, p.3.

24 Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 19.

Table 5: ATCO forecast gas consumption (TJ) over AA5

Tariff Class	2020	2021	2022	2023	2024	CAGR[25]
A1 (industrial)	9,828	10,066	9,649	9,270	9,143	-1.8%
A2 (industrial)	1,669	1,630	1,592	1,555	1,519	-2.3%
B1 (commercial)	2,094	2,133	2,168	2,200	2,223	1.5%
B2 (commercial)	1,419	1,436	1,453	1,469	1,477	1.0%
B3 (residential)	9,891	9,758	9,634	9,518	9,421	-1.2%
Total	**24,901**	**25,023**	**24,496**	**24,011**	**23,782**	**-1.1%**

Source: ATCO, Access Arrangement Information, p.59, Table 9.7. Some numbers may not add due to rounding.

64. ATCO forecast total customer numbers to increase by 1.6 per cent over AA5 (see Table 6).[26] ATCO's forecast shows the industrial customer base is expected to decline (A1 Tariff) or remain unchanged (A2 Tariff), but commercial and residential customers are expected to increase over AA5.

Table 6: ATCO forecast customer numbers over AA5

Tariff Class	2020	2021	2022	2023	2024	CAGR[27]
A1 (industrial)	70	70	69	67.5	67	-1.10%
A2 (industrial)	96	96	96	96	96	0.00%
B1 (commercial)	1,816.131496	1,885.4586	1,949.2543	2,009.5765	2,068.6886	3.30%
B2 (commercial)	12,527.29492	12,850.497	13,189.963	1,3527.586	13850.06	2.50%
B3 (residential)	747,478.9968	759,437.2	771,652.09	784,164.53	796954.07	1.60%
Total	**761,988**	**774,339**	**786,956**	**799,865**	**813,036**	**0**

Source: ATCO, Access Arrangement Information, p. 59, Table 9.7. Some numbers may not add due to rounding.

Ancillary reference services

65. ATCO proposed to continue offering the same ancillary reference services in the AA5 period as offered in the AA4 period, but with the addition of a special meter reading service. The ancillary services ATCO proposed to offer were:[28]

- Applying a meter lock: apply a lock to a valve that is part of the delivery facility, in order to prevent gas from being received at the corresponding delivery point. This service applies to B2 and B3 customers.

25 CAGR = Compound Annual Growth Rate.

26 ATCO, *Access Arrangement Information*, p. 59, Table 9.7.

27 CAGR = Compound Annual Growth Rate.

28 ATCO, *Access Arrangement Information*, p. 50.

- Removing a meter lock: remove a lock that has been applied to a valve to prevent gas from being received at the corresponding delivery point. This service applies to B2 and B3 customers.
- Deregistering a delivery point: deregister a delivery point permanently by removing the delivery facility, removing the delivery point (in accordance with the Retail Market Procedures) and removing the delivery point from the delivery register. This service applies to all customers.
- Disconnecting a delivery point: disconnect a delivery point physically to prevent gas from being delivered to the delivery point. This service applies to B2 and B3 customers.
- Reconnecting a delivery point: reconnect a delivery point to allow gas to be delivered to the delivery point. This service applies to B2 and B3 customers.
- Special meter reading: a reading of a standard gas meter that occurs outside of the regular cycle. This service applies to B1, B2 and B3 customers.

66. ATCO reclassified the special meter reading service from a non-reference service to a reference service, as this service was likely to be sought by a larger proportion of the market during AA5.[29] During AA4, increased competition in the residential gas retail market increased the demand for special meter readings.[30] In its proposal, ATCO expected the increased demand for special meter reading to continue into AA5. However, ATCO stated that the "special meter reading at an appointed time" service would remain classified as a non-reference service due to its expected low volumes.[31]

67. ATCO forecast its ancillary services across all categories, which largely relate to B3 connections. ATCO applied the forecast compound annual growth in B3 customers of 1.6 per cent per year to its forecast demand for ancillary services over AA5 (see Table 7).

Table 7: ATCO's forecast demand for ancillary services over AA5

Ancillary Service	2020	2021	2022	2023	2024	CAGR
Applying a meter lock	8,900	9,042	9,188	9,338	9,490	1.60%
Removing a meter lock	7,589	7,711	7,835	7,963	8,093	1.60%
Deregistering a delivery point	2,240	2,276	2,313	2,350	2,389	1.60%
Disconnecting a delivery point	3,461	3,517	3,574	3,632	3,691	1.60%
Reconnecting a delivery point	2,488	2,528	2,569	2,611	2,653	1.60%
Special meter reading	96,436	97,980	99,563	101,183	102,838	1.60%

Source: ATCO, Access Arrangement Information, p. 61, Table 9.9.

[29] ATCO, *Access Arrangement Information*, p. 51.

[30] ATCO, *Access Arrangement Information*, p. 51.

[31] ATCO, *Access Arrangement Information*, p. 51.

Submissions

68. AGL Energy noted that ATCO had signalled significant decreases in demand in AA5. As a new entrant with a small customer base, AGL submitted that it was difficult for it to provide a rigorous analysis of ATCO's gas forecasts. AGL submitted that ATCO's gas forecast and the weather normalisation strategy appeared reasonable and matched industry standards. However, AGL submitted that it was not confident that forecast higher business connections would be the result of an increasing gross state product and considered the forecast upward trend in the number of commercial and small business customers was moderately optimistic.

69. Alinta Energy submitted that ATCO's forecast average demand per residential customer was significantly less than its own forecasts, which were based on active consuming customers. Compared to ATCO's AA5 forecast, Alinta Energy submitted that it expected a lower reduction rate of average demand per residential customer due to competitor activity and new connections.

70. Alinta agreed with ATCO's normalisation of the effect of weather on demand, but noted that lower prices tended to lead to higher demand. Alinta submitted that it did not anticipate a significant decline in average demand per customer as suggested by ATCO, with five gas retailers actively competing for residential customers by offering considerable discounts.

71. Kleenheat questioned the reasonableness of the demand forecasts, in particular the relatively steep decline in B3 demand per customer, but did not provide further information to elaborate on its submission.

Draft Decision

Haulage Reference Services

72. The ERA has assessed ATCO's demand forecast of haulage reference services over AA5 and notes the following:

- The projected decrease of total gas demand across all tariff classes over AA5 is largely a reflection of the trend decline in average volume per customer in B2 (commercial) and B3 (residential) tariff class since 2008.
- ATCO's forecast indicates that new residential customer connections will increase by 1.6 per cent over AA5. However, the growth rate of new B3 connections during AA5 is expected to be lower than the growth over AA4.
- ATCO used weather normalised data in 2017 as a base to forecast its customer connection number and volume per connection for all tariff classes and the 2017 actual data for the assumption variables (for example, Gross State Product) from 2018 to 2024.

73. The ERA acknowledges that 2017 customer consumption data was the most recent data available when ATCO submitted its AA5 proposal. Actual 2018 customer consumption and economic data should be available after this draft decision is published. Given the commencement of AA5 in 2020, the actual data for 2018 should be used to amend ATCO's demand forecast for the AA5 final decision to ensure that the ATCO's AA5 forecast represents the best estimate under rule 74(2) (b) of the NGR.

Overview of the ERA's assessment of ATCO's demand forecast

74. ATCO surveyed A1 and A2 customers to collect annual consumption volume data, including data from the larger industrial customers.[32] For the industrial customers, generally accepted industry practice is to use a survey to inform demand forecasts as this would provide a better estimation of demand from large A1 customers.[33] ATCO forecast B1 customer connection based on a moderate growth rate for the AA5 period, compared to relatively high connection growth over AA4. ATCO explained that two factors contributed to the growth rate during AA4: increased economic activity, and increased retail competition following the entry of several new gas retailers.[34]

75. In its AA5 proposal, ATCO responded to the ERA's recommendation in the AA4 final decision by factoring in the effect of economic conditions for its demand forecast of A2, B1 and B2.[35] For example, ATCO undertook econometric testing to assess the effect of economic conditions on commercial customer connections for its AA5 forecast.[36] As discussed in paragraph 73, the inclusion of the most recent gas demand and economic data for 2018 will assist the ERA to better assess the correlation between economic conditions and gas usage during AA5, and determine if ATCO's demand forecast represents the best estimate under rule 74(2)(b) of the NGR.

76. The ERA considers that ATCO's demand forecast for B2 and B3 customers does not meet rule 74 of the NGR. ATCO's AA5 forecast is based on the assumption that it is not constrained in its ability to meet the demand for connections of new B2 and B3 customers. Specifically, ATCO's proposed AA5 greenfields and brownfields growth capital expenditure does not meet the incremental revenue test under rule 79(2)(b) of the NGR and should not be rolled into the regulatory asset base for AA5 (see discussion in paragraphs 512 to 555). As a result, the associated connection and usage assumed by ATCO for its B2 and B3 customers over AA5 is not reasonable pursuant to rule 74 (2)(a) of the NGR.

77. Figure 2 shows the difference between ATCO's actual and estimated total demand and the AA4 final decision forecast total demand. While the total actual demand in 2015 and 2016 was slightly higher than the final decision forecast, the actual gas consumption started to decrease in 2017. ATCO expects this downward trend will continue in 2018 to 2019.

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32 ATCO defines 'large industrial customers' as A1 customers that are anticipated to consume more than 35TJ per year.

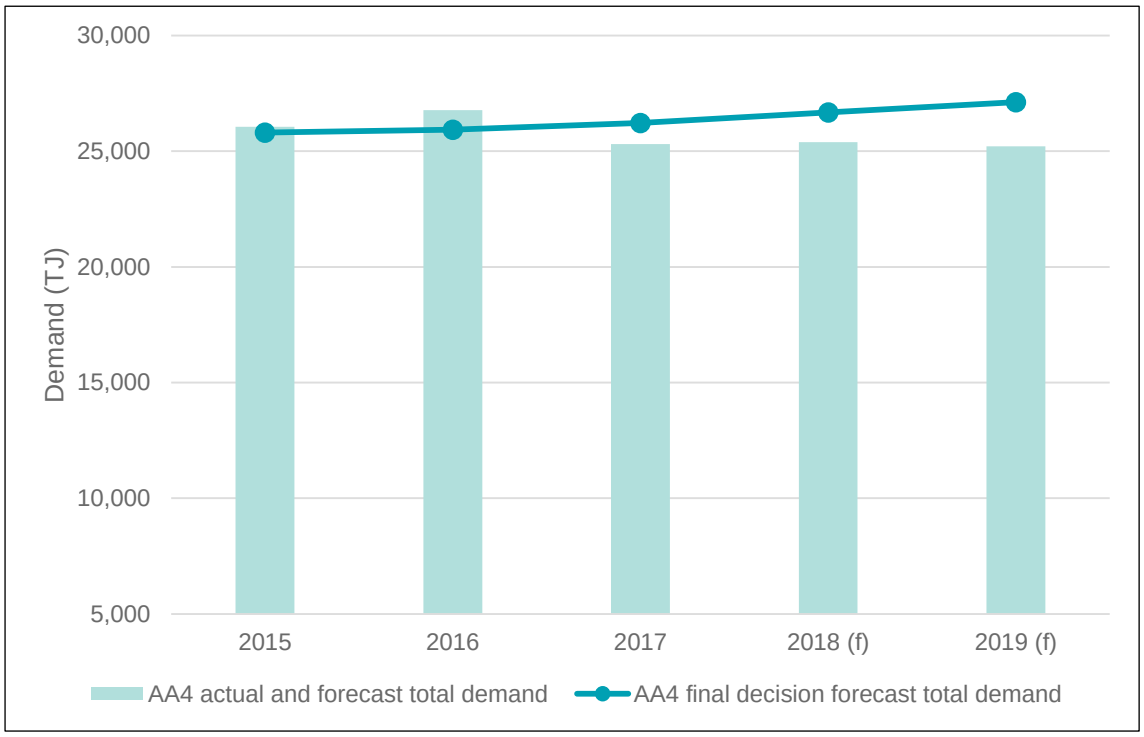
33 ERA, *AA4 Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution Systems*, p. 45.

34 Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 66.

35 ERA, *AA4 Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution Systems*, p. 42, p.44 and p. 45

36 Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 107

Figure 2 AA4 final decision forecast total demand and AA4 actual and ATCO estimated total demand

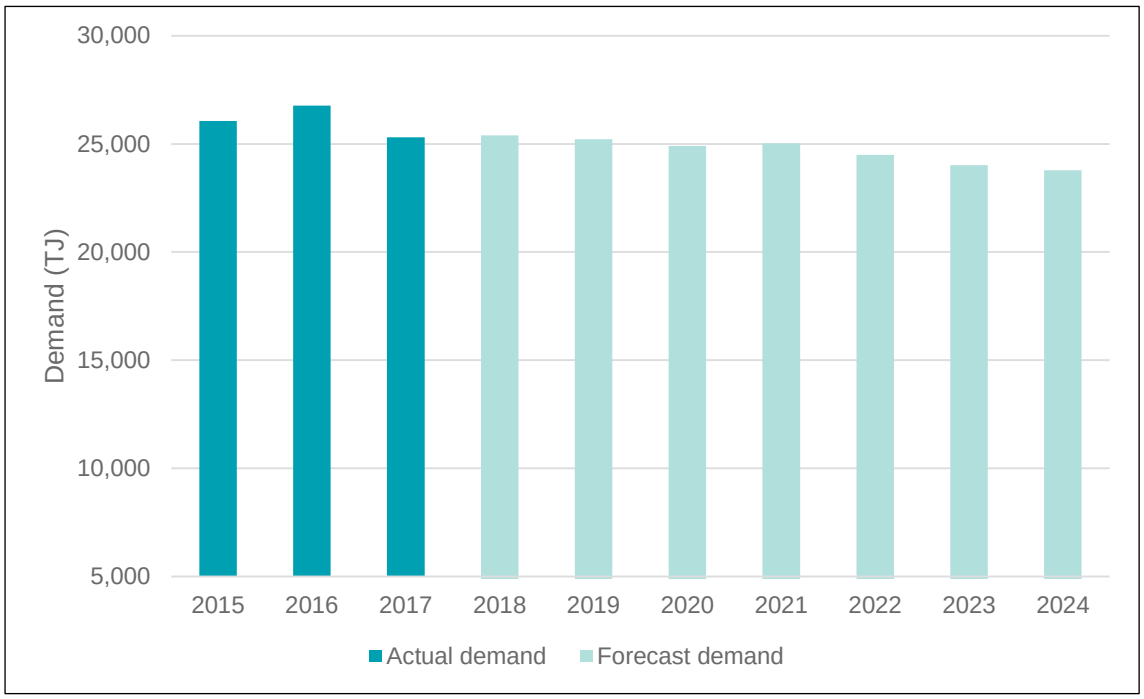


Source: ERA analysis, based on ATCO, 2020-2024 Plan (Access Arrangement Information), p. 54, Table 9.2, and ERA, Access Arrangement Information for the Mid-West and South-West Gas Distribution Systems, revised by reason of and pursuant to orders of the Australian Competition Tribunal made on 13 July 2016, p. 12, Table 13.

78. ATCO forecast the declining trend for total gas demand to continue during AA5. ATCO forecast a decline on total demand over AA5 from 25,303 TJ in 2017, to 23,782 TJ by 2024 (see Figure 3).[37] This is largely driven by a significant decline in average volume across commercial and residential customers in 2018 and 2019, with further declines expected over the AA5 period.

[37] ATCO, *Access Arrangement Information*, Table 9.2 and Table 9.7.

Figure 3 ATCO actual and forecast total demand for all customers



Source: ERA analysis, based on ATCO, 2020-2024 Plan (Access Arrangement Information), p. 54, Table 9.2 and p. 59, Table 9.7, and ERA, Access Arrangement Information for the Mid-West and South-West Gas Distribution Systems, revised by reason of and pursuant to orders of the Australian Competition Tribunal made on 13 July 2016, p. 12, Table 13.

79. While expecting the demand per connection to decrease across almost all tariff classes during AA5, ATCO forecast total new commercial and residential customer connections would increase by 1.6 per cent for B3 customers, 2.5 per cent for B2 customers, and 3.3 per cent for B1 customers. While ATCO expects A2 industrial customer connections to remain the same over AA5, A2 gas consumption is forecast to decrease by 2.3 per cent per year during AA5. In its proposal, ATCO also expected A1 industrial customer connections to decrease by 1.1 per cent per year, and gas consumption to decrease by 1.8 per cent per year during AA5 (see paragraphs 63 and 64).

Assessment of ATCO's A1 and A2 Demand Forecast

80. Given the size and concentration of industrial customers, the ERA requested ATCO to survey those customers to forecast the consumption for A1 and A2 customers in its AA4 final decision, rather than using a linear trend through the historical data as the basis of ATCO's forecasts.[38] ATCO accepted the ERA's recommendation and surveyed its industrial customers to forecast gas consumption during AA5.

81. ATCO's A1 demand forecast was based on large industrial customers requiring more than 35 TJ per year, including manufacturing operations, construction, chemicals or minerals processing.[39] Smaller A1 and A2 customers consume gas for large-scale space heating and water heating, including shopping centres, hotels, hospitals and other large public buildings. [40]

[38] ERA, *AA4 Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution Systems*, p. 45.

[39] Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 55.

[40] Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 55.

82. ATCO reviewed the list of its A1 and A2 customers for January 2018 and sorted those customers by industry sector. After compiling the historical consumption data of A1 and A2 customers, ATCO identified new connections and disconnections expected to occur during the forecast period, and used the survey data and comments made by industrial customers to adjust the gas consumption and connection forecast for the AA5 period. While A1 gas consumptions are expected to remain static for most industrial customers during AA5, ATCO forecast the total gas consumption of A1 customers to decrease at an average rate of 1.76 per cent, largely due to a scheduled disconnection in 2022 and 2023.

83. ATCO's A2 demand forecast included an assessment of the relationship between economic activity and gas consumption by industry sector. ATCO used the gross value added data by industry segment from the Australian Bureau of Statistics to undertake a regression analysis against gas consumption.[41] A statistically significant relationship exists only between historical gas consumption and gross value added of the manufacturing segment. ATCO stated that gross state product was also used as a predictor of A2 gas consumption but did not find any robust and reliable statistical relationship.[42]

84. A survey of large customers provides the necessary information to understand the planned future demand for A1 customers and subsequently derives a better estimation of industrial gas consumption for the AA5 period, instead of using only historical data as the basis of A1 demand forecast.

Assessment of ATCO's B1, B2 and B3 Demand Forecast

85. In the AA4 final decision, the ERA noted that ATCO's demand forecast lacked a consideration of the effect of economic growth on B1 and B2 consumption. In its AA5 proposal, ATCO undertook econometric analysis to test the relationship between gross state product and commercial consumption and the relationship between business numbers in greater Perth and commercial consumption.[43] ATCO found that the economic effect applied only to commercial connections, not volume per commercial connection.[44]

86. As a result, ATCO's forecast for B1 and B2 connections included two statistical relationships: commercial connection forecast and gross state product, and commercial connection forecast and greater Perth business numbers. ATCO used the corresponding coefficients from those statistical analyses to forecast the growth of B1 and B2 connections for the AA5 period.

87. ATCO forecast usage per B1 and B2 new and existing connection based on weather-normalised demand data and other factors that affected usage per connection, such as own-price and cross-price elasticity effect on usage.

88. ATCO accounted for the effect of gross state product and business numbers in the greater Perth area on its B1 demand forecast. The ERA considers this a better

41 The Australian Bureau of Statistics defines 'gross value added' as the value of output at basic prices minus the value of intermediate consumption at purchasers' prices. This term is used to describe gross product by industry and by sector.

42 Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 33.

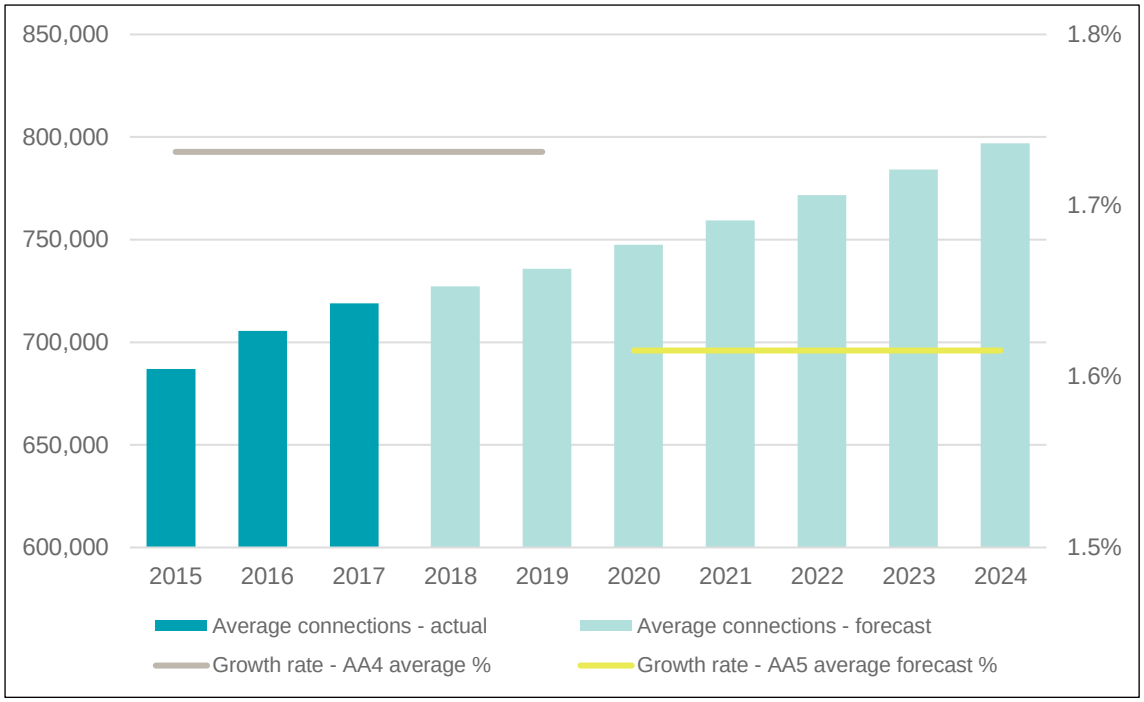
43 The Australian Bureau of Statistics uses the term 'Greater Perth' to describe Perth's Greater Capital City Statistical Area, which is a geographical area designed to represent the functional extent of Western Australia's capital city.

44 Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 107.

approach to reflect the responsiveness of gas demand to the economic conditions over the AA5 period.

89. Figure 4 shows that ATCO forecast new B3 average connections to increase by around 1.6 per cent per year during AA5 (yellow line), compared with a growth rate of around 1.75 per cent over the AA4 period (grey line). The projected connection growth over AA5 is largely a reflection of ATCO's projected population growth and dwelling completions for Perth through to 2024. ATCO's forecast also includes consideration of 5,500 zero-volume gas users disconnecting during AA5.[45]

Figure 4 Actual and Forecast Connections for B3 customers and the B3 connection growth rate over the AA4 and AA5 period

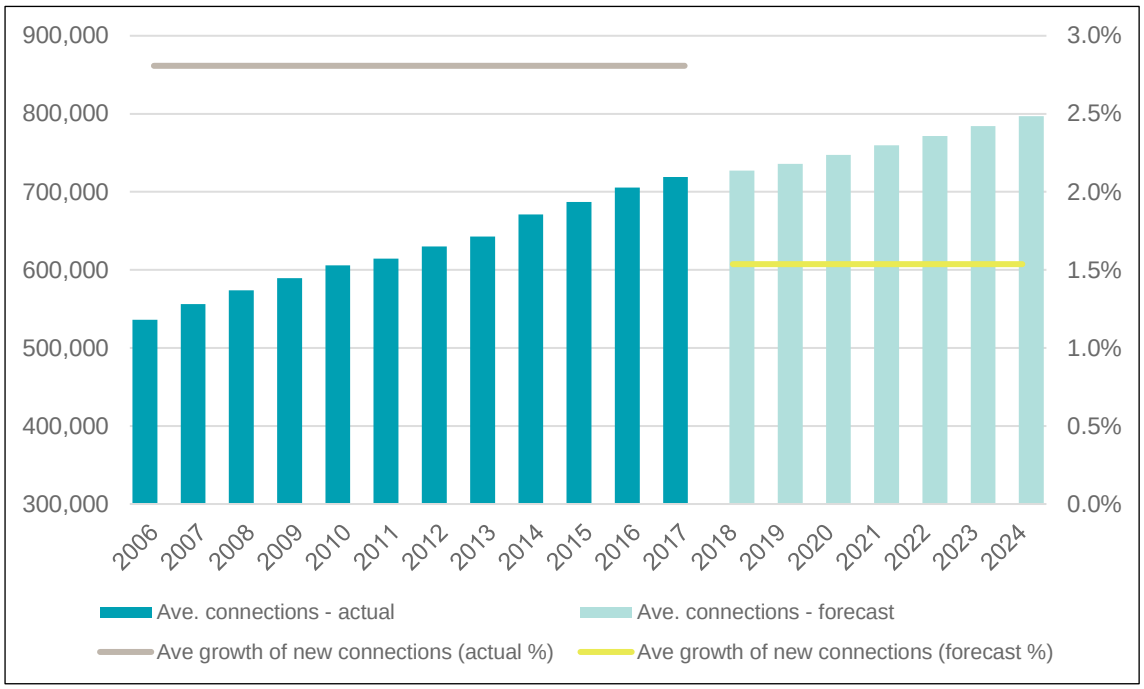


Source: ERA analysis, based on ATCO, 2020-2024 Plan (Access Arrangement Information), p. 54, Table 9.2 and p. 59, Table 9.7.

90. The steady decline in connecting new residential customers over AA5 appears to follow a longer term trend as shown in Figure 5, with the actual average growth rate decreasing from 2.8 per cent per year between 2006 and 2017 (grey line), to around 1.5 per cent during the forecast period from 2018 to 2024 (yellow line).

[45] ATCO, *Access Arrangement Information*, p. 58.

Figure 5 ATCO's actual and estimated growth rate for new B3 connections



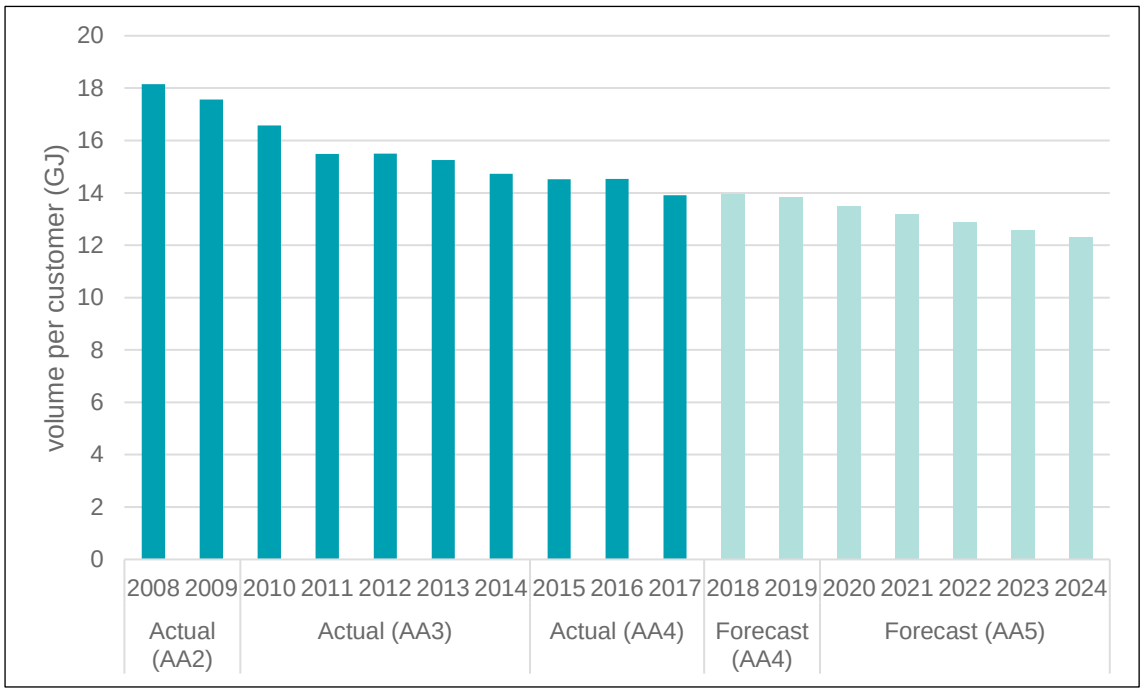
Source: ERA Analysis, based on ATCO's revenue and pricing model.

91. Figure 6 indicates a steady decrease in volume per residential customer (both existing and new customers) from the second access arrangement period to AA5, reducing from around 20 GJ in 2005 to less than 12 GJ in 2024. Core Energy's report indicated the factors that led to the expected reduction in gas consumption per connection, such as energy efficiency, appliance substitution and dwellings with fewer gas appliances.[46] Based on the weather normalised demand data, volume per existing connection is expected to decrease from 13.9 GJ in 2017 to 12.3 GJ in 2024. The gas usage by each early cohort of new B3 customers is also forecast to decline steadily each year during AA5 from 9.51 GJ per customer in 2020 to 9.14 GJ per customer in 2024.[47]

[46] Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 44.

[47] Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, pp. 43-44. The numbers quoted are based on mature customers. Core Energy defines a mature customer as a customer that connects two years prior.

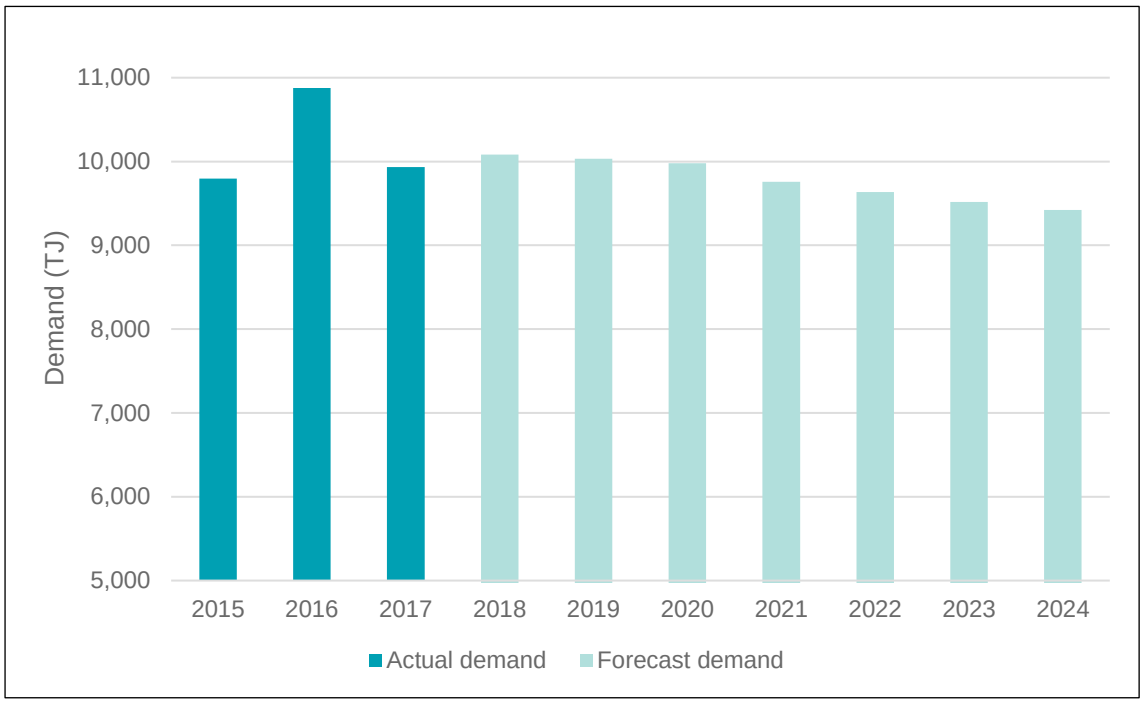
Figure 6 ATCO's actual and forecast B3 volume per customer (2008 to 2024)



Source: ERA Analysis, based on ATCO's revenue and pricing model and Core's demand forecast model.

92. Despite the projected increase for new B3 connections, ATCO expected that the decreasing volume per B3 connection would reduce total gas consumption of its B3 customers during AA5. Figure 7 shows the actual and estimated gas consumption for the B3 residential customers during the AA4 period and ATCO's forecast of residential gas consumption over AA5, reducing from around 10,000 TJ in 2018 to less than 9,400 TJ in 2024.

Figure 7 ATCO actual and forecast total demand for B3 residential customers



Source: *ERA analysis, based on ATCO, 2020-2024 Plan (Access Arrangement Information), p. 54, Table 9.2 and p. 59, Table 9.7, and ERA, Access Arrangement Information for the Mid-West and South-West Gas Distribution Systems, revised by reason of and pursuant to orders of the Australian Competition Tribunal made on 13 July 2016, p. 12, Table 13.*

93. ATCO's projected growth over AA5 assumed that ATCO was not constrained in its ability to meet the demand for connections of new B2 and B3 customers.

94. However, the ERA considers that ATCO's proposed greenfields and brownfields growth capital expenditure is not conforming capital expenditure (refer to paragraphs 512 to 555). ATCO's proposed AA5 greenfields and brownfields growth capital expenditure does not meet the incremental revenue test under rule 79(2)(b) of the NGR and should not be rolled into the regulatory asset base for AA5.

95. As a result, the ERA has removed associated customers and usage assumed by ATCO for its proposed greenfields and brownfields growth capital from the demand forecast used for this draft decision. Specifically, the ERA has revised ATCO's B2 and B3 demand forecast by:

- Reducing ATCO's greenfield connections forecast from 1,555 to zero for B2 new connections, and from 77,414 to zero for B3 new connections over AA5 and removing the associated gas usage.
- Reducing ATCO's brownfields connections forecast from 465 to zero for B2 new connections, and from 3,599 to zero for B3 new connections over AA5 and removing the associated gas usage.
- Adjusting ATCO's forecast of the average usage per B2 and B3 connection per year by using the average connection number, rather than ATCO's approach of using the closing connections per year. The ERA considers that the use of average connections (an average of the number of opening and closing connections) as the mid-point is appropriate for the tariff revenue calculation. The use of either the opening or closing connection number would overestimate or underestimate the tariff revenue during the year.

96. The ERA has applied ATCO's following assumptions to the revised B2 and B3 demand forecast for this draft decision:

- B2 disconnection rate of 0.6 per cent per year and B3 disconnection rate of 0.5 per cent per year.[48] The B3 disconnection includes ATCO's forecast of removing 5,500 zero-volume consumption meters in 2018.[49]
- ATCO's forecast of usage per B2 existing connection per year and the usage per B3 existing connection per year over AA5.[50]

97. Table 8 shows the cumulative decrease of B2 and B3 average connection number over AA5. The ERA's amended forecast also reflects the B2 and B3 disconnections per year over AA5, and the removal of ATCO's proposed new B2 and B3 greenfields and brownfields connections per year over AA5.

Table 8: ERA's amended forecast for B2 and B3 average connection numbers over AA5

	2020	2021	2022	2023	2024
B2 tariff class					
ATCO's forecast	12,527	12,850	13,190	13,528	13,850
ERA's adjustment to ATCO's forecast	-190	-588	-1,005	-1,422	-1,825
Amended forecast	**12,337**	**12,262**	**12,185**	**12,106**	**12,025**
B3 tariff class					
ATCO's forecast	747,479	759,437	771,652	784,165	796,954
ERA's adjustment to ATCO's forecast	-7,784	-23,441	-39,336	-55,510	-71,943
Amended forecast	**739,695**	**735,996**	**732,316**	**728,655**	**725,011**

Source: ATCO, Access Arrangement Information, Table 9.7. p. 59. EMCa analysis; ERA, GDS Tariff Model, February 2019.

98. Table 9 shows the cumulative decrease of B2 and B3 forecast gas usage over AA5. The decreasing demand is largely a reflection of the amended forecast for B2 and B3 customer numbers as discussed in paragraph 96.

[48] ERA analysis based on Core Energy Group's *AGA AA5 Gas Demand Forecast Report*, Table 5.2 and Table 6.6.

[49] Core Energy Group, *AGA AA5 Gas Demand Forecast Report*, p. 46. ATCO*, Access Arrangement Information*, p. 58.

[50] ERA analysis based on Core Report, Table 5.4 and Table 6.9.

Table 9: ERA's amended forecast for B2 and B3 gas usage (TJ) over AA5

	2020	2021	2022	2023	2024
B2 tariff class					
ATCO's forecast	1,419	1,436	1,453	1,469	1,477
ERA's adjustment to ATCO's forecast	-35	-73	-110	-147	-181
Amended forecast	**1,384**	**1,363**	**1,343**	**1,322**	**1,296**
B3 tariff class					
ATCO's forecast	9,891	9,758	9,634	9,518	9,421
ERA's adjustment to ATCO's forecast	-90	-179	-321	-465	-611
Amended forecast	**9,801**	**9,579**	**9,313**	**9,053**	**8,810**

Source: ATCO, Access Arrangement Information, Table 9.7. p. 59. EMCa analysis; ERA, GDS Tariff Model, February 2019.

99. The ERA's adjusted GDS demand forecast for the fifth access arrangement period is shown in Table 10.

Table 10: ERA's amended GDS demand forecast for AA5

Tariff Class	2020	2021	2022	2023	2024
A1					
Customers	72	72	71	69.5	69
Usage (TJ)	9,828	10,066	9,649	9,270	9,143
A2					
Customers	96	96	96	96	96
Usage (TJ)	1,669	1,630	1,592	1,555	1,519
B1					
Customers	1,816	1,885	1,949	2,010	2,069
Usage (TJ)	2,094	2,133	2,168	2,200	2,223
B2					
Customers	12,337	12,262	12,185	12,106	12,025
Usage (TJ)	1,384	1,363	1,343	1,322	1,296
B3					
Customers	739,695	735,996	732,316	728,655	725,011
Usage (TJ)	9,801	9,579	9,313	9,053	8,810
Total					
Customers	754,016	750,312	746,618	742,936	739,270
Usage (TJ)	24,776	24,771	24,064	23,399	22,991

Source: ATCO, Access Arrangement Information, Table 9.7. p. 59. EMCa analysis; ERA, GDS Tariff Model, February 2019.

100. The ERA has used actual B2 and B3 data for 2017 as a base to adjust ATCO's demand forecast as it represents the most recent information available at the time of this decision. The ERA considers that actual 2018 data for all tariff classes, when available, should be provided and applied by ATCO to update the demand forecast for AA5. This will ensure that the demand forecast represents the best estimate as required under rule 74(2)(b) of the NGR.

Required Amendment 1

ATCO must amend the gas distribution systems demand forecasts for the fifth access arrangement period in accordance with this draft decision, which includes updating the demand forecast to reflect 2018 actual data for all tariff classes.

Ancillary reference services

101. ATCO used 2015 and 2016 data to determine all forecast ancillary services, except for special meter reading where it used data for 2016 and 2017. The ERA does not consider that using these years to determine forecast demand would represent the best forecast possible in the circumstances as required by rule 74(2)(b). The ERA considers that the actual data for 2017 should be used as the basis for all ancillary services as it represents the most recent information. For example, special meter reading services have increased from 63,077 in 2016 to 119,622 in 2017. This increase is largely due to retail churn as a result of the increased competition in the retail market. Origin Energy and AGL entered the retail market in the second half of 2017 and Simply Energy entered in 2018. ATCO's use of 2016 data for special meter reading is likely to lead to a large understatement of demand for special meter reading through the AA5 period. The ERA considers that the actual number of special meter readings during 2018 would now be available to ATCO to use to inform the forecast number of special meter readings during AA5 in its response to the draft decision.

102. The ERA accepts that there is a relationship between the demand for these ancillary services and the total B3 connections, and has used the forecast total B3 connections for AA5 as listed in Table 10 to adjust the forecast for the ancillary services.

103. The ERA has adjusted ATCO's forecast demand for ancillary services by:

- Using the most recent ancillary service actual data for 2017 to forecast the B3 ancillary service demand during AA5.
- Calculating a ratio of the 2017 actual demand for each ancillary service to the total B3 connections in 2017.
- Applying the ratio for each ancillary service to the amended B3 connection forecast from 2020 to 2024.

104. Table 11 shows the ERA's amended forecast demand for ancillary services over AA5.

Table 11: ERA's amended forecast demand for ancillary services over AA5

Ancillary Service	2020	2021	2022	2023	2024
Applying a meter lock	9,559	9,510	9,461	9,412	9,361
Removing a meter lock	8,756	8,712	8,667	8,622	8,575
Deregistering a delivery point	2,932	2,917	2,902	2,887	2,871
Disconnecting a delivery point	4,031	4,011	3,990	3,969	3,948
Reconnecting a delivery point	3,138	3,122	3,106	3,090	3,073
Special meter reading	122,109	121,493	120,866	120,229	119,582

Source: ATCO, *Access Arrangement Information*, p. 61, Table 9.9; ERA analysis

105. As noted in paragraph 100, the ERA considers that actual 2018 data should be used to update the demand forecasts for haulage reference services. The ERA considers that actual 2018 data should also be used for the calculation of ancillary reference services to ensure that the demand forecasts represent the best estimate as required under rule 74(2)(b) of the NGR.

Required Amendment 2

ATCO must amend the demand forecast for ancillary services for the fifth access arrangement period in accordance with this draft decision, which includes updating the demand forecasts to reflect 2018 actual data.

Key Performance Indicators

106. Rule 72(1)(f) of the National Gas Rules (NGR) requires access arrangement information to include information on the key performance indicators to be used by the service provider to support the expenditure to be incurred over the access arrangement period.

ATCO's Proposal

107. ATCO's proposed key performance indicators are set out in Chapter 10 of the access arrangement information and are summarised below (Table 12 and Table 13). With the exception of a new *asset health index indicator*, the indicators remain unchanged from the fourth access arrangement period (AA4) with updated targets for the fifth access arrangement period (AA5).

Table 12 ATCO's key performance indicators and targets for AA5

KPI	Description	AA5 Target
Customer Service		
Domestic customer connections within five business days *	The percentage of new customer connections to established domestic dwellings on the distribution network provided within five business days (the applicable regulated time limit).	>98.7%
Attendance to broken mains and services within one hour *	The percentage of attendance to broken mains and services within one hour of the service request being received.	>99.9%
Attendance to loss of supply within three hours *	The percentage of attendance to loss of gas supply within three hours of the service request being received. This indicator is included in [ATCO's] Safety Case[51] and is covered by the Guarantee Service Level scheme.	>99.9%
Network Integrity		
Asset health index	An index based on unplanned SAIDI, unplanned SAIFI, mains leaks, service leaks, and meter leaks.	100
Total public reported gas leaks per km of main	Total number of confirmed gas leaks reported by the public (excluding third-party damage) per kilometre of main per year.	<0.65
System average interruption frequency index (SAIFI)	The number of supply interruptions experienced by the average customer as a result of sustained unplanned interruptions, calculated as: *"(sum of the number of customers interrupted) / (number of customers served)"*.	<0.0041

[51] ATCO, *Gas Distribution System Safety Case*, December 2017.

KPI	Description	AA5 Target
Unaccounted for gas (UAFG) rate *	UAFG is the difference between the measurement of the quantity of gas delivered into the gas distribution system in each period and the measurement of the quantity of gas delivered from the gas distribution system during that period.	Yearly target (Table 13)
Expenditure		
Operating expenditure per km of main	The total operating expenditure per year divided by the total km of main.	Yearly target (Table 13)
Operating expenditure per customer connection	The total operating expenditure per year divided by the total number of customer connections.	Yearly target (Table 13)

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Table 10.3.

** Reported to the ERA annually as required under ATCO's gas distribution licence.*

Table 13: ATCO's unaccounted for gas and operating expenditure key performance indicator targets for AA5

KPI	2020	2021	2022	2023	2024
UAFG rate	2.55%	2.52%	2.50%	2.48%	2.46%
Operating expenditure per km of main ($ 2019)	4,687	4,736	4,855	4,894	4,889
Operating expenditure per customer connection ($ 2019)	89	89	92	92	92

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Table 10.4.

108. The indicators are categorised into three groups – customer service, network integrity and expenditure. ATCO has set the AA5 indicator targets by:[52]

> **Using current performance:**
>
> The customer service and network integrity KPIs use the simple average of our service performance over the past five years. We believe the past five years is representative of the performance that customers are seeking into AA5. The five-year average moderates the effect of events outside of our control such as weather.
>
> **Using expected performance in 2024:**
>
> For the new asset health index KPI, we have set the AA5 targets to reflect the level of performance expected in 2024. This KPI allows customers to see the changes in asset health over the period.
>
> **Aligning with AA5 forecast expenditure:**
>
> The expenditure KPIs have been calculated consistent with our expenditure forecasts using the forecasts of opex, customer numbers, and km of mains over AA5. The [unaccounted for gas] KPI targets have been set based on volume demand forecasts and historical trends.

[52] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 63.

Submissions

109. Synergy has submitted that "because ATCO is under a price-cap form of regulation, the key performance indicators are not linked to any financial reward or penalty scheme".[53] It still considered, however, that such performance indicators provided a measurable benchmark for ATCO, retailers, customers and the ERA to assess ATCO's performance. Synergy further submitted that the key performance indicators that were set for AA4 appeared to have been set at levels that were easily met. It recommended that ATCO's proposed indicators for AA5 be assessed to ensure the measures provided a realistic target and possibly a "stretch target".[54]

110. Apart from Synergy, no other submissions to the ERA addressed ATCO's proposed key performance indicators and targets for AA5.

Draft Decision

111. Rule 72(f) of the NGR requires ATCO to include in access arrangement information key performance indicators to be used to support the expenditure to be incurred over the access arrangement period. The rule does not prescribe the number or type of key performance indicators to be used, or any specific assessment criteria that the indictors must meet.

112. ATCO's proposal to include the nine key performance indicators, detailed in Table 12 (above), meets the requirements of rule 72(f). That is, ATCO included in its access arrangement information the key performance indicators that it will use to support the expenditure to be incurred over AA5.

113. The NGR do not detail any specific assessment criteria for key performance indicators. Given this, the ERA has considered the following matters.

- Whether the proposed indicators support the categories of expenditure that will be incurred over the access arrangement period.
- Whether the proposed indicators provide a means to measure and benchmark the effect of the expenditure and whether the targets set are suitable.

114. ATCO's proposed operating and capital expenditure that will be incurred over the access arrangement period are discussed elsewhere in this decision.[55] Table 14 summarises the categories of expenditure. ATCO's proposed key performance indicators either directly or indirectly support these categories of expenditure. For example, the unaccounted for gas rate indicator directly supports the unaccounted for gas expenditure category, whereas the other network integrity indicators (i.e. asset health index, reported leaks per km of main and System Average Interruption Frequency Index (SAIFI)) all indirectly support the network operating and network sustaining expenditure categories.

[53] Synergy submission, *14 November 2018*, p. 8.

[54] Synergy submission, *14 November 2018*, p. 8.

[55] For operating expenditure see paragraph 152. For capital expenditure see paragraph 362.

Table 14: ATCO's operating and capital expenditure categories for AA5

Operating expenditure categories	Capital expenditure categories
Network operating expenditure *Expenditure for network maintenance and network control and operations support.*	Network sustaining *Expenditure to maintain and improve the safety and integrity of services, comply with regulatory obligations and meet current levels of demand.*
Corporate operating expenditure *Expenditure associated with enterprise-wide needed support functions (for example, human resources and finance support functions).*	Network growth *Expenditure to comply with regulatory obligations and meet forecast growth in demand for services.*
Information technology operating expenditure *Expenditure for managing the maintenance and replacement of IT assets.*	Information technology *Expenditure for IT systems to provide services to customers and for strategic initiatives.*
Unaccounted for gas *Expenditure to cover unaccounted for gas.*	Structures and equipment *Expenditure to maintain and replace fleet vehicles, plant and property.*
Ancillary *Expenditure associated with the provision of ancillary services.*	

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Chapter 11 and Chapter 12.

115. The measurability of, and targets for, ATCO's proposed key performance indicators are considered in turn below. As part of these considerations, the ERA has considered advice from its technical advisor EMCa.

Customer service indicators

116. ATCO's customer service indicators comprise three separate key performance indicators and remain unchanged from the indicators included in the current AA4 access arrangement. The AA5 target for each indicator has been set by using a simple average of ATCO's service performance over the past five years, resulting in two of the three targets being higher than the current targets (Table 15).

117. ATCO submitted that reporting against these indicators would help it maintain connection times within customers' expected timeframes and a high standard of fault response and safety performance.[56]

[56] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, pp. 63 and 64.

Table 15: ATCO's customer service key performance indicators and targets

KPI	AA4 target	AA5 target	Basis for AA5 target
Domestic customer connections within five business days (%)	>99.5	>98.7	Average of ATCO's actual service performance over the past five years
Attendance to broken mains and services within one hour (%)	>99.7	>99.9	
Attendance to loss of gas supply within three hours (%)	>99.7	>99.9	

Source: ERA, AA4 Final Decision, Table 18; ATCO, Access Arrangement Information, Chapter 10.

118. ATCO's proposed customer service indicators provide a means to measure and benchmark the effect of associated expenditures as part of the access arrangement. The ERA has considered ATCO's proposed expenditure for AA5 elsewhere in this decision. Any changes to capital and/or operating expenditures that are allocated to address customer service operations should result in consequential effects on ATCO's performance against this indicator over time.

119. ATCO set the customer service targets for AA5 by using its average service performance over the past five years, which resulted in two of the targets (attendance to broken mains and services and attendance to loss of gas supply) being higher than the current AA4 targets by 0.2 percentage points. The remaining target (domestic customer connections) is 0.8 percentage points lower than the current target. This method for setting AA5 targets is reasonable on the basis that it reflects customers' expectations that ATCO's existing performance levels are acceptable and do not require improvements.[57]

Network integrity indicators

120. ATCO's network integrity indicators comprise four separate key performance indicators and remain unchanged from the indicators included in the current AA4 access arrangement, with the exception of a new "asset health index" (Table 16).

Table 16: ATCO's network integrity indicators and targets

KPI	AA4 target	AA5 target	Basis for AA5 Target
Asset health index (new)	na	100	Level of performance expected in AA5 (year 2024)
Total public reported gas leaks per kilometre of main	<0.7	<0.65	Average of ATCO's actual service performance over the past five years
SAIFI	<0.0044	<0.0041	Average of ATCO's actual service performance over the past five years
UAFG rate	Table 17	Table 17	Volume demand forecasts and historical trends

Source: ERA, AA4 Final Decision, Table 18; ATCO, Access Arrangement Information, Chapter 10.

[57] EMCa, *Review of Technical Aspects of the Proposed Access Arrangement (Confidential)*, January 2019, section 3.6.

Table 17: ATCO's unaccounted for gas rate AA4 and AA5 targets

UAFG rate	Year	Year	Year	Year	Year
AA4 targets (%)	**2015**	**2016**	**2017**	**2018**	**2019**
	2.63	2.62	2.62	2.60	2.58
AA5 targets (%)	**2020**	**2021**	**2022**	**2023**	**2024**
	2.55	2.52	2.50	2.48	2.46

Source: ERA, AA4 Final Decision, Table 34; ATCO, Access Arrangement Information, Chapter 10.

Asset health index

121. The ERA's final decision for AA4 required ATCO to include an asset health key performance indicator for AA5 "to provide a link between network management and the service level that is experienced by customers".[58]

> … an asset health KPI was important, given the increase in forecast sustaining capital expenditure over the fourth access arrangement period. The asset health KPI would need to:
>
> - Address how changes to asset condition data and models occurring during the access arrangement period will be accounted for; and
> - Provide flexibility to make efficient adjustments within the access arrangement period, for example an efficient capital expenditure/operating expenditure trade-off allowing for deferral of an asset replacement.

122. ATCO submitted that the purpose of its proposed asset health index for AA5 was "to demonstrate the value of proposed asset expenditure to [its] customers regarding improved asset health".[59] To develop the index, ATCO considered:

- what information was measured and reported on in AA4
- how the index would complement the existing key performance indicators
- whether the index was easily understandable.

123. ATCO submitted that Australian Gas Networks (Victoria and Albury) and AusNet adopted a similar index for their respective gas distribution networks. ATCO's asset health index parameters, weightings and targets are shown in Table 18. ATCO submitted:[60]

> The index is based on the weighted average of the index scores for unplanned System Average Interruption Duration Index (SAIDI), unplanned System Average Interruption Frequency Index (SAIFI), mains leaks, service leaks, and meter leaks. The index score calculation is:
>
> $Index_n = 200 - (Actual_n \,/\, Target_{2024}) \times 100$
>
> We have set the target performance for each parameter to reflect the expected level of performance in 2024 to enable the Asset Health Index to demonstrate the value of the

[58] ERA, *Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution Systems*, 30 June 2015, p. 55, paragraph 240.

[59] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 65.

[60] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 65.

proposed asset expenditure over AA5.

Table 18: ATCO's asset health index parameters

Parameter	Description	Weighting	Target$_{2024}$
Unplanned SAIDI	Total duration of sustained interruptions in a year	25%	1.7877
Unplanned SAIFI	Total number of sustained interruptions in a year	25%	0.0041
Main leaks	Leaks pa / km	30%	0.0282
Service leaks	Leaks pa / service	15%	0.0102
Meter leaks	Leaks pa / meter	5%	0.0003

Source: ATCO, Access Arrangement Information, Table 10.2.

124. EMCa's review of ATCO's proposed asset health indicator noted that:

- The index was derived from other key performance indicators.
- The selected parameters were all lagging indicators of performance (that is, the parameters measured an event occurring on the network, rather than being indicative of the condition of the network and inherent risk).

125. EMCa concluded that:[61]

- The rationale for ATCO deriving an asset health indicator from other existing KPIs is not clear.
- An asset health index should be specified in such a way that it can be read as a leading indicator of performance.
- ATCO provides no annual estimate of the Asset Health KPI for the AA5 period, nor for the AA4 period. If it were to produce the historical Asset Health KPI for at least 2014 onwards, it would help with understanding the historical and forecast 'health' of the GDS as a result of its investment in the GDS.
- ATCO has not provided justification for the weightings applied in the development of the Asset Health KPI.
- There is no evidence that ATCO has taken this KPI into account in developing its AA5 forecast or in (retrospectively) monitoring its historical performance.

126. EMCa's conclusions are reasonable. The information provided by ATCO did not adequately explain its choice of asset health indicator. While ATCO provided an overview of the matters it considered to develop the indicator (see paragraph 122), it did not provide any further explanation.

127. ATCO submitted that two Australian service providers – Australian Gas Networks (AGN) and AusNet Services[62] – have adopted a similar asset health indicator. The

[61] EMCa, *Review of Technical Aspects of the Proposed Access Arrangement (Confidential)*, January 2019, section 3.6, paragraph 91.

[62] Previously known as SP AusNet.

asset health indicators used by AGN and AusNet Services are key performance indicators that cover either or both:[63]

- Mechanical mains and service damage, with:
  - mains damage measuring the frequency of mechanical damage per kilometre of mains.
  - service damage measuring the frequency of mechanical damage to service per customer connection.
- Mains replacement, which measures the volume of mains replacement works, in kilometres per year, as part of an annual mains replacement program.

128. AGN and AusNet Services do not combine or weight the above indicators to create an asset health index. The indication of asset health is provided by the yearly reporting of performance against each of the key performance indicators used.

129. Consistent with its AA4 final decision, the ERA still considers that any one, a combination, or all of the indicators used by AGN and AusNet Services are suitable indicators to inform and benchmark asset health. Notwithstanding this, ATCO chose to develop its own asset health indicator, which is consistent with the ERA's AA4 final decision required amendment. As indicated in paragraphs 125 to 126, however, additional information is required from ATCO to further explain its choice of indicator and how the indicator supports the expenditure to be incurred over the access arrangement period.

Required Amendment 3

ATCO must provide additional information to further explain its choice of asset health indicator for inclusion in the access arrangement information.

Total public reported gas leaks per kilometre of main

130. ATCO described the "total public reported gas leaks per kilometre of main" indicator as "the total number of confirmed gas leaks reported by the public, excluding third-party damage, per kilometre of main per year". The indicator reflects the performance of the network and ATCO's maintenance activities.[64]

131. ATCO set the reported gas leaks target for AA5 by using its average service performance over the past five years. That resulted in a target of <0.65 for AA5, which is higher standard than the current (AA4) target of <0.7.[65]

132. ATCO's proposed indicator provides a means to measure and benchmark the effect of associated expenditures as part of the access arrangement. The method for setting the AA5 target is considered reasonable on the basis that the target is seeking

63 Australian Gas Networks, *Final Plan Access Arrangement Information for our Victorian and Albury natural gas distribution networks: 2018 to 2022*, December 2016, p. 20.
AusNet Services, *Gas Access Arrangement Review 2018-2022: Access Arrangement Information*, 16 December 2016, chapter 3.6.

64 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 66.

65 Given the nature of the indicator, a higher target is represented by a lower number.

a higher level of service performance (that is, a lower number of reported gas leaks per kilometre of main).[66]

133. The ERA has considered ATCO's proposed expenditure for AA5 elsewhere in this decision. Any changes to capital and/or operating expenditures that are allocated to address the number of publicly reported gas leaks should result in consequential effects on ATCO's performance against this indicator over time.

System average interruption frequency index (SAIFI)

134. ATCO described the SAIFI indicator as "the number of supply interruptions experienced by the average customer as a result of sustained unplanned interruptions".[67] It is calculated as:

(sum of the number of customers interrupted) / (number of customers served)

135. ATCO submitted "SAIFI is an industry accepted measure for reliability, indicating the average number of interruptions that a customer would experience in a year" and that during AA5 it will "continue to invest in the network, including the installation of high pressure pipelines, interconnections, and associated pressure reduction infrastructure to maintain reliability for customers".[68]

136. ATCO set the SAIFI target for AA5 by using its average service performance over the past five years. That resulted in a target of <0.0041 for AA5, which is higher standard than the current (AA4) target of <0.0044.[69]

137. ATCO's proposed indicator provides a means to measure and benchmark the effect of associated expenditures as part of the access arrangement. The method for setting the AA5 target is considered reasonable on the basis that the target is seeking a higher level of service performance (that is, a lower number of supply interruptions from unplanned interruptions).[70]

138. The ERA has considered ATCO's proposed expenditure for AA5 elsewhere in this decision. Any changes to capital and/or operating expenditures that are allocated to address unplanned supply interruptions should result in consequential effects on ATCO's performance against this indicator over time.

Unaccounted for gas (UAFG)

139. ATCO described the UAFG indicator as "the difference between the measurement of the quantity of gas *delivered into* the gas distribution system in each period and the measurement of the quantity of gas *delivered from* the gas distribution system during that period". ATCO submitted that:[71]

66 EMCa, *Review of Technical Aspects of the Proposed Access Arrangement (Confidential)*, January 2019, section 3.6.

67 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 66.

68 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 66.

69 Given the nature of the indicator, a higher target is represented by a lower number.

70 EMCa, *Review of Technical Aspects of the Proposed Access Arrangement (Confidential)*, January 2019, section 3.6.

71 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, pp. 67 and 69.

> UAFG is attributable to both leakage in the network and measurement error. UAFG makes up part of the overall cost of providing services. Reporting against this KPI will help [ATCO] maintain [its] commitment to reducing UAFG.

140. ATCO's proposed UAFG targets for AA5 have been set for each year of the access arrangement period and are based on volume demand forecasts and historical trends. Information to support the UAFG targets are included in ATCO's *UAFG Strategy and Pricing Forecast*.[72]

141. The ERA has considered ATCO's forecast of unaccounted for gas and associated operating expenditure to cover the unaccounted for gas elsewhere in this decision.[73] Consistent with these considerations, ATCO's proposed AA5 UAFG indicator targets (shown in Table 17 above) are considered reasonable on the basis that the targets are declining targets. These declining targets support ATCO's forecast performance and expenditure for reducing the rate of unaccounted for gas over AA5.[74]

Expenditure indicators

142. ATCO's expenditure indicators comprise two separate key performance indicators and remain unchanged from the indicators included in the current AA4 access arrangement. The AA5 yearly targets for each indicator have been set based on ATCO's expected performance and forecast expenditure (opex) in AA5 (Table 19).

Table 19: ATCO's expenditure key performance indicator targets for AA5

KPI	2020	2021	2022	2023	2024
Opex per km of main ($ 2019)	4,687	4,736	4,855	4,894	4,889
Opex per customer connection ($ 2019)	89	89	92	92	92

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Table 10.4.

143. ATCO submitted that its proposed expenditure indicators "ensure that [its] measures of efficiency include the costs associated with additional kilometres of network and additional customers".[75]

144. ATCO's operating expenditure indicators and targets are based on ATCO's forecast of operating expenditure for AA5 and hence provide a direct means to measure and benchmark the effect of this expenditure.

145. The indicator targets have been set based on ATCO's expected performance and forecasts for AA5.[76] The ERA has considered ATCO's forecast operating expenditure and demand forecasts elsewhere in this decision.[77] Consistent with the required amendments in these sections, ATCO's AA5 targets for its expenditure indicators must be recalculated. The ERA's recalculated targets are shown in Table 20.

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72 ATCO, *2020-24 Plan Attachment 11.2: UAFG Forecast Strategy (Public)*, 31 August 2018.

73 See paragraph 280.

74 EMCa, *Review of Technical Aspects of the Proposed Access Arrangement (Confidential)*, January 2019, section 3.6.

75 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 68.

76 EMCa, *Review of Technical Aspects of the Proposed Access Arrangement (Confidential)*, January 2019, section 3.6.

77 For forecast operating expenditure see paragraph 152. For demand forecasts see paragraph 52.

Table 20: ERA's draft decision expenditure key performance indicator targets for AA5

KPI	2020	2021	2022	2023	2024
ATCO Proposal					
Opex per km of main ($ 2019)	4,687	4,736	4,855	4,894	4,889
Opex per customer connection ($ 2019)	89	89	92	92	92
ERA Draft Decision					
Opex per km of main ($ 2019)	4,440	4,437	4,460	4,499	4,480
Opex per customer connection ($ 2019)	84	84	85	86	86

Required Amendment 4

ATCO must amend its expenditure key performance indicator targets in accordance with Table 20 of this draft decision.

Revenue and Tariffs

Total Revenue

146. Rule 76 of the National Gas Rules (NGR) requires total revenue to be determined for each year of the access arrangement period using the building block approach, in which the building blocks are:

- operating expenditure
- return on the projected capital base
- depreciation on the projected capital base
- estimated cost of corporate income tax
- increments or decrements resulting from the operation of an incentive mechanism to encourage gains in efficiency.

ATCO's proposal

147. ATCO has applied the building block approach to propose a total revenue requirement for the fifth access arrangement period (AA5) of $1,025 million. Table 21 details ATCO's proposed building block components. Each of these components is discussed in the sections that follow, except for the 'inflationary gain in return on assets'.

148. The return on the projected capital base is calculated by applying a nominal return on capital to a nominal asset base. As the nominal rate of return includes an allowance for inflation and the capital base is inflated each year to maintain it in nominal (current) dollars, there is a double count of inflation in the return of the projected capital base building block. To remove this double count of inflation, the inflationary gain in return on assets is calculated and shown as a separate line item in Table 21.

Table 21: ATCO's proposed total revenue requirement for AA5 ($ millions nominal)

Building blocks	2020	2021	2022	2023	2024	Total
Operating expenditure	68.8	71.8	76.1	79.3	82.0	**377.9**
Return of the projected capital base	49.4	60.5	63.9	67.0	70.9	**311.7**
Inflationary gain in return on assets	(24.8)	(26.3)	(27.6)	(28.9)	(30.2)	**(137.8)**
Return on the projected capital base	81.2	86.1	90.4	94.6	99.0	**451.4**
Return on working capital	0.1	1.5	1.5	1.6	1.6	**6.3**
Tax payable	6.7	5.5	4.5	4.0	3.4	**24.1**
Value of imputation credits	(2.3)	(1.9)	(1.5)	(1.4)	(1.2)	**(8.2)**
Total Revenue (Unsmoothed)	**179.2**	**197.2**	**207.3**	**216.2**	**225.5**	**1,025.5**

Source: ATCO, 2020–24 Plan (Access Arrangement Information), p. 160, Table 18.3.

Submissions

149. None of the submissions made to the ERA address the overall calculation of total revenue. Submissions that addressed one or more of ATCO's total revenue building block components are discussed under the following sections.

- operating expenditure
- opening capital base
- projected capital base
- return on the regulatory capital base
- depreciation
- taxation
- working capital

Draft Decision

150. The ERA's reasoning for each of the five building blocks of NGR 76 is set out in the sections identified in paragraph 149 of this draft decision. The resulting total revenue in nominal dollars from the building blocks (operating expenditure, return on the projected capital base, depreciation of the projected capital base and the estimated cost of corporate income tax) is set out in Table 22. As there was no incentive scheme that operated in AA4, there were no increments or decrements that affect AA5 revenue.

Table 22: ERA's total revenue (nominal) building blocks AA5

Nominal $ Million	2020	2021	2022	2023	2024	Total
Regulatory operating expenditure	64.2	67.2	68.7	70.4	71.3	**341.8**
Operating expenditure	*64.1*	*65.2*	*66.6*	*68.4*	*69.2*	***333.5***
Return on working capital	*0.1*	*2.0*	*2.0*	*2.1*	*2.1*	***8.3***
Return on capital base	72.4	73.8	74.9	75.9	76.7	**373.7**
Regulatory depreciation	24.1	33.1	34.2	34.9	36.2	**162.6**
Depreciation	*45.8*	*55.3*	*56.7*	*57.7*	*59.3*	***274.8***
Inflationary gain	*(21.7)*	*(22.2)*	*(22.5)*	*(22.8)*	*(23.0)*	***(112.2)***
Regulatory corporate income tax	0.0	0.0	0.0	0.2	2.5	**2.6**
Corporate income tax	*0.0*	*0.0*	*0.0*	*0.3*	*4.9*	***5.3***
Imputation credits	*0.0*	*0.0*	*0.0*	*(0.2)*	*(2.5)*	***(2.6)***
Total Revenue	**160.7**	**174.1**	**177.8**	**181.4**	**186.7**	**880.7**

Source: ERA, GDS Tariff Model, April 2019.

151. The allocation of total revenue to the haulage and ancillary reference services is set out in the Allocation of Total Revenue section (at paragraph 815) of this draft decision. The reference tariffs to recover this forecast revenue and the mechanism to vary these tariffs during the AA5 period for the references services are set out in the Reference Tariffs section (at paragraph 821) and Tariff Variation Mechanism section (at paragraph 861) of this draft decision.

Required Amendment 5

ATCO must amend the values for total revenue (nominal) to reflect the values set out in Table 22 of this draft decision.

Operating Expenditure

152. Rule 91 of the NGR states the criteria the ERA must consider when approving a service provider's operating expenditure:

> **91 Criteria governing operating expenditure**
>
> (1) Operating 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 delivering pipeline services.
>
> (2) The [ERA's] discretion under this rule is limited.

153. Rule 74 of the NGR states specific requirements for forecasts and estimates:

> **74 Forecasts and estimates**
>
> (1) Information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate.
>
> (2) A forecast or estimate:
>
> (a) must be arrived at on a reasonable basis: and
>
> (b) must represent the best forecast or estimate possible in the circumstances.

154. Rule 71 of the NGR states the considerations the ERA may and should take into consideration when evaluating forecast operating expenditure.

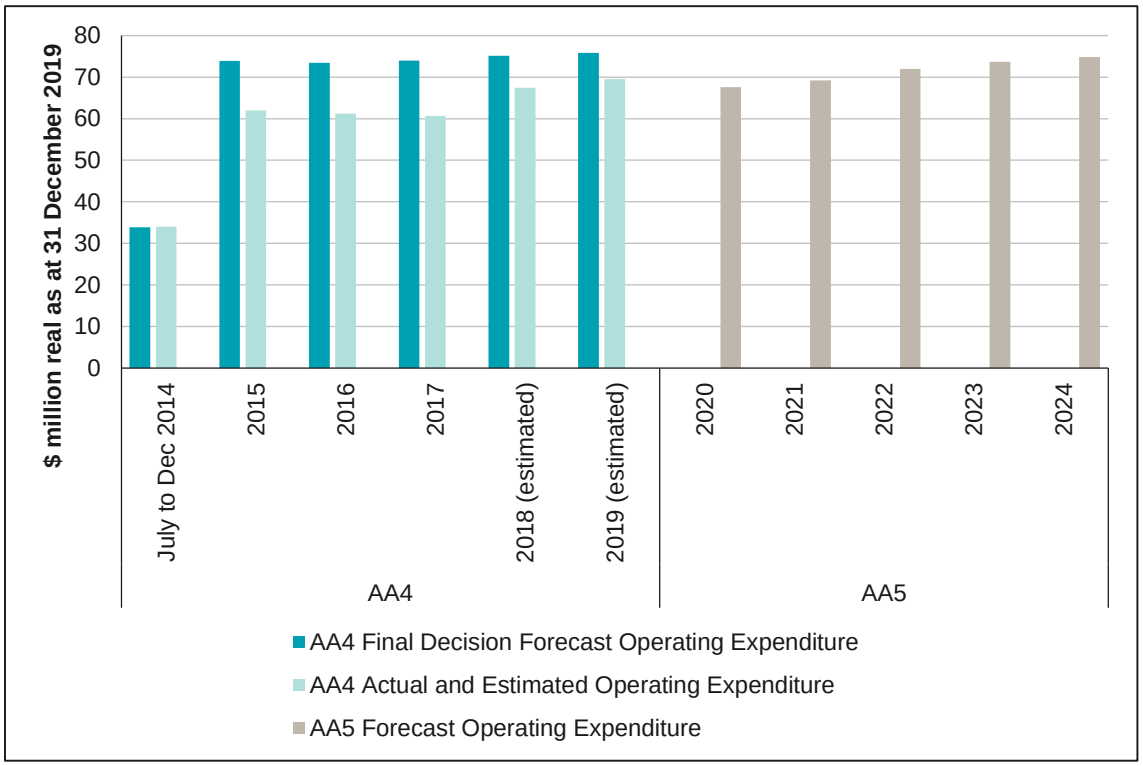
> **71 Assessment of compliance**
>
> (1) In determining whether capital or operating expenditure is efficient and complies with other criteria prescribed by these rules, the [ERA] may, without embarking on a detailed investigation, infer compliance from the operation of an incentive mechanism or on 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.

ATCO's proposal

155. ATCO has proposed $357.4 million[78] total operating expenditure for AA5, which is a five-year period from 2020 to 2024 inclusive. Estimated total operating expenditure for AA4, a five and a half-year period, was $354.9 million.[79]

156. Figure 8 shows the forecast operating expenditure used for the AA4 final decision, ATCO's actual and estimated operating expenditure for AA4, and ATCO's proposed operating expenditure for AA5. As shown, the forecast yearly operating expenditure for AA5 is higher than actual yearly operating expenditure during AA4.

Figure 8 AA4 final decision forecast operating expenditure, ATCO AA4 actual and estimated operating expenditure and ATCO AA5 proposed operating expenditure ($ million real as at 31 December 2019)



Source: ERA analysis, based on ATCO, 2020-2024 Plan (Access Arrangement Information), p. 36, Table 5.5, and p. 75, Table 11.3, and ERA, Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 30 June 2015 as amended on 10 September 2015, p. 112, Table 37.

157. Table 23 shows ATCO's estimated operating expenditure for AA4. These figures are actual operating expenditure for June 2014 to December 2017, and estimates for 2018 and 2019. The estimated network, corporate and ancillary services operating expenditure for 2018 and 2019 represent significant increases from ATCO's 2015, 2016 and 2017 actual operating expenditure levels for those categories.

[78] $ million real as at 31 December 2019. ATCO Gas Australia, *2020-24 Plan* (*Access Arrangement Information)*, 31 August 2018, p. 75, Table 11.3.

[79] $ million real as at 31 December 2019. The estimated operating expenditure for AA4 reflects actual operating expenditure for June 2014 to December 2017 inclusive, and estimates for 2018 and 2019. ATCO Gas Australia, *2020-24 Plan* (*Access Arrangement Information)*, 31 August 2018, p. 36, Table 5.5.

Table 23: ATCO AA4 actual and estimated operating expenditure ($ million real as at 31 December 2019)

	Actual				Estimated		
	July to Dec 2014	**2015**	**2016**	**2017**	**2018**	**2019**	**AA4 Total**
Network	13.9	26.4	30.1	27.7	31.3	32.4	161.7
Corporate	11.3	18.1	13.6	16.2	19.1	19.5	97.8
IT	4.3	8.8	8.5	9.7	9.0	9.3	49.6
Unaccounted for gas (UAFG)	4.4	7.9	8.2	6.0	6.1	6.9	39.4
Ancillary services	0.2	0.9	0.9	1.0	1.9	1.5	6.5
Total	34.0	62.0	61.2	60.7	67.4	69.5	354.9

Source: ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), p. 36, Table 5.5.

158. ATCO presented two operating expenditure forecasts for AA5:

- A forecast which used the base-step-trend method for network, corporate services and information technology (IT) operating expenditure and specific forecasts for UAFG and ancillary services.
- A bottom-up forecast.

159. ATCO's proposed operating expenditure for AA5 used the base-step-trend method combined with specific forecasts for UAFG and ancillary services. The bottom-up forecast was used to consider the reasonableness of the forecast derived from the base-step-trend method.

160. ATCO considered the base-step-trend forecast combined with specific forecasts represented the best possible forecast of its efficient operating expenditure because:

- The base-step-trend method used the operating expenditure incurred in an efficient base year and adjusted for expected changes over the forecast term.[80]
- Benchmarking supplied by ATCO showed its levels of operating expenditure were relatively efficient in comparison to a sample of entities over the 2013 to 2017 period.[81] ATCO considered that, as this benchmarking indicated that ATCO was currently operating efficiently, using the most recent year's incurred operating expenditure as a starting point and applying appropriate adjustments to reflect future operational changes should yield a forecast which best reflected the operating expenditure of a prudent service provider operating efficiently.

80 ATCO Gas Australia, *2020-24 Plan* (*Access Arrangement Information)*, 31 August 2018, p. 74.

81 ATCO Gas Australia, *2020-24 Plan* (*Access Arrangement Information),* 31 August 2018, p. 37, p. 77, and *Attachment 5.1, Benchmarking Partial Productivity Performance.*

161. ATCO derived forecast operating expenditure for AA5 as the sum of:

- Estimates for the network, corporate and IT operating expenditure categories derived using the operating expenditure costs incurred in an efficient base year plus adjustments to account for anticipated differences between the base year and the AA5 years.
- Specific yearly forecasts for UAFG and ancillary services. Specific forecasts were calculated for these cost categories because ATCO considered that the categories' expenditure profile over AA5 was not suitably captured by the method of growth in the base-step-trend method.

162. Table 24 shows ATCO's proposed forecast operating expenditure for AA5 according to the base-step-trend forecast combined with specific forecasts, broken down into its components. ATCO did not include a specific adjustment for productivity. This is discussed at paragraph 186.

Table 24: ATCO proposed forecast operating expenditure for AA5 ($ million real as at 31 December 2019)

	2020	2021	2022	2023	2024	AA5 Total
Base year	54.8	54.8	54.8	54.8	54.8	273.8
Recurrent step changes	1.4	1.5	1.8	1.9	1.9	8.5
Non-recurrent step changes	0.9	0.9	2.1	2.3	1.9	8.1
Output growth	0.9	1.7	2.6	3.5	4.4	13.0
Input cost	0.6	1.2	1.8	2.4	3.0	9.0
Productivity growth	-	-	-	-	-	-
Sub-total network, corporate and IT	58.5	60.1	63.1	64.8	65.9	312.4
UAFG	6.3	6.2	6.1	5.9	5.8	30.3
Ancillary services	2.8	2.9	2.9	3.0	3.0	14.6
Total forecast operating expenditure	**67.6**	**69.2**	**72.0**	**73.7**	**74.8**	**357.4**

Source: ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), p. 75, Table 11.3.

163. The base year ATCO used to estimate the network, corporate and IT operating expenditure forecast for AA5 was 2019. 2019 is the final year of AA4.

164. ATCO stated that it had estimated the 2019 base operating expenditure for network, corporate and IT costs as follows:

- Determining the level of ATCO's operating expenditure 'outperformance' in 2017 by subtracting actual network, corporate and IT costs for 2017 from the AA4 final decision forecast expenditure for those categories.
- Subtracting the amount calculated in the preceding step from the AA4 final decision forecast network, corporate and IT operating expenditure for 2019.
- From the amount calculated in the preceding step, adjusting for non-recurrent costs in 2017 and 2019 as follows:
  - Including short term employee incentive payments paid in 2017 over the provisioned amount (2017). ATCO considered this adjustment appropriate because it considered the base year estimate should include the full, normal level of annual employee remuneration.
  - Removing costs for preparing its AA5 submission, which were included in the 2019 forecast operating expenditure in the AA4 final decision. ATCO's reasoning for removing this amount from the base year estimate was that the AA5 submission costs will not be a recurring cost item during AA5.[82]

165. Table 25 shows ATCO's calculation of its 2019 base operating expenditure.

Table 25: ATCO's calculation of base year operating expenditure (OPEX) ($ million real as at 31 December 2019)

	2017 final decision forecast OPEX (A)	2017 actual OPEX (B)	2017 'outperformance' (C = A - B)	2019 final decision forecast OPEX (D)	2019 base year OPEX (E = D - C)
Network	34.622	27.676	6.946	35.174	28.23
Corporate	19.232	16.213	3.019	20.578	17.56
IT	11.528	9.716	1.812	11.272	9.46
Total final year OPEX					**55.247**
Adjustment: Add short term incentive payment in excess of provisioned amount (2017)					0.657
Adjustment: Subtract costs for preparing AA5 proposal which were included in the 2019 forecast operating expenditure in the AA4 final decision					-1.153
Efficient base network, corporate and IT OPEX					**54.751**

166. The above adjustments yield an estimated operating expenditure for network, corporate and IT costs for the base year of $54.8 million.[83]

167. For each year in AA5, step changes were made to account for additional recurring costs not incurred within the base year. ATCO's base-step-trend operating expenditure forecast included step changes for recurrent operating expenditure of

[82] ATCO Gas Australia, *2020-24 Plan (Access Arrangement Information)*, pp. 76-77.

[83] $ million real as at 31 December 2019.

$8.5 million[84] over AA5. These recurrent costs were due to additional costs of safety, compliance and regulatory activities, including:

- additional leak survey and repair activities
- the addition of new offtake facilities to the Parmelia Gas Pipeline
- new installations of supervisory control and data acquisition assets.

168. The proposed step change for additional leak survey and repair covers costs for an expansion of the scope of ATCO's existing leak survey activities, including leak surveying at the location of the meter as the below-ground assets are potential leak points due to conditions such as age, installation type and environment. ATCO stated that the expansion of its leak survey and repair activities commenced in 2018 and would continue into AA5 with the inclusion of meter positions in high-density community use locations,[85] city centre, commercial and residential areas. ATCO stated that this expansion was driven by the formal safety assessment process that it conducted as required under the *Gas Standards (Gas Supply and System Safety) Regulations (GSSR) 2000* (Part 4 – Distribution system safety). Standard AS/NZS 4645.1, *Gas distribution networks- Network management*, prescribes the requirement to complete a formal safety assessment to understand the risk and associated controls to manage leaks. ATCO stated that due to a change in Standard AS/NZS 4645.1, its risk obligations were increased. After conducting the formal safety assessment, ATCO proposed to take further action to satisfy its obligations under this Standard.

169. The proposed step change for new interconnections covers costs for supporting the ongoing operation and maintenance of new offtake facilities (gate stations) to the Parmelia gas pipeline, including new gate stations within Rockingham (2020), South Metro (2021) and North Metro (2022).

170. The proposed step change for Supervisory Control and Data Acquisition (SCADA) covers costs for supporting the ongoing operation and maintenance of additional SCADA assets. ATCO proposed that the costs for acquisition and installation of these assets should form part of its approved capital expenditure for AA5, as outlined in paragraphs 476 to 487. ATCO's view was that installation of these assets would enable it to optimise its distribution network through remote control of capacity management and enhanced data acquisition.

171. For each year in AA5, changes were made to account for expected non-recurrent costs not incurred within the base year. ATCO's base-step-trend operating expenditure forecast included total changes for non-recurrent operating expenditure of $8.1 million[86] over AA5. These included costs for:

- hazardous areas review and remediation
- pipeline inline inspections
- mains reclassification

84 $ million real as at 31 December 2019.

85 'High-density community use locations' are defined as areas where buildings of four or more storeys are prevalent, major shopping centres, schools, hospitals, aged care facilities, and major sporting and cultural facilities. Public infrastructure (e.g. roads and railways, trafficable tunnels) in direct proximity of the high-density community use area is also deemed to be part of the high-density community use area. ATCO Gas Australia, *2020-24 Plan (Access Arrangement Information)*, p. 79.

86 $ million real as at 31 December 2019.

- preparation costs for the sixth access arrangement period (AA6)
- a review of ATCO's asset and business management system.

172. The proposed change for hazardous areas review and remediation covers proposed expenditure for a project commenced in 2018 with the objective of ensuring that higher priority non-compliant equipment would be rectified within the required timelines. This project is due for completion in 2022. The proposed operating expenditure includes re-design costs, consultancy fees and costs for remediation of existing facilities associated with the project. ATCO stated that its project for hazardous areas review and remediation was initiated based on recommendations arising from an external Gas Distribution System Safety Case audit conducted in 2017. This audit as conducted as part of ATCO's obligations to maintain its safety and operating plan in conjunction with the Australian Standard AS/NZS 4645.1: Gas distribution networks – Network management.

173. The proposed change for pipeline inline inspections covers operating expenditure linked to the continuation of inspections of major pipelines into AA5 following on from other inspection project completions in AA4. ATCO proposed that capital expenditure costs for necessary modifications to six pipelines in order to enable inspections to be carried out should form part of its capital expenditure for AA5, as outlined in paragraph 505. ATCO stated that the proposed operating expenditure change was driven by the outcome of ATCO's formal safety assessment, which highlighted internal inspections as an important risk control, forming part of ATCO's pipeline integrity management plans. High-pressure steel pipelines require internal inline inspections as prescribed in the standards AS/NZS 2885.3:2001 Pipelines – Gas and liquid petroleum- Operation and maintenance and AS/NZS 2885.3: 2012 Pipelines-Gas and liquid petroleum- Operation and maintenance.

174. The proposed change for mains reclassification covered operating expenditure for continuing a project commenced by ATCO in AA4 to capture, record and amend maintenance plans for approximately 6,000 locations on ATCO's gas network information system. ATCO cited a change to the Australian Standard for gas distribution as the driver for the initiation of the mains reclassification project. The Australian Standard (*Gas distribution networks Part 1: Network management*) defines a main (gas pipe) as 'a pipe installed to convey gas to individual services or other distribution facilities'. According to ATCO, the standard definition for 'services' within the standard has been updated based on volume, and consequently ATCO has re-defined its criteria for mains and services and identified approximately 6,000 locations where its mains require updating to be available within the gas network information system.

175. The proposed change for the asset and business management system review covered operating expenditure for the planning and scoping phase of an upgrade of ATCO's enterprise resource planning system. The planning and scoping phase is scheduled to be completed in 2022. ATCO stated that conditions attached to its Gas Distribution License were applicable to ATCO under the *Energy Coordination Act 1994*, and required it to have an asset management system in place. ATCO considered that its enterprise resource planning system enabled it to monitor, maintain and replace assets prudently and efficiently.

176. The proposed change for AA6 preparation covered regulatory preparation costs for the access arrangement revision required for the period commencing 1 January 2025. These costs include consultancy fees, project management fees and additional resources related to the revision of the access arrangement.

177. For each year in AA5, escalation has been added to base year expenditure to reflect additional operating expenditure expected to be incurred due to output growth from the base year. ATCO gave examples of this expenditure including meter reading costs, leak surveys, network maintenance and incremental facility costs. ATCO's base-step-trend operating expenditure forecast included output growth escalation of $13.0 million[87] over AA5.

178. The output growth escalation factor was derived based on two factors which ATCO considered drove increases in operating expenditure: expected growth in customer numbers and expected growth in the physical size (measured in kilometres of mains) of the distribution network.

179. ATCO cited analysis conducted by ACIL Allen[88] and Economic Insights,[89] for Australian Gas Networks and Multinet Gas respectively, to support the selection of these two factors.

180. These two growth rates were assigned weightings of 45 per cent and 55 per cent respectively to derive the output growth escalation factor. As support for the weightings applied, ATCO cited the Australian Energy Regulator's (AER) most recent draft decision for Multinet Gas' access arrangement,[90] wherein the AER accepted use of the same growth factors and weightings to calculate an operating expenditure output growth escalation factor.

181. Table 26 shows the proposed output growth escalation rate for ATCO for each year in AA5.

Table 26: ATCO proposed operating expenditure forecast – Output growth escalation factor

Forecast growth factors	Weighting	2020	2021	2022	2023	2024
Percentage growth in the number of customers (%)	45	1.62	1.62	1.63	1.64	1.65
Percentage growth in the length of mains (%)	55	1.52	1.44	1.49	1.46	1.65
Weighted annual output growth escalation rate (%)	-	1.57	1.52	1.55	1.54	1.65

Source: ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), p. 83, Table 11.6.

182. For each year in AA5, a real escalation has been added to reflect additional operating expenditure due to input cost growth from the base year cost level in excess of

87 $ million real as at 31 December 2019.

88 ACIL Allen, Opex Partial Productivity Analysis, 20 December 2016, pages 27-28, prepared for Australian Gas Networks Limited.

89 Economic Insights, *Gas Distribution Businesses Opex Cost Function*, prepared for Multinet Gas, 22 August 2016.

90 Australian Energy Regulator, Draft decision – *Multinet Gas access arrangement 2018 to2022, Attachment 7 – Operating expenditure*, 6 July 2017, p. 23.

inflation. ATCO's base-step-trend operating expenditure forecast included input cost growth escalation of $9.0 million[91] over AA5.

183. The input growth escalation factor was derived based on a 62 per cent/38 per cent weighted average of expected labour price growth and expected non-labour (materials) price growth. ATCO cited a report on Total Factor Productivity by the Pacific Economics Group[92] as support for the weightings applied.

184. ATCO applied its consultant's (Synergies) forecast annual rate of growth in the wage price index for the Western Australian electricity, gas, water and waste water sector[93] as its labour price growth rate. ATCO did not include a real cost escalation for non-labour costs as it does not expect any price rises in excess of inflation for materials costs.

185. Table 27 shows the resulting real input growth escalation rate for ATCO for each year in AA5.

Table 27: ATCO proposed operating expenditure forecast – Real input growth escalation factor

Input growth factor	Weighting	2020	2021	2022	2023	2024
Labour (%)	62	1.64	1.64	1.64	1.62	1.66
Materials (%)	38	-	-	-	-	-
Weighted annual input growth rate (%)		1.02	1.02	1.02	1.00	1.03

Source: ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), p. 83, Table 11.6.

186. The escalation factors applied did not include a productivity adjustment. ATCO's reasoning for this included:

- It was already operating efficiently, a view which ATCO believed was supported by the benchmarking cited at paragraph 160.
- A productivity adjustment would affect its ability to provide safe and reliable services to consumers and therefore harm consumer interests in the long term.
- ATCO's proposal to absorb approximately $2.6 million[94] of certain costs[95] that it was not seeking to include within approved operating expenditure for AA5. ATCO stated that it would not seek to include these costs within approved operating expenditure as the benefits of these projects would be realised during AA5.

187. The proposed UAFG expenditure was calculated as forecast unit gas prices for UAFG multiplied by forecast UAFG volumes. Estimation of the expected volume of UAFG required ATCO to forecast its:

91 $ million real as at 31 December 2019.

92 Pacific Economics Group, *TFP Research for Victoria's Power Distribution Industry,* December 2004.

93 ATCO Gas Australia, *Access Arrangement Information*, *Attachment 12.9 Wage price index forecast*, 31 August 2018, p. 74.

94 $ million real as at 31 December 2019.

95 These costs are listed and described in: ATCO Gas Australia, *2020-24 Plan* (*Access Arrangement Information)*, pp. 84-85.

- UAFG rates as a percentage of total gas throughput for each year of AA5
- total gas throughput for each year of AA5.

188. ATCO applied a forecast unit price for UAFG that it estimated based on the most recent publicly available information and predictions, and noted that a tender process would be conducted beginning in late 2018 which would fix the actual price of UAFG per gigajoule (GJ) for the five years from 1 January 2020 to 31 December 2024.

189. ATCO indicated that it would apply the actual unit price of UAFG, as determined through the tender, to update its proposed UAFG operating expenditure following the draft decision.

190. ATCO forecast a decrease in its UAFG rate from 2.55 per cent in 2020 to 2.46 per cent in 2024.[96] The forecast UAFG rates are similar but below the AA4 approved UAFG rates.

191. The throughput estimates on which ATCO based its UAFG volume forecast are based on its demand forecast, which is outlined in paragraphs 54 to 67.

192. Based on ATCO's initial calculations, forecast UAFG costs for AA5 are $30.3 million.[97]

193. ATCO calculated the proposed ancillary services expenditure ($14.6 million[98]) by multiplying the anticipated unit rate costs for each ancillary service by the expected volumes of the services over AA5.

194. The following ancillary services are included in ATCO's ancillary services operating expenditure forecast:

- applying a meter lock
- removing a meter lock
- deregistering a delivery point
- disconnecting a delivery point
- reconnecting a delivery point
- special meter reading.

195. Further information on ATCO's proposed ancillary services is provided in paragraphs 37 to 40.

196. ATCO based its forecast ancillary services volumes on historical growth and current retailer demands.

197. As stated in paragraph 157, ATCO presented a 'bottom-up' operating expenditure forecast. This was presented as a sense check to the base-step-trend forecast combined with specific forecasts, rather than being the basis for the proposed operating expenditure. For the bottom-up forecast, total forecast operating expenditure was derived by identifying the expected activities for each cost category

96 ATCO Gas Australia, *2020-24 Plan (Access Arrangement Information)*, p. 70.

97 $ million real as at 31 December 2019.

98 $ million real as at 31 December 2019.

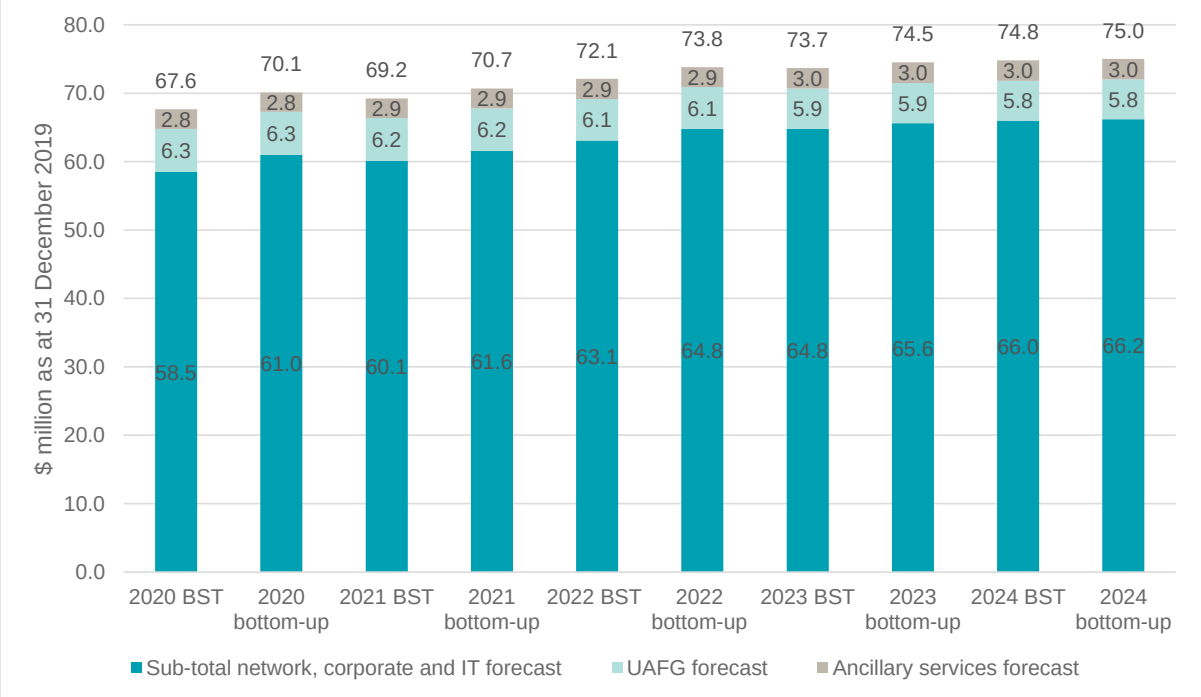
over AA5 and summing the expenses ATCO expected to incur to undertake those activities. As such, ATCO's bottom-up forecasts of UAFG and ancillary services costs were the same as the specific forecasts made under the base-step-trend method. The total bottom-up operating expenditure forecast for AA5 was $364.2 million.[99] Table 28 shows ATCO's forecast operating expenditure for AA5 using the bottom-up method. Figure 9 compares ATCO's bottom-up forecast of operating expenditure with ATCO's base-step-trend forecast.

Table 28: ATCO forecast AA5 operating expenditure - Bottom-up method ($ million real as at 31 December 2019)

	2020	2021	2022	2023	2024	AA5 Total
Network operating expenditure	36.1	36.8	38.3	38.4	39.0	188.7
Corporate operating expenditure	17.5	17.5	17.7	19.4	19.4	91.4
IT operating expenditure	7.4	7.3	8.8	7.8	7.8	39.2
UAFG operating expenditure	6.3	6.2	6.1	5.9	5.8	30.3
Ancillary services operating expenditure	2.8	2.9	2.9	3.0	3.0	14.6
TOTAL	**70.2**	**70.8**	**73.8**	**74.4**	**75.0**	**364.2**

Source: ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), p. 87, Table 11.11.

Figure 9 ATCO AA5 base-step-trend and bottom-up operating expenditure forecasts



Source: ERA analysis based on ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), p. 74, Table 11.2, and p. 87, Table 11.11.

[99] $ million real as at 31 December 2019.

Submissions

198. Alinta Energy and Synergy accepted the use of the base-step-trend method for forecasting ATCO's operating expenditure for AA5.[100]

199. However, Alinta noted that the intended expenditure would require ERA evaluation to determine whether it met the criteria outlined in rule 91 of the NGR. Alinta also observed that, as customer connection growth forecasts may have a substantial impact on operating expenditure, these should be carefully reviewed by the ERA.[101]

200. Similarly, while Synergy agreed with the reasonableness of the use of the base-step-trend method, it challenged ATCO's application of the method whereby costs were escalated and passed through. Specifically, Synergy considered that ATCO's application of the base-step-trend method for forecasting its operating expenditure did not account for economies of scale or efficiencies as a result of its capital expenditure programs and therefore could not reflect the lowest sustainable costs of service delivery. Synergy expected that ATCO had identified specific areas where step changes that decreased operating expenditure could be achieved, including projects that ATCO stated would or could reasonably be expected to deliver productivity or efficiency improvements, and that these efficiency savings should be removed from ATCO's forecast operating expenditure. Synergy cited the AA5 upgrades to IT systems and significant investment in SCADA and remote control capability as examples of projects that it expected would only be included in ATCO's forecasts if they were expected to deliver efficiencies, and therefore an associated reduction in future operating expenditure would be warranted to reflect the trade-off between capital expenditure investments and operating expenditure savings.[102]

201. Synergy said that ATCO's customers expected ongoing efficiencies and standards to be maintained or improved. Synergy therefore did not agree with ATCO's claim that, due to its performance against benchmarks (described at paragraph 160), there should be no additional productivity growth factored into its AA5 operating expenditure forecasts.

202. Kleenheat also questioned the reasonableness of not including a productivity adjustment within ATCO's AA5 proposed operating expenditure forecasts. Kleenheat questioned whether this approach implied that further productivity improvements and efficiencies were no longer necessary.[103]

203. Synergy disagreed with ATCO's use of 2019 as the base year for its proposed operating expenditure forecast. Synergy noted that ATCO used the forecast operating expenditure for 2019 from the AA4 final decision, less the efficiencies achieved two years prior (in 2017) to derive its estimate of efficient base year operating expenditure, and that this approach would not include any further

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100 Alinta Energy, *Submission, Proposed Revisions to the Mid-West and South-West Gas Distribution System Access Arrangement for 2020 to 2024 Issues Paper,* 14 November 2018, p. 7; Synergy, *Response to Issues Paper on Proposed Revisions to the Mid-West and South-West Gas Distribution Systems Access Arrangement,* 14 November 2018, p. 6.

101 Alinta Energy, *Submission, Proposed Revisions to the Mid-West and South-West Gas Distribution System Access Arrangement for 2020 to 2024 Issues Paper,* 14 November 2018, p. 7.

102 Synergy, *Response to Issues Paper on Proposed Revisions to the Mid-West and South-West Gas Distribution Systems Access Arrangement,* 14 November 2018, pp. 6-7.

103 *Kleenheat*, Kleenheat submission on the proposed revised access arrangement for Mid-West to South-West Gas Distribution Systems (GDS), 13 November 2018.

efficiencies between 2017 and 2019. Synergy considered this approach was unlikely to yield an accurate assessment of ATCO's efficient operating expenditure levels.[104]

204. Kleenheat questioned the level of conservatism incorporated in ATCO's operating expenditure forecasts, and the potential that the forecasts had been overestimated. Kleenheat's concern stemmed from the variance between ATCO's actual operating expenditure and the forecast operating expenditure for the AA4 period.[105]

205. Kleenheat also questioned the use of benchmarks as a basis for comparison to evaluate ATCO's operating efficiency. While Kleenheat acknowledged that benchmarks against other gas pipeline owners in Australia were an important measure, Kleenheat considered that some networks were generally understood to be 'gold plated' to earn higher returns for owners, and the Australian Competition and Consumer Commission and the AER were looking closely at price reviews for all network operators.[106]

206. Kleenheat specifically challenged the special meter reading unit costs used by ATCO as part of its ancillary services cost forecast. Kleenheat compiled data covering special meter reading costs for ATCO and five other Australian gas distribution network operators and observed that, within this sample, ATCO's proposed meter reading cost was the second highest with the average cost from this sample 23 per cent cheaper than ATCO's cost. Kleenheat questioned the reasonableness of the special meter reading unit costs on that basis, and questioned whether this price sufficiently reflected any efficiency gains achieved through economies of scale as market churn increased as a result of increased competition in the WA natural gas market. Kleenheat's view was that ATCO's performance, relative to its sample, appeared to be inconsistent with that of an efficient operator.[107]

207. Synergy stated that ATCO's key performance indicators relating to operating expenditure increased significantly between 2017 (the most recent actuals) and the estimated 2019 values. Synergy observed that this was inconsistent with ATCO's suggestion that its benchmarking exercise indicated that its operating expenditure per kilometre of mains and operating expenditure per customer connection was amongst the best in Australia as at 2017. Synergy calculated that ATCO's estimated 2019 operating expenditure put ATCO towards the middle of the comparator group of gas distribution network service providers. Synergy also noted that the AER had recognised that benchmarking was a "fraught activity" when setting expenditure allowances.[108]

208. Synergy observed that in ATCO's bottom-up forecast of operating expenditure, corporate operating expenditure accounted for approximately 25 per cent of total operating expenditure, which it considered was a high proportion in comparison with other regulated network businesses. Synergy considered that this observation was magnified by the fact that the corporate expenditure it referred to appeared to be

104 Synergy, *Response to Issues Paper on Proposed Revisions to the Mid-West and South-West Gas Distribution Systems Access Arrangement,* 14 November 2018, pp. 6-7.

105 *Kleenheat*, Kleenheat submission on the proposed revised access arrangement for Mid-West to South-West Gas Distribution Systems (GDS), 13 November 2018.

106 *Kleenheat*, Kleenheat submission on the proposed revised access arrangement for Mid-West to South-West Gas Distribution Systems (GDS), 13 November 2018.

107 *Kleenheat*, Kleenheat submission on the proposed revised access arrangement for Mid-West to South-West Gas Distribution Systems (GDS), 13 November 2018.

108 Synergy, *Response to Issues Paper on Proposed Revisions to the Mid-West and South-West Gas Distribution Systems Access Arrangement,* 14 November 2018, p. 7.

made up of direct costs, and there were also indirect costs included in the capital expenditure forecast. Synergy therefore questioned the quantum of the corporate overheads, from both ATCO Australia and the ATCO Group more broadly, allocated to ATCO's Australian regulated gas business. Synergy requested the ERA to require ATCO to substantiate these costs in greater detail.[109]

Draft decision

Assessment of operating expenditure

209. ATCO's proposed operating expenditure forecast for AA5 was equivalent to an average annual operating expenditure forecast of $71.5 million.[110] This was 10.78 per cent higher than the average annual operating expenditure incurred by ATCO during AA4.

210. The ERA's technical advisor, EMCa, reviewed ATCO's approach to investment governance and management systems, procedures and practices and compared them to good industry practice. EMCa also compared what ATCO's governance framework required and the evidence of consistent application of those requirements.

211. The ERA considered information provided by ATCO, public submissions received and also EMCa's advice to determine the amount of operating expenditure that meets the requirements of the National Gas Rules.

212. The ERA's assessment of ATCO's proposed forecast operating expenditure for AA5 has covered the following:

- Base-step-trend forecasting method.
- Selection of the most appropriate base year.
- Adjustments to derive efficient base year operating expenditure.
- Recurrent step changes proposed to ATCO's base year network, corporate and IT operating expenditure.
- Non-recurrent step changes proposed to ATCO's base year network, corporate and IT operating expenditure.
- Output growth escalation factor.
- Input growth escalation factor.
- UAFG operating expenditure.
- Ancillary service operating expenditure.

Base-step-trend forecasting method

213. ATCO's proposed forecast operating expenditure for AA5 was calculated using the base-step-trend method combined with specific forecasts for UAFG and ancillary services. Estimates for the network, corporate and IT operating expenditure categories were derived using the expenditure incurred in an 'efficient' base year

[109] Synergy, *Response to Issues Paper on Proposed Revisions to the Mid-West and South-West Gas Distribution Systems Access Arrangement,* 14 November 2018, pp. 7-8.

[110] $ million real as at 31 December 2019.

(2019) plus adjustments to account for anticipated differences between the base year and the AA5 years.

214. EMCa reviewed the operating expenditure forecast proposed by ATCO in terms of:

- the forecasting method selected
- the assumptions applied by ATCO.

215. EMCa's view was that using the base-step-trend method for forecasting ATCO's network, corporate and IT costs, and using specific forecasts for estimating UAFG and ancillary services costs, was appropriate for these operating expenditure categories.[111] However, EMCa did have concerns about ATCO's application of the method.

216. Conceptually, and in the context of decision-making processes for access arrangements for other gas distribution service providers, the AER has also acknowledged the suitability of using revealed (actual) operating expenditure as the starting point for operating expenditure forecasts:

> We consider revealed opex in the base year is generally a good indicator of opex requirements over the next period because the level of *total opex* is relatively stable over time. This reflects the broadly predictable and recurrent nature of opex. [112]

217. The AER has also acknowledged the suitability of the base-step-trend method for forecasting operating expenditure for electricity distribution network service providers, cautioning however that it was not necessarily the most appropriate method in all cases:

> We prefer a 'base-step-trend' approach to assessing most opex categories. However, when appropriate, we may assess some opex categories using other forecasting techniques, such as an efficient benchmark amount. We will assess opex categories forecast using other forecasting techniques on a case-by-case… We will also assess whether using alternative forecasting techniques in combination with a 'base-step-trend' approach produces a total opex forecast consistent with the opex criteria. [113]

218. The ERA has used the base-step-trend method for forecasting operating expenditure in all its recent regulatory decisions and considers that this method should be used to forecast ATCO's operating expenditure for AA5. It is appropriate for network costs, corporate costs and IT costs to be forecast from a base year estimate, with adjustments applied to account for inefficiencies in the base year and efficient costs not captured in the base year and annual rates of change to account for changes in the real price level, output growth and productivity in the forecast period. Past costs for the network, corporate and IT cost categories provide a reliable starting point for determining an efficient forecast as these costs are largely recurrent, and with appropriate adjustments the base-step-trend method will provide a reliable estimate of efficient costs for these categories.

219. The ERA has revised ATCO's application of the base-step-trend method. Some assumptions applied by ATCO resulted in a forecast that does not yield the best

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111 Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* 15 January 2019, paragraph 135.

112 Australian Energy Regulator, *Draft Decision: AusNet Services Gas access arrangement, Attachment 7 – Operating expenditure*, July 2017, p. 12; Australian Energy Regulator, *Draft Decision: Multinet Gas Access arrangement 2018 to 2022, Attachment 7 – Operating expenditure,* July 2017, p. 12.

113 Australian Energy Regulator, *Expenditure Forecast Assessment Guideline for Electricity Distribution,* November 2013, p. 22.

forecast or estimate possible, as required by rule 74 of the NGR. Further, some of ATCO's assumptions did not yield a forecast that reflected the operating expenditure that would be incurred by a prudent service provider acting efficiently and in accordance with accepted good industry practice, as is required by NGR rule 91.

220. The assumptions applied by ATCO which are inconsistent with rules 74 and 91 are:

- Use of 2019 as the base year.
- Some of the adjustments applied to the actual base year (2019) operating expenditure to derive the efficient base year operating expenditure.
- Some of the step changes and escalation factors applied.

221. The ERA has accepted the use of the base-step-trend method for forecasting ATCO's operating expenditure and so has not scrutinised the bottom-up forecast of operating expenditure presented by ATCO in depth.

222. As outlined in paragraph 220, the ERA has revised the base-step-trend forecast to ensure the AA5 forecast reflects an efficient level of operating expenditure, including revising the base year costs. The ERA's revision of the costs included in the base year costs addresses Synergy's concern (paragraph 208) that corporate operating expenditure accounts for approximately 25 per cent of total operating expenditure within ATCO's bottom-up forecast. The ERA's review included specific consideration of the costs included within ATCO's corporate cost category.[114] The ERA's revised forecast consequently includes adjustments to the base year for items that fall within the corporate cost category including staff incentive payments (paragraph 232) and business development and marketing (paragraphs 233 to 235).

223. The ERA's review of operating expenditure also includes consideration of:

- The amount of corporate overheads allocated to ATCO's Australian regulated gas business from ATCO Australia and the ATCO Group. These transactions have not caused a material overstatement of ATCO's historical operating expenditure, including in the base year.[115]
- The indirect costs included in ATCO's operating expenditure forecast. This draft decision includes an amendment to exclude $25.5 million of costs from the regulatory asset base for AA4 which ATCO has proposed to capitalise as a result of a change in ATCO's capitalisation policy for AA4. This amendment is described in paragraphs 350 to 356 and 358.

Selection of the most appropriate base year for network, corporate and IT operating expenditure

224. ATCO's proposal to use 2019 as the starting point for deriving the efficient base year cost for network, corporate and IT operating expenditure did not yield the best forecast or estimate possible in the circumstances, as required by NGR rule 74(2)(b). The ERA has selected 2017, rather than 2019, as the base year for the revised network, corporate and IT operating expenditure forecast.

[114] ERA, Information Request EMCa 19, 21 September 2018. ATCO's response to this information request was provided via e-mail dated 1 October 2018.

[115] ERA, Information Request EMCa 39, 11 October 2018. ATCO's response to this information request was provided via e-mail dated 17 October 2018.

225. ATCO's use of 2019 was an incorrect application of the base-step-trend method. The base-step-trend method uses a recent representative year of actual expenditure to determine efficient base year costs. ATCO used the forecast 2019 operating expenditure published in the ERA's AA4 final decision and reduced this by the level of 'outperformance' in 2017. The operating expenditure in the AA4 final decision was set based on forecasts prepared in 2014. This approach unnecessarily introduces forecasting error when the actual operating expenditure for 2017 is available and does not require estimation and therefore does not include forecasting error. The operating expenditure assumed for 2018 and 2019 to develop the AA5 base operating expenditure will then use more up-to-date forecasts and allow for a better estimate of operating expenditure than ATCO's proposed application as it uses current information rather than forecasts from 2014.

226. The AER's Expenditure Forecast Assessment Guidelines for Electricity Distribution supports using actual expenditure as the basis for forecasting operating expenditure:

> If actual expenditure in the base year reasonably reflects the opex criteria…[then it]…will set base year opex equal to actual expenditure for those cost categories using the revealed cost approach.[116]

227. Synergy's concerns about the use of 2019 as the base year were connected to the level of efficiency reflected in this year. As described in paragraph 207, Synergy observed that while the efficiency benchmarking presented by ATCO indicated that ATCO's operating expenditure per kilometre of mains and per customer connection in 2017 was amongst the best in Australia, applying ATCO's 2019 forecast operating expenditure resulted in a significant deterioration in performance on these measures. This shows that the forecast operating expenditure performance of ATCO in 2019 would be relatively less efficient than it was in 2017. These measures are two of the eight key performance indicators for ATCO included in the fourth access arrangement.[117] Further, as described in paragraph 203, Synergy considered that ATCO's use of an estimated operating expenditure for 2019 based on 2017 levels meant ATCO's proposed base year did not include any further efficiencies achieved between 2017 and 2019.

228. The ERA has considered Synergy's submission on the efficiency reflected in the estimated operating expenditure for 2019. ATCO's estimate of the 2019 base year results in a deterioration in ATCO's performance on the two operating expenditure key performance indicators compared to 2017. However, given 2017 has been selected as the base year for the revised forecast, the efficiency of ATCO's 2019 estimate has not been analysed in-depth.

229. Similarly, EMCa stated that while ATCO's claimed 'outperformance' against its benchmarking could be interpreted to indicate that ATCO was operating efficiently, this did not provide assurance that ATCO's base year (2019) was efficient, and so examination of the base year cost was necessary.[118]

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116 Australian Energy Regulator, *Expenditure Forecast Assessment Guideline for Electricity Distribution,* November 2013, cited in Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* 23rd November 2018, paragraph 473.

117 ERA, *Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System*, 30 June 2015 as amended on 10 September 2015, pp. 61-62.

118 Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* 15 January 2019, paragraph 139.

Adjustments to derive efficient base year network, corporate and IT operating expenditure

230. The ERA's calculation of efficient base year operating expenditure for ATCO's AA5 network, corporate and IT costs is set out in Table 29. As stated in paragraph 224, the ERA has selected 2017, rather than 2019, as the base year for the revised network, corporate and IT operating expenditure forecast. As Table 19 shows, ATCO's operating expenditure in 2017 was $60.7 million[119].

Table 29: Revised forecast efficient base year network, corporate and IT operating expenditure ($ million real as at 31 December 2019)

Line item	Amount
2017 actual operating expenditure (all categories)	60.7
Adjustments:	
Staff incentives	-0.7
Business development and marketing	-1.9
IT	-0.7
Total adjustments	-3.3
Subtract 2017 actual UAFG and ancillary services expenses:	
UAFG	6.0
Ancillary services	1.0
Total UAFG and ancillary services	7.0
Efficient base year network, corporate and IT operating expenditure	50.3

231. The adjustments in Table 29 are for items included in ATCO's 2017 actual operating expenditure which do not represent an efficient expenditure level for those items, as is required by rule 91 of the NGR. These include adjustments to the following items:

- staff bonuses
- business development and marketing costs
- IT costs.

232. The portion of staff bonuses above the provisioned amount ($0.657 million[120]) has been subtracted from the base year operating expenditure for the revised operating expenditure forecast. The provisioned amount included in the 2017 base year ($0.955 million[121]) more closely represented a normal and efficient level of annual

[119] $ million real as at 31 December 2019. This is equivalent to the $58.5 million (2017 dollars) total operating expenditure shown in ATCO's regulatory financial statement.

[120] $ real as at 31 December 2019.

[121] $ real as at 31 December 2019.

employee bonus expense than the 2017 actual expense for this item, as required by rule 91 of the NGR. This is because ATCO's total 2017 staff bonus payments did not reflect a normalised level of annual expense for this item. ATCO's 2017 staff bonus expense was anomalously high relative to the preceding years, particularly 2014 and 2015, when no short-term incentive payments were paid.[122] Including the full amount of staff bonuses in the base year amount would therefore not result in an efficient base year operating expenditure. The provisioned amount of staff bonus expense for 2017 reflects a more efficient amount compared to the actual amount.

233. The revised operating expenditure forecast includes an adjustment of $1.9 million to ATCO's base year (2017) business development and marketing expenditure. This adjusts the item from the actual amount incurred by ATCO in 2017 to the amount that was included as forecast operating expenditure in the ERA's AA4 final decision.

234. This adjustment is considered to represent a more efficient level of operating expenditure, which aligns with good industry practice as required by rule 91 of the NGR. This is because ATCO's 2017 business development and marketing expense was anomalously high compared to historical levels and there is no evidence that this level of expense will recur on an ongoing basis over AA5. ATCO incurred approximately $3.8 million of business development and marketing expense in 2017, compared to its previous expenditure of $2.4 million in 2016 and $1.4 million in 2015.[123]

235. Further, the proposed business development and marketing expenditure cannot be justified based on the benefit it would provide to consumers. Rule 100 of the NGR sets out a general requirement that the provisions of an access arrangement must be consistent with the national gas objective, which is to promote efficient investment in and operation of natural gas services for the long-term interests of consumers. ATCO cited expected falling demand and other expected changes to its commercial environment and lower than average marketing expenditure compared to its Australian peers as support for its proposed business development and marketing expenditure. There is no evidence, however, that ATCO's proposed level of expenditure would benefit existing customers.

236. The revised operating expenditure forecast includes an adjustment of $0.7 million to the base year (2017) IT expense. This adjusts this item from the actual amount incurred by ATCO in 2017 to the average actual amount incurred by ATCO between 2015 and 2017.

237. This adjustment is considered to represent a more efficient level of operating expenditure, which aligns with good industry practice as required by rule 91 of the NGR. This is because ATCO's 2017 IT expense was anomalously high and there is no evidence that this level of expense will reoccur on an ongoing basis over AA5. ATCO incurred $9.7 million of IT costs in 2017, which was $1.2 million higher than in 2016 and $0.7 million higher than it has budgeted for in 2018.[124] The ERA therefore considers ATCO's 2017 IT expense does not represent a normalised level of annual expense for this item or an efficient level of annual IT expense.

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122 Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* 15 January 2019, paragraphs 477 to 479.

123 Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* 15 January 2019, paragraphs 481 and 483.

124 Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* 15 January 2019, paragraphs 488. ATCO has explained that $0.5 million of the increase arose from an accounting reclassification from 'Corporate' costs due to a change in its account allocation system.

ATCO's proposed step changes for recurrent network, corporate and IT operating expenditure

238. The recurrent operating expenditure which ATCO has included as step changes in its proposed operating expenditure forecast for AA5 are shown in Table 30.

Table 30: Step changes for recurrent operating expenditure included in ATCO's proposed operating expenditure forecast for AA5 ($ million real as at 31 December 2019)

	AA5 Total
Additional leak survey and repair	5.0
New interconnections	1.2
SCADA	2.3
Total proposed step changes for recurrent operating expenditure	8.5

Source: ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), p. 79, Table 11.4.

239. The proposed additional leak survey and repair activities are in accordance with accepted good industry practice. Based on this, and given that these activities were not included in ATCO's 2017 operating expenditure, a step change for these costs is included in the operating expenditure forecast for AA5. However, it is not clear that the amount proposed is efficient. The cost estimates in the leak survey and repair project brief are high-level, and it is not clear how the estimates have been derived. For this reason, the ERA does not consider that the full amount of the proposed step change is in line with what would be incurred for this activity by a prudent service provider acting efficiently, as required by rule 91 of the NGR. For the purpose of this draft decision, the ERA includes 50 per cent of the proposed step change amount ($2.5 million) in the revised operating expenditure forecast for AA5. ATCO must supply more information to support the proposed amount for leak survey and repair activities to demonstrate clearly that the proposed amount is efficient.

240. In considering the additional leak survey and repair activities the ERA has, in addition to its own review, considered EMCa's view that there is a case for ATCO to conduct enhanced leak survey and repair activities during AA5 but the documentation for the cost estimate for the proposed step change is deficient. The information supplied by ATCO dated August 2018 states that ATCO was still conducting trials and had not yet defined a specific program for the work. For this reason, among others, EMCa found that the project brief did not provide reliable documentation for the amount of the proposed step change for the additional leak survey and repair activities.[125]

241. The proposed step change for new interconnections is linked to the proposed capital expenditure for AA5 for construction of new offtake facilities described in paragraphs 496 to 498. Given the ERA's position that the proposed capital expenditure for the new offtake facilities does not satisfy rule 79 of the NGR, and is therefore not conforming capital expenditure, it follows that the ERA considers that the associated operating expenditure would not be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, as required by rule 91 of the NGR. The ERA has therefore not included the proposed

[125] Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* 15 January 2019, paragraph 501.

$1.2 million step change for new interconnections in the operating expenditure forecast for AA5.

242. The proposed step change SCADA activities is linked to the proposed capital expenditure for acquisition and installation of new SCADA assets during AA5 described in paragraphs 476 to 490. Given the ERA's position that the proposed capital expenditure for the new SCADA assets does not satisfy rule 79 of the NGR, and is therefore not conforming capital expenditure, it follows that the ERA considers that the associated operating expenditure would not be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, as required by rule 91 of the NGR. The ERA has therefore not included the proposed $2.3 million step change for SCADA activities in the operating expenditure forecast for AA5.

243. Table 31 summarises the step changes for recurrent operating expenditure included in the revised operating expenditure forecast for AA5.

Table 31: Draft decision – Included step changes for recurrent operating expenditure in AA5 revised operating expenditure forecast ($ million real as at 31 December 2019)

	2020	2021	2022	2023	2024	AA5 Total
Included step change - Additional leak survey and repair	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2.5

ATCO's proposed changes for non-recurrent network, corporate and IT operating expenditure

244. The non-recurrent costs which ATCO has included as changes in its operating expenditure forecast for AA5 are shown in Table 32.

Table 32: Changes for non-recurrent operating expenditure included in ATCO's proposed operating expenditure forecast for AA5 ($ million real as at 31 December 2019)

	AA5 Total
Hazardous areas review & remediation	0.8
Pipeline inline inspections	3.0
Mains reclassification	0.6
Asset & business management system review	0.7
Access arrangement six regulatory preparation	2.9
Total proposed step changes for non-recurrent operating expenditure	8.1

Source: ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), p. 80, Table 11.5.

245. The proposed change for hazardous areas review and remediation covers activities that ATCO is already performing. Including the proposed amount for the hazardous areas review and remediation activities as a change in the revised forecast would

therefore add an amount that is already included in the efficient base year operating expenditure. This would result in an operating expenditure forecast that is not efficient, which would not comply with rule 91 of the NGR. The proposed change for hazardous areas review and remediation activities therefore is not included in the revised operating expenditure forecast.

246. As described in paragraph 172, ATCO stated that its proposed change for hazardous areas review and remediation was driven by an external audit conducted as part of ATCO's obligations to maintain its safety and operating plan in conjunction with the Australian Standard. However, ATCO did not adequately demonstrate that its compliance obligations under the applicable Standard have materially changed for AA5; rather the proposed change is for activities that are considered part of ATCO's current operations.[126] The proposed amount for the hazardous areas review and remediation is therefore already included in the efficient base year operating expenditure and a further change is not justified for these activities.

247. The proposed change for pipeline inspections costs is for costs that represent good industry practice that are not included in the 2017 base year. The amount proposed, being a revealed cost, reflects the efficient cost of undertaking this activity, as is required under rule 91 of the NGR. The proposed $3.0 million step change for pipeline inline inspections is therefore included in the revised operating expenditure forecast for AA5.

248. The proposed change for the mains reclassification project covers activities that ATCO is already performing. Including the proposed amount for the mains reclassification activities as a change in the revised forecast would therefore add an amount that is already included in the efficient base year operating expenditure. This would result in an operating expenditure forecast that is not efficient, which would not comply with rule 91 of the NGR. The proposed change for the mains reclassification project is therefore not included in the revised operating expenditure forecast.

249. As described in paragraph 174, ATCO cited a change to the Australian Standard for gas distribution as the driver for the initiation of the mains reclassification project. However, ATCO has not demonstrated that its compliance obligations for mains under the applicable Standard have materially changed for AA5. ATCO is already performing the activities described in the project brief as part of complying with its existing compliance obligations.[127] The scale of the mains reclassification activities performed by ATCO would likely increase given an increase in ATCO's network size. Any increase in ATCO's obligations for the mains classification project due to changes in scale would therefore be captured by the growth escalation outlined at paragraphs 172 to 181.

250. The proposed change for the asset and business management system review covers activities that ATCO is already performing and which are routine operational activities.[128] The expenditure for these activities is therefore already captured by the base year amount, and including the proposed amount for these activities in the revised forecast would add an amount that is already included in the efficient base year operating expenditure. This would result in an operating expenditure forecast

[126] Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* 15 January 2019, paragraph 506.

[127] Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* 15 January 2019, paragraph 506.

[128] Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* 15 January 2019, paragraph 506.

that is not efficient, which would not comply with rule 91 of the NGR. The proposed change for the asset and business management system review is therefore not included in the revised operating expenditure forecast.

251. The revised operating expenditure forecast includes a change of $2.3 million for access arrangement six preparation costs. In 2017, the base year used for the revised operating expenditure forecast, ATCO did not incur any access arrangement preparation costs. It is therefore appropriate to include a non-recurrent change in the operating expenditure forecast to allow for this activity to be undertaken during AA5.

252. ATCO proposed $2.9 million[129] of access arrangement six preparation costs. While the proposed change for the preparation costs is for activities that represent good industry practice, it is not clear that the proposed amount is efficient, as required by rule 91 of the NGR. The final decision for access arrangement four included $2.1 million[130] for preparation costs for access arrangement five, which is equal to $2.3 million when restated to real dollars as at 31 December 2019. ATCO has not provided support for the proposed access arrangement six preparation costs exceeding the access arrangement five preparation costs in real terms and overall it is unclear that the proposed amount is efficient. The access arrangement six preparation costs included in the revised operating expenditure costs are therefore set to $2.3 million (2019 dollars), which is equal to the access arrangement five preparation costs included in the AA4 final decision in real terms.

253. The $2.3 million for access arrangement six preparation costs has been distributed between the years ATCO proposed to incur this expenditure (2023 and 2024) in the same proportions as ATCO's proposed distribution of preparation costs between these years.

254. Table 33 summarises the changes for non-recurrent operating expenditure included in the revised operating expenditure forecast for AA5.

Table 33: Draft decision – Included changes for non-recurrent operating expenditure in AA5 revised operating expenditure forecast ($ million real as at 31 December 2019)

	2020	2021	2022	2023	2024	AA5 Total
Included change - Pipeline inline inspections	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.0
Included change - Access arrangement six preparation costs	-	-	-	1.23	1.06	2.3

Output growth escalation factor

255. The inclusion of an output growth escalation factor in the revised operating expenditure forecast to account for fluctuations in the scale of ATCO's operations contributes to a reasonable basis for deriving the operating expenditure forecast when using the base-step-trend approach, in line with NGR rule 74(2)(a).

[129] $ real as at 31 December 2019.

[130] $ real as at 31 December 2014.

256. As described in paragraph 178, ATCO considered that the output growth for operating expenditure includes expected growth in customer numbers and expected growth in the physical size (measured in kilometres of mains) of the distribution network. The weightings proposed by ATCO for customer numbers and kilometres of mains (45 per cent and 55 per cent) were included in calculating the output growth escalation factor.

257. ATCO's customer numbers are expected to be lower over AA5 (see Table 10). The revised forecast customer numbers have therefore been included in the revised operating expenditure forecast.

258. Given that customer numbers are forecast to decrease over AA5, no growth in the total length of the mains in the network is included in the output escalation for AA5, and the length of the mains in the network is forecast to be equal to the 2019 length.

259. Table 34 summarises the output growth escalation included in the revised operating expenditure forecast for AA5.

Table 34 ATCO's proposed real output growth escalation and the revised operating expenditure forecast output growth escalation for AA5

	Weighting	2020	2021	2022	2023	2024	Total
ATCO proposed output growth escalation for AA5							
Customer numbers	45%	12,155	12,351	12,617	12,909	13,171	63,203
Net growth in the length of the network (kilometres)	55%	216	208	218	217	249	1,108
Weighted annual real output growth rate	-	1.57%	1.52%	1.55%	1.54%	1.65%	-
ATCO proposed output growth escalation for AA5 ($ million real as at 31 December 2019)	-	0.86	1.70	2.58	3.47	4.43	13.04
Output growth escalation included in the draft decision forecast operating expenditure forecast for AA5							
Customer numbers growth rate	45%	0.56%	-0.49%	-0.49%	-0.49%	-0.49%	-
Number of kilometres growth rate	55%	0%	0%	0%	0%	0%	-
Weighted annual real output growth rate	-	0.25%	-0.22%	-0.22%	-0.22%	-0.22%	-
Output growth escalation included in the revised operating expenditure forecast for AA5 ($ million real as at 31 December 2019*)	-	1.44	1.32	1.21	1.08	0.97	6.02

** The output growth escalation also applies an output growth escalation to the efficient base year amount of network, corporate and IT costs to account for output growth escalation between 2017 and 2019.*

Input real growth escalation factor

260. The inclusion of an input real growth escalation factor in the revised operating expenditure forecast to account for increases in labour and materials costs above

inflation contributes to a reasonable basis for deriving the operating expenditure forecast when using the base-step-trend approach, in line with rule 74(2)(a) of the NGR.

261. The weightings proposed by ATCO for labour and materials costs (62 per cent and 38 per cent) have been included in calculating the input real growth escalation factor in the forecast operating expenditure for this draft decision. The AER applied the same weightings for labour and materials costs in recent access arrangement decisions for other distribution network service providers.[131]

262. As the materials costs included in the 2017 base year are considered efficient, and increases in the cost of materials are not expected to exceed Consumer Price Index (CPI) growth, the materials cost real growth rate of zero proposed by ATCO has been included in calculating the input growth escalation factor in the forecast operating expenditure for this draft decision.

263. The AER generally also escalates materials costs by the CPI only for forecasting purposes for gas distribution.[132] The AER stated that setting the escalation for materials costs equal to CPI reflected its expectation that a prudent service provider would hedge its materials costs to reduce the potential for volatile input costs. This view was also held by the Energy Markets Reform Forum, which expected that gas networks would undertake prudent hedging arrangements for commodity prices given the volatility of commodity prices and the relative certainty of gas distribution networks' demand for each of the products.[133]

264. ATCO's proposed labour cost real growth rate was not applied for calculating the input growth escalation factor in the revised operating expenditure forecast for this draft decision. ATCO's proposed labour cost growth rate added a growth premium of 50 basis points to the wage price index for all industries to account for what ATCO viewed as a historical premium for wages growth in the electricity, gas, water and waste water sector over the all industries average.[134] The data on which ATCO based its premium estimate covered the period from September quarter 1998 to June quarter 2017. However, it is not clear that this premium will continue into AA5.

265. As ATCO's consultant Synergies observed, wages growth for the electricity, gas, water and waste water sector has slowed since the mining boom peaked, so that it is now roughly in line with wages growth in other sectors.[135] It is not clear that Synergies/ATCO's estimated premium of wages growth for the electricity, gas, water and waste water sector over all industries wages growth would be regained during AA5.

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131 AER, *Draft Decision: Australian Gas Networks Access Arrangement 2016-21, Attachment 7 – Operating expenditure*, November 2015, p. 34; AER, *Final Decision: Australian Gas Networks Access Arrangement 2016-21, Attachment 7 – Operating expenditure*, May 2016, p. 15; AER, *Draft Decision: Jemena Gas Networks 2015-20, Attachment 7 – Operating expenditure*, November 2014, pp. 35-37; AER, *Final Decision: Jemena Gas Networks 2015-20, Attachment 7 – Operating expenditure, Attachment 7 – Operating expenditure*, June 2015, p. 17.

132 AER, *Draft Decision: Jemena Gas Networks 2015-20, Attachment 7 – Operating expenditure*, November 2014, p. 37.

133 AER, *Draft Decision: Jemena Gas Networks 2015-20, Attachment 7 – Operating expenditure*, November 2014, p. 37.

134 ATCO Gas Australia, *Access Arrangement Information*, *Attachment 12.9 Wage price index forecast*, 31 August 2018, p. 23 and p. 35.

135 ATCO Gas Australia, *Access Arrangement Information*, *Attachment 12.9 Wage price index forecast*, 31 August 2018, p. 24.

266. Further, the revised operating expenditure forecast does not include a productivity adjustment (see paragraphs 272 to 274), and ATCO did not propose one. Given that a business with no productivity growth is unlikely to sustain real wage growth at above-average rates in the long term, it is not reasonable to expect wages growth for ATCO to exceed average wages growth without increases in ATCO's productivity.

267. Given the points outlined in paragraphs 265 and 266, the labour cost inflation proposed by ATCO cannot be considered reliably representative of the best forecast for the AA5 period, and is therefore inconsistent with rule 74(2)(b) of the NGR.

268. In order to calculate the best forecast of real labour escalation, the ERA has used the average of recent and forecast Western Australian Treasury Wage Price Index growth and Consumer Price Index growth. The real labour escalation rate is 0.54 per cent.

269. The Western Australian Treasury data applied is shown in Table 35. This data includes actual data for 2017/18, mid-year revision estimate data for 2018/19 and forward estimate data for 2019/20, 2020/21 and 2021/22.

Table 35 Western Australian Wage Price Index data included in calculating the real annual labour escalation included in the revised operating expenditure forecast

	2017/18 (actual)	2018/19 (mid-year revision estimate)	2019/20 (forward estimate)	2020/21 (forward estimate)	2021/22 (forward estimate)	Average 2017/18 to 2021/22
Wage Price Index (%) growth	1.5	1.75	2.75	3.0	3.25	2.45
Consumer Price Index (%) growth	1.0	1.5	2.0	2.5	2.5	1.90

Source: WA Department of Treasury, Government Mid-Year Financial Projections Statement (online) [accessed 1 April 2019].

270. The revised annual operating expenditure forecast applies the real labour escalation growth rate of 0.54 per cent. This is the best forecast or estimate possible for real labour escalation, as required by rule 74(2)(b) of the NGR. The inflation rate used to calculate the weighted average cost of capital (see Table 68) is used to calculate the nominal operating expenditure.

271. Table 36 summarises the input growth escalation included in the revised operating expenditure forecast for AA5.

Table 36: ATCO's proposed real input growth escalation and the revised operating expenditure forecast input growth escalation for AA5

	Weighting	2020	2021	2022	2023	2024	Total
ATCO proposed input growth escalation for AA5							
Labour cost growth rate	62%	1.64%	1.64%	1.64%	1.62%	1.66%	-
Materials cost growth rate	38%	0%	0%	0%	0%	0%	-
Weighted annual real input growth rate	-	1.02%	1.02%	1.02%	1.00%	1.03%	-
ATCO proposed input growth escalation for AA5, $ million real as at 31 December 2019	-	0.58	1.17	1.81	2.43	3.04	9.03
Input growth escalation included in the draft decision forecast operating expenditure forecast for AA5							
Annual labour escalation	62%	0.54%	0.54%	0.54%	0.54%	0.54%	-
Materials cost growth rate	38%	0%	0%	0%	0%	0%	-
Weighted annual real input growth rate	-	0.33%	0.33%	0.33%	0.33%	0.33%	-
Input growth escalation included in the revised operating expenditure forecast for AA5, $ million real as at 31 December 2019*	-	0.51	0.68	0.86	1.05	1.23	4.33

** The input growth escalation also applies an input growth escalation to the efficient base year amount of network, corporate and IT costs to account for input growth escalation between 2017 and 2019.*

Productivity adjustment

272. As described in paragraph 186, ATCO did not apply a productivity growth adjustment to its operating expenditure forecast because it considered that it was already operating efficiently. ATCO cited its performance relative to its peers according to the benchmarking it supplied (described in paragraph 160) to justify this claim. ATCO also presented other data showing that its productivity had been flat over the past 17 years.[136]

273. As stated in paragraph 201, Synergy did not agree with ATCO's assertion that no productivity growth adjustment should be included in its operating expenditure forecast for AA5. Similarly, Kleenheat questioned the reasonableness of not including a productivity adjustment in ATCO's operating expenditure forecasts.

274. The revised operating expenditure forecast does not include a productivity adjustment as the scale of ATCO's operations is not forecast to increase over AA5, as shown by the demand forecast in Table 10. Both ATCO's total connections numbers and gas throughput are forecast to decrease over AA5, thus it is unlikely that ATCO will improve its operating expenditure productivity over AA5 due to increasing economies of scale. Similarly, it is unlikely that ATCO will improve its

[136] Economic Insights, *The productivity performance of ATCO Gas' Western Australian Gas Distribution System*, 16 July 2018.

operating expenditure productivity over AA5 due to technological developments. Most of ATCO's proposed capital expenditure for AA5 is for network sustaining and network growth projects and structures and equipment, rather than strategic projects to enhance the productivity and efficiency of its operations or reduce ATCO's operating cost structure.

Ancillary services operating expenditure

275. ATCO proposed ancillary services operating expenditure of $14.6 million[137] for AA5. ATCO's proposed ancillary services operating expenditure is distributed over AA5 as shown in Table 37.

Table 37: ATCO's proposed ancillary services operating expenditure for AA5 ($ million real as at 31 December 2019)

	2020	2021	2022	2023	2024	AA5 Total
Total proposed ancillary services operating expenditure	2.8	2.9	2.9	3.0	3.0	14.6

Source: ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), p. 74, Table 11.2.

276. The forecast unit rates for ancillary services applied by ATCO are considered efficient when compared with ATCO's historical costs for ancillary services. ATCO's proposed forecast unit costs for ancillary services were close to its current costs for most of the services except for special meter reads. Based on this, the proposed unit rates for ancillary services are considered to represent the best estimate possible in the circumstances, in line with NGR rule 74(2)(b), and have been included in calculating the ancillary services costs in the revised operating expenditure forecast.

277. As outlined in paragraph 206, Kleenheat considered that ATCO's proposed pricing for the special meter reads was inconsistent with that of an efficient operator, given that ATCO's proposed meter reading cost was the second most expensive within Kleenheat's sample, with the average cost from that sample being 23 per cent cheaper than ATCO. The ERA has considered the cost of special meter reads and observes that ATCO's forecast unit cost ($12.82) is substantially below the unit cost in AA4 ($18.67), and the ERA is therefore satisfied that the proposed AA5 pricing of this service factors in a gain in efficiency.

278. The forecast volumes for ancillary services included in the draft decision demand forecast are shown in paragraph 104. These are considered to be the best forecast possible for ancillary services volumes, as required by rule 74(2)(b), and therefore these volumes have been applied to calculate the ancillary services operating expenditure included in the revised operating expenditure forecast.

279. Table 38 shows the ancillary services operating expenditure included in the revised operating expenditure forecast for AA5.

[137] $ million real as at 31 December 2019.

Table 38: ATCO's proposed ancillary services operating expenditure and the ancillary services operating expenditure included in the revised operating expenditure forecast for AA5 ($ million real as at 31 December 2019)

	2020	2021	2022	2023	2024	AA5 Total
ATCO proposed ancillary services operating expenditure for AA5						
Applying a meter lock	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2.258
Removing a meter lock	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.048
Deregistering a delivery point	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.418
Disconnecting a delivery point	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.750
Reconnecting a delivery point	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.781
Special meter reading	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	6.383
ATCO total proposed ancillary services operating expenditure	2.8	2.9	2.9	3.0	3.0	14.6
Ancillary services operating expenditure included in the revised operating expenditure forecast for AA5						
Applying a meter lock	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2.324
Removing a meter lock	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.158
Deregistering a delivery point	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.778
Disconnecting a delivery point	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.953
Reconnecting a delivery point	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2.153
Special meter reading	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	7.745
Ancillary services operating expenditure included in the revised operating expenditure forecast	3.5	3.4	3.4	3.4	3.4	17.1

UAFG operating expenditure

280. ATCO proposed UAFG operating expenditure of $30.3 million[138] for AA5. ATCO's proposed UAFG operating expenditure is distributed over AA5 as shown in Table 39.

Table 39: ATCO's proposed UAFG operating expenditure for AA5 ($ million real as at 31 December 2019)

	2020	2021	2022	2023	2024	AA5 Total
Total proposed UAFG operating expenditure	6.3	6.2	6.1	5.9	5.8	30.3

Source: ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), p. 74, Table 11.2.

281. ATCO's proposal to apply a UAFG unit price as determined through a competitive tender to acquire UAFG is consistent with good industry practice and rule 91 of the NGR. This approach, whereby the competitively tendered UAFG unit price is taken to be the efficient UAFG unit price, was used for AA4. For the purposes of this draft decision, the ERA has used the placeholder value of the UAFG unit price and will

[138] $ million real as at 31 December 2019.

await the unit price from the competitive tender conducted by ATCO when this becomes available.

282. While ATCO's forecast UAFG rates reflect only a small reduction over AA5, the rates are in line with other gas distribution service providers and are therefore considered in line with good industry practice and the UAFG costs that would be incurred by a prudent service provider acting efficiently, as required by NGR rule 91. The UAFG rates proposed by ATCO have therefore been applied in calculating the UAFG costs included in the revised operating expenditure forecast.

283. The forecast throughput included in this draft decision is shown in paragraph 99. This forecast is considered the best forecast possible for gas throughput, as required by rule 74(2)(b). This throughput forecast has therefore been applied to calculate the UAFG operating expenditure included in the revised operating expenditure forecast.

284. Table 40 shows ATCO's proposed UAFG operating expenditure and the UAFG operating expenditure included in the draft decision AA5 operating expenditure forecast for AA5 based on the inputs outlined in paragraphs 282 to 283. Table 40 also shows the UAFG rates and total throughput assumptions applied in both forecasts.

Table 40: ATCO's proposed UAFG operating expenditure and revised UAFG operating expenditure forecast for AA5

	2020	2021	2022	2023	2024	AA5 Total
ATCO proposed UAFG operating expenditure						
UAFG rate (%)	2.55	2.52	2.50	2.48	2.46	-
Total throughput (TJ)	24,901	25,023	24,496	24,011	23,782	122,214
ATCO proposed UAFG operating expenditure ($ million real as at 31 December 2019)	6.3	6.2	6.1	5.9	5.8	30.3
UAFG operating expenditure included in the revised operating expenditure forecast for AA5						
UAFG rate (%)	2.55	2.52	2.50	2.48	2.46	-
Total throughput (TJ)	24,776	24,771	24,064	23,399	22,991	120,001
UAFG operating expenditure included in the revised operating expenditure forecast ($ million real as at 31 December 2019)	6.3	6.2	6.0	5.7	5.6	29.8

Required amendments

285. Following the reasoning and conclusions outlined in paragraphs 209 to 284, the ERA considers that $316.81 million[139] of ATCO's forecast operating expenditure for AA5 satisfies rules 74 and 91 of the NGR.

286. Table 41 summarises the revised operating expenditure forecast for AA5.

Table 41: Revised operating expenditure forecast for AA5 ($ million real as at 31 December 2019)

	2020	2021	2022	2023	2024	AA5 Total
Base year network, corporate and IT expense	50.35	50.35	50.35	50.35	50.35	251.74
Step changes						
Additional leak survey	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	2.51
Pipeline inline inspections	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	3.05
Access arrangement 6 regulatory preparation	0.00	0.00	0.00	1.23	1.06	2.29
Output growth escalation	1.44	1.32	1.21	1.08	0.97	6.02
Input growth escalation	0.51	0.68	0.86	1.05	1.23	4.33
UAFG	6.26	6.19	5.96	5.75	5.60	29.76
Ancillary services	3.46	3.44	3.42	3.40	3.39	17.11
Total	63.03	62.99	63.32	63.87	63.60	316.81

Required Amendment 6

ATCO must amend the values for operating expenditure (real) to reflect the values set out in Table 41 of this draft decision.

Opening Capital Base

287. Rule 77(2) of the NGR establishes the approach to determine the opening capital base for an access arrangement period that follows immediately on the conclusion of a preceding access arrangement period. The opening capital base for the later access arrangement period is to be:

[139] $ million real as at 31 December 2019.

(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) confirming 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 82, 84 or 86;

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

(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.

288. Rule 79 of the NGR sets out the new capital expenditure criteria:

79 New 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;

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

(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 two 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) The AER's discretion under this rule is limited.

ATCO's proposal

289. ATCO proposed an opening capital base for AA5 of $1,347.5 million at 1 January 2020.[140] Table 42 details ATCO's opening capital base calculation.

Table 42: ATCO's closing capital base for AA4 ($m real as at 31 December 2019)

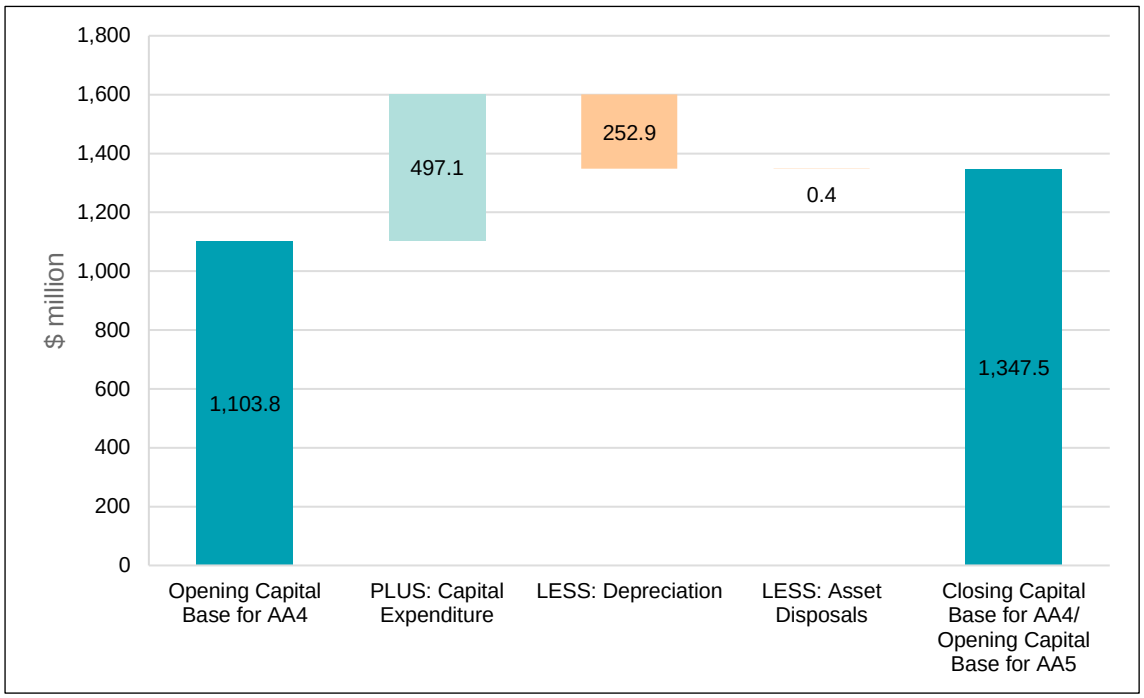
	Jul to Dec 2014	2015	2016	2017	2018 (forecast)	2019 (forecast)
Opening capital base	1,103.8	1,129.6	1,170.6	1,219.0	1,263.9	1,312.1
Plus: Capital expenditure	43.9	80.9	92.9	92.4	98.3	88.6
Less: Depreciation	18.1	39.9	44.3	47.3	50.1	53.2
Less: Asset disposals	0.0	0.0	0.2	0.2	-	-
Closing capital base	**1,129.6**	**1,170.6**	**1,219.0**	**1,263.9**	**1,312.1**	**1,347.5**

Source: ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), Table 13.2, p. 121.

290. ATCO's calculated values of the capital base include $497.1 million of proposed conforming capital expenditure for the AA4 period, less depreciation of $252.9 million and asset disposals of $0.4 million (see Figure 10).

[140] ATCO, *Access Arrangement Information*, p. 120.

Figure 10 ATCO's proposed opening capital base for AA5 ($M real as at 31 December 2019)



Source: ATCO Gas Australia, 2020-24 Plan (Access Arrangement Information), Table 13.2, p. 121.

291. Rule 79 of the NGR sets out the criteria of conforming capital expenditure. Under rule 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. 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

  or

  - to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred.

292. ATCO proposed that the actual and forecast capital expenditure conforms to the criteria under rule 79 of the NGR. Under rule 77(2) of the NGR, capital expenditure must be conforming capital expenditure in order to be added to the capital base.

293. ATCO proposed to add $497.1 million for the AA4 period to the opening capital base for AA5.[141] This proposed capital expenditure is $7 million or 1.4 per cent more than the ERA's AA4 final decision forecast.[142]

294. Table 43 shows the ERA's AA4 final decision forecast capital expenditure, ATCO's proposed capital expenditure for the AA4 period and the variances by cost driver.

Table 43: ERA AA4 final decision forecast capital expenditure and ATCO proposed conforming capital expenditure for AA4 by cost driver ($m real as at 31 December 2019)

Cost Driver Category	Jul to Dec 2014	2015	2016	2017	2018 (forecast)	2019 (forecast)	ERA final decision forecast AA4 (A)	Total proposed AA4 (B)	Variation (B - A)
Network sustaining	14.5	32.7	42.7	50.3	51.8	44.2	228.7	236.2	7.5
Network growth	21.9	41.3	35.2	29.4	26.5	33.1	187.2	187.4	0.2
Information technology	5.3	3.1	8.8	7.7	3.1	2.2	28.9	30.2	1.3
Structures & equipment	2.2	3.9	6.1	5.0	16.6	8.4	44.2	42.1	-2.0
Equity raising costs	-	-	-	-	-	-	1.1	1.1	0.0
TOTAL	**43.9**	**80.9**	**92.9**	**92.4**	**98.0**	**87.9**	**490.2**	**497.1**	**7.0**

Source: ATCO, Access Arrangement Information, p. 34, Table 5.4 and includes equity raising costs approved in AA4. Some numbers may not add due to rounding.

295. Table 44 shows the ERA's AA4 final decision forecast capital expenditure, ATCO's proposed conforming capital expenditure for the AA4 period and the variation by asset class.

[141] ATCO, *Access Arrangement Information*, p. 94.

[142] ATCO, *Access Arrangement Information*, p. 33.

Table 44: ERA AA4 final decision forecast and ATCO's proposed conforming capital expenditure for AA4 by asset class ($m real as at 31 December 2019)

Asset Class	ERA final decision forecast AA4 (A)	Total proposed AA4 (B)	Variation (B-A)
High pressure mains - steel	28.9	19.3	-9.6
High pressure mains – polyethylene (PE)	3.5	4.2	0.7
Medium and low pressure mains	156.5	185.4	28.9
Regulators	11.3	16.6	5.3
Secondary gate stations	20.1	7.8	-12.3
Buildings	14.6	17.3	2.7
Meter and services pipes	190.2	186.0	-4.2
Equipment and vehicles	6.9	7.2	0.3
Vehicle	16.3	14.0	-2.3
IT (including telemetry)	34.0	34.5	0.5
Land	6.3	3.7	-2.6
Equity raising costs	1.2	1.1	-0.1
TOTAL	**489.7**	**497.1**	**7.4**

Source: ATCO, Access Arrangement Information, p. 33, Table 5.3 and includes equity raising costs approved in AA4. Some numbers may not add due to rounding.

Submissions

296. The ERA did not receive any submissions specifically on ATCO's proposed conforming capital expenditure for AA4.

Draft decision

297. The ERA assessed ATCO's proposed opening capital base for the AA5 period pursuant to rules 77 and 79 of the NGR. This included:

- Determining ATCO's opening capital base for AA5, taking into account an assessment of:
  - conforming capital expenditure in AA4
  - capital contributions
  - depreciation.
- Assessing ATCO's general method of calculating the capital base.

Assessment of capital expenditure

298. EMCa assisted the ERA to assess whether ATCO's actual and proposed capital expenditure during AA4 was conforming capital expenditure that should be rolled into

the opening capital base of AA5. This assessment is based on a three-step framework in the NGR:

- Evaluate whether the expenditure is justifiable on the grounds set out in rule 79(2) of the NGR;
- Consider whether the expenditure satisfies the prudent service provider test set out in rule 79(1)(a) of the NGR; and
- Assess whether forecasts or estimates comply with rule 74(2) of the NGR.

299. The ERA reviewed ATCO's governance and management framework with EMCa's assistance and assessed how the framework applied to actual capital expenditure during AA4 and forecast capital expenditure in AA5, focusing on the link between ATCO's application of its asset management process (for example, the Asset Management Plan, Asset Lifecycle Strategies, business cases) and its planned and proposed capital expenditure.

300. ATCO's proposed conforming capital expenditure of $497.1 million for the AA4 period is $7.0 million, or 1.4 per cent, more than the ERA's AA4 final decision forecast as shown in Table 43.[143] ATCO explained that the variances between the ERA's AA4 final decision forecast and the actual expenditure undertaken in AA4 were due to a combination of:

- Prioritisation of replacing high risk metallic mains to ensure a safe and reliable network.
- Postponement of Parmelia Gas Pipeline interconnections.
- Deferral of demand growth projects to align with a slowdown in forecast growth.

301. Despite the small variance of $7 million between the AA4 actual expenditure and the ERA's AA4 final decision forecast, the ERA's assessment shows that a total of $75.5 million is not conforming capital expenditure under rule 79 of the NGR, and should not be rolled into the opening capital base of AA5. This is mainly because ATCO did not provide adequate information to justify how its capital expenditure was prudent and efficient under rule 79(1) and rule 79(2) of the NGR. The capital expenditure that is not conforming comprises:

- $41.5 million on network sustaining capital expenditure
- $4.4 million on structures and equipment capital expenditure
- $2.8 million on network growth capital expenditure
- $1.3 million on information technology capital expenditure
- $25.6 million on overheads capitalisation.

302. Table 45 shows ATCO's actual and estimated capital expenditure over AA4, the capital expenditure that is not conforming based on the ERA's assessment, and the ERA's amended conforming capital expenditure (AA4) by project driver. The ERA's assessment on each project is presented in the following paragraphs of this draft decision.

[143] ATCO, *Access Arrangement Information*, p. 33.

Table 45: ATCO actual and estimated capital expenditure for AA4 and ERA's assessment of conforming capital expenditure for AA4 by project driver ($m real as at 31 December 2019)

Project category	ATCO's actual & estimated AA4 capital expenditure (A)	Capital expenditure that is not conforming (B)	Conforming capital expenditure for AA4 (A-B)
Network sustaining	236.2	41.5	194.7
Network growth	187.4	2.8	184.6
Information Technology	30.2	1.3	28.9
Structures & equipment	42.1	4.4	37.7
Overheads capitalisation	-	25.6	-25.6
Total	**496.0**	**75.5**	**420.5**

Source: ATCO, Access Arrangement Information, p. 34, Table 5.4. Some numbers may not add due to rounding.

Network sustaining capital expenditure

303. As Table 45 shows, the ERA's review found that a total of $41.5 million of ATCO's AA4 actual and estimated network sustaining capital expenditure should not be rolled into the regulatory asset base for AA5. The ERA determined that the following network sustaining projects do not satisfy rule 79 of the NGR:

- [redacted] million on unprotected metallic mains.
- [redacted] million on odd size unprotected steel.
- [redacted] million on unplasticised polyvinyl chloride (PVC) mains and services.
- [redacted] million on multi-storey buildings risk reduction.
- [redacted] million on a security of supply project commencing in 2019 and completing in 2020 (the first year of the AA5 period) for Caversham.

Unprotected metallic mains

304. ATCO provided its approved business case for replacing all unprotected metallic mains by the end of 2020, including ageing steel and galvanised iron mains.[144] EMCa's review of ATCO's Capital Expenditure Appropriation Request indicated that ATCO had increased its volume of replacement from [redacted] km included in the ERA's AA4 final decision to [redacted] km in 2017.[145] However, ATCO did not provide sufficient information to explain this increase, following the ERA's request for more information.

305. ATCO expected to incur an additional $16.7 million above the ERA's AA4 final decision forecast for replacing unprotected metallic mains. During an on-site meeting, ATCO explained that it accelerated the replacement of metallic mains and odd size steel to complete the program by 2019. As those replacement projects were in the same suburb in many cases, ATCO said it was more efficient to bundle the projects together to achieve a lower unit rate of replacement.[146]

144 ATCO, *Access Arrangement Information*, p. 32.

145 EMCa's final report, p. 43.

146 ATCO, *Access Arrangement Information*, p. 34.

306. However, ATCO did not adequately explain how the additional expenditure of $16.7 million satisfied the conforming capital expenditure criteria under rule 79(1)(a) and rule 79(2)(c)(i) and (ii) of the NGR. Specifically, ATCO did not justify why accelerating the replacement of metallic mains during AA4 was considered a prudent decision. In addition, the increased expenditure appears to be inconsistent with the AA4 Final Decision, in which ATCO accepted the ERA's view that some replacement works and expenditure could be deferred.[147]

Odd size unprotected steel

307. ATCO expected to incur an additional [redacted] million above the ERA's AA4 final decision forecast for replacing odd size unprotected steel.

308. In its AA4 proposal, ATCO explained that its odd size steel was installed in the 1960s and 1970s as trunk mains to support a wide distribution area. ATCO prioritised these mains for replacement due to the inability to isolate a localised section with standard flow stopping equipment, particularly in the case of emergency repairs.[148] As the majority of the odd size steel trunk mains were constructed without cathodic protection at the time of manufacture, the coating on many of these pipes became ineffective due to their age and subsequently led to corrosion and pitting.[149]

309. ATCO did not provide adequate information to justify the additional costs of [redacted] million. As a result, the ERA considers that the additional expenditure of [redacted] million incurred in the odd size unprotected steel replacement does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c)(i) of the NGR.

PVC mains and services

310. ATCO expected to incur an additional [redacted] million above the ERA's AA4 final decision forecast for replacement of PVC mains and services. In its AA4 submission, ATCO explained that the replacement should be targeted in high density community use areas, as faults in PVC mains contributed to 80 per cent of the annual reactive maintenance costs on mains, and those mains with a diameter of 100mm or greater forming a large proportion of these costs.[150] Based on this assessment, ATCO identified that 17km of PVC pipes greater than 100mm in diameter required replacement during AA4.

311. ATCO provided information to explain the reasons that resulted in the additional costs of the PVC mains replacement program, including the introduction of the Mains Replacement Prioritisation tool, which was software used to predict the risk and condition associated with plastic mains on the GDS.[151]

312. However, ATCO did not provide adequate information to explain the increase in the PVC mains replacement rate during AA4 and how the accelerated replacement was reflected in its strategy for AA4.

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147 ERA, as amended 10 September 2015, *Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution Systems*, paragraph 623, p. 144.

148 ATCO, *Access Arrangement Information AA4*, p. 173.

149 ATCO, *Access Arrangement Information AA4*, p. 173.

150 ATCO, *Access Arrangement Information AA4*, p. 177.

151 ATCO, *PVC Mains Replacement Strategic Analysis & MRP Tool Overview Public*, p. 6.

313. As a result, the ERA considers that the additional expenditure of [redacted] million for the PVC mains replacement and services does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c)(i) of the NGR.

Multi-storey building risk reduction

314. ATCO expected to incur an additional [redacted] million above the ERA's AA4 final decision forecast for the multi-storey building risk reduction project. ATCO provided documents to support the capital expenditure for its multi-storey building risk reduction project, explaining: (1) how the expenditure complied with the NGR and the management procedures that applied over the course of this project, and (2) the cost variance of the project, including the locations that required rectification and the expenditure associated with the project and timeline during AA4.

315. At an on-site meeting, ATCO explained that the multi-storey building risk reduction project was actually completed in April 2018, which was about two years after the completion date of the original project indicated in its business case.

316. ATCO's explanation appears to suggest that it had already completed the original project at a total cost of [redacted] million. However, ATCO did not adequately explain why the multi-storey building risk reduction project was extended to 2018 with a total cost of [redacted] million. Specifically, ATCO only justified the inclusion of [redacted] million out of [redacted] million, but did not explain if the scope of the program was subsequently extended, and how the residual amount of [redacted] million satisfied the capital expenditure criteria under the NGR.

317. In the absence of ATCO's justification on the cost variance, the ERA considers that the capital expenditure of [redacted] million for the multistorey building risk reduction program does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c)(i) of the NGR.

Security of supply project - Caversham

318. ATCO proposed to spend [redacted] million for a security of supply project commencing in 2019 and completing in 2020 for Caversham. ATCO explained that third-party damage to the network pipeline segments within the Caversham region presented a high risk, which required further work to reduce the risk to an acceptable level. However, the ERA considers that ATCO's proposed expenditure for this project during AA5 does not satisfy the conforming capital expenditure criteria under rule 79 of the NGR (see paragraphs 451 to 457). As a result, the ERA has determined that the proposed capital expenditure of [redacted] million for 2019 to commence the Caversham project is also not conforming capital expenditure for AA4.

319. The ERA considers that, after accounting for the adjustments presented in paragraphs 303 to 318, ATCO's network sustaining capital expenditure of $193.9 million for AA4 is reasonable and conforming under 79 of the NGR.

320. Table 46 shows ATCO's actual and estimated network sustaining capital expenditure, and the ERA's amended network sustaining capital expenditure for AA4.

Table 46: ERA's amended conforming network sustaining capital expenditure (AA4) ($m real as at 31 December 2019)

Capital expenditure – network sustaining	Jul to Dec 2014	2015	2016	2017	2018 forecast	2019 forecast	Total
ATCO proposed conforming capital expenditure	14.5	32.7	42.7	50.3	51.8	44.2	236.2
Replacement – unprotected metallic mains	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Replacement – PVC mains & services	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Replacement – odd size unprotected steel	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Multi-storey building risk reduction	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Security of supply - Caversham	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ERA amended conforming capital expenditure	**14.4**	**32.4**	**36.2**	**38.7**	**35.9**	**37.1**	**194.7**

Source: ERA's analysis. Some numbers may not add due to rounding.

Network growth capital expenditure

321. ATCO's actual and estimated network growth capital expenditure of AA4 was only $0.2 million higher than the ERA's AA4 final decision forecast. ATCO explained the cost variation was largely due to:

- The establishment of new contract rates in 2016 through a competitive tender process where 2017 was the first year. ATCO realised benefits from the contracts.[152]
- A lower growth demand forecast as ATCO deferred various reinforcement projects, which resulted in the refinement of its modelling assumptions. Specifically, ATCO shifted its network growth capital expenditure from demand-related projects to customer-initiated projects in its modelling. This arrangement reflected the lower demand growth over the period than expected, and a higher rate of customer connections.

322. The ERA's assessment of ATCO's customer-initiated projects focused on variable volume capital expenditure which comprised the following programs:

- Mains in greenfield subdivisions.
- New connections (commercial and existing subdivisions).
- New connections to domestic customers in new subdivisions – North region and South region.
- Customer initiated gas feeders and gas mains.

[152] ATCO, *Access Arrangement Information*, p. 34.

323. The ERA assessed ATCO's Net Present Value (NPV) model for its AA4 network growth projects and reviewed ATCO's assumptions applied to its NPV model and the assessment of these assumptions made by EMCa.

324. The assumptions used by ATCO for its AA4 NPV calculations are significantly different from those used in the AA5 NPV model:

- ATCO assumed a considerably higher volume per B3 connection than the volume that it applied to its AA5 growth NPV model. This reflects the declining trend in consumption per B3 connection since AA4.
- ATCO used lower connection costs in its AA4 NPV model compared to its AA5 NPV model. For example, ATCO assumed a weighted average of [redacted] per B3 connection for meters and services, compared with [redacted] in its AA5 model.
- ATCO applied lower incremental maintenance cost assumptions in its AA4 NPV model compared to its AA5 model. For example, ATCO assumed an incremental operating cost of [redacted] per customer per year for the AA4 period, compared with [redacted] per customer per year during AA5. This reflects a change to the method used to calculate the incremental operating expenditure. ATCO provided its workings for the AA5 method which were robust.

325. The ERA considers that the following adjustments should be made to assess whether the AA4 new connections meet the incremental revenue test as required by rule 79(2)(b) of the NGR:

- Exclusion of ATCO's assumed new connections at Kalgoorlie and Albany from the model, as both areas are not part of the GDS.
- Exclusion of the conversion of sub-meter to master meter from the model, which added materially to the modelled cash flow.
- Revision of volume per B2 and B3 connection, B3 connection costs and incremental maintenance costs per B3 customer to ensure the same assumptions applied to both AA4 and AA5 network growth NPV tests, as ATCO used inconsistent numbers in its AA4 and AA5 models.

326. After revising ATCO's modelling assumptions as discussed in paragraph 325, the ERA's assessment demonstrated a positive cash flow for a few years within the first 25-year timeframe, but showed a negative cash flow for almost ten years afterwards. The cash flow only becomes positive again in the 35th year and thereafter.[153] ATCO calculated its NPVs for a 60-year timeframe, assuming that customer use of the gas pipeline network and costs for replacing meters and services remained almost constant within this very long timeframe.

327. While most of ATCO's network growth projects demonstrated a positive NPV over the assessment period, the ERA considers that the $2.1 million sub-meter to master meter program and the [redacted] million from ATCO's Murdoch Drive reinforcement project should not be rolled into the regulatory asset base of AA5 for the following reasons:

- The $2.1 million sub-meter to master meter program was not included in the ERA's AA4 final decision forecast. This program is not related to the new connection expenditure over AA5, and does not represent new services that need to be provided.

[153] EMCa's final report, p. 127.

- ATCO did not provide adequate information to justify the inclusion of the sub-meter to master meter program, and why the $2.1 million capital expenditure should be rolled into the regulatory asset base under rule 79 of the NGR.
- ATCO expected to incur an additional [redacted] million above its approved business case for the Murdoch Drive reinforcement project, which was not included in the ERA's AA4 final decision. ATCO did not adequately explain the [redacted] million overspend of the project, and how the additional expenditure satisfied the capital expenditure criteria under rule 79 of the NGR.

328. After the total reduction of [redacted] million from the sub-meter to master meter program and the Murdoch Drive reinforcement project, the ERA considers that ATCO's network growth capital expenditure of $184.6 million for AA4 meets the test under rule 79(2)(b) of the NGR and should be rolled into the regulatory asset base in AA5.

329. Table 47 shows ATCO's actual and estimated network growth capital expenditure, and the ERA's amended network growth capital expenditure for AA4.

Table 47: ERA's amended conforming network growth capital expenditure (AA4) ($M real as at 31 December 2019)

Capital expenditure – network growth	Jul to Dec 2014	2015	2016	2017	2018 forecast	2019 forecast	Total
ATCO proposed conforming capital expenditure	21.9	41.3	35.2	29.4	26.5	33.1	187.4
Sub-meter to master meters	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Reinforcement – Murdoch Drive	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ERA amended conforming capital expenditure	**21.9**	**41.3**	**37.5**	**27.3**	**24.6**	**32.1**	**184.7**

Source: ERA analysis. Some numbers may not add due to rounding.

Structures and equipment capital expenditure

330. The ERA assessed ATCO's capital expenditure of structures and equipment for AA4 and noted the small variance of $2.0 million between ATCO's actual expenditure and the ERA's AA4 final decision forecast.[154]

331. Despite the small aggregate variance, the ERA noted a relatively large movement in two projects within the structures and equipment capital expenditure portfolio: Jandakot redevelopment and training facility, and Clean Energy Innovation Hub.

Jandakot Redevelopment and Training Facility

332. The Jandakot warehouse and training centre was the final phase of the Jandakot Redevelopment project, which commenced during the third access arrangement period (AA3). ATCO expected to incur [redacted] million to complete its warehouse redevelopment ([redacted] million) and build its training facility ([redacted] million). The total

[154] ATCO, *Access Arrangement Information*, p. 34.

capital expenditure of [redacted] million exceeded the ERA's AA4 final decision forecast by [redacted] million.

333. In its AA4 proposal, ATCO explained that the warehouse redevelopment project was required to upgrade the operational facilities of its Jandakot depot to ensure compliance with occupational health and safety requirements.[155] However, there was limited information available on the proposed training centre in ATCO's AA4 Access Arrangement Information.

334. During the AA4 assessment, the ERA questioned the assumptions underpinning ATCO's proposed training facility. While accepting the inclusion of the full value of the project at the time of assessment, this inclusion was subject to an *ex-post* review and the relevant information available in ATCO's business case and cost-benefit analysis.

335. ATCO's business case for its warehouse and training centre does not adequately respond to concerns raised in the ERA's AA4 final decision, specifically why the additional expenditure satisfies the capital expenditure criteria under the NGR.

336. As a result, the ERA considers that the additional expenditure of [redacted] million incurred in the Jandakot Redevelopment and Training facility does not satisfy the conforming capital expenditure criteria under rule 79(1)(a) and 79(2)(c) of the NGR.

Clean Energy Innovation Hub

337. ATCO proposed to establish a Clean Energy Innovation Hub at its Jandakot site at a cost of [redacted] million in its AA5 proposal. ATCO explained that the Clean Energy Innovation Hub project aimed to investigate and demonstrate how cleaner energy sources and energy storage could be integrated into an effective energy grid by combining gas, electricity and heat for use in homes and industry.[156]

338. ATCO provided a Business Case to explain that it expected the construction of its Clean Energy Innovation Hub to be complete by 2019. The Australian Renewable Energy Agency contributed [redacted] million to support this project.[157]

339. The Clean Energy Innovation Hub project appears to be a research and development project mainly for marketing purposes. The ERA considers that ATCO has not justified how the capital expenditure of this project satisfies any of the capital expenditure criteria under rule 79 of the NGR. As a result, the ERA determined that the [redacted] million associated with the Clean Energy Innovation Hub project is not conforming capital expenditure and should not be rolled into the regulatory asset base in AA5.

Blue Flame Kitchen

340. In the AA4 Final Decision, the ERA did not approve the capital expenditure of ATCO's Jandakot Blue Flame Kitchen, which was primarily positioned as a marketing project. As a result, the ERA considered that the capital expenditure of Blue Flame Kitchen

[155] ATCO, *Access Arrangement Information*, AA4, p. 151.

[156] ATCO, *Access Arrangement Information*, p. vii.

[157] EMCa's final report, p. 60.

did not meet rule 79(2)(c) of the NGR and should not be rolled into the regulatory asset base in AA4.[158]

341. As ATCO did not explain why it included the capital expenditure of Blue Flame Kitchen in its AA4 proposed conforming capital base, the ERA considers that the $0.1 million incurred in this project is not conforming capital expenditure under rule 79(1)(a) and 79(2)(c) of the NGR.

342. For the reasons described in paragraphs 330 to 341, the ERA determined that a total of $4.4 million on structures and equipment capital expenditure does not meet the capital expenditure criteria under rule 79 of the NGR. The non-conforming capital expenditure includes the Jandakot warehouse and training centre ($2.9 million), Clean Energy Innovation Hub ($1.5 million) and Blue Flame Kitchen ($0.1 million). After the total deduction of $4.4 million from these projects, the ERA considers that ATCO's structure and equipment capital expenditure of $37.7 million for AA4 should be rolled into the regulatory asset base in AA5.

343. Table 48 shows ATCO's actual and estimated structures and equipment capital expenditure, and the ERA's amended structures and equipment capital expenditure for AA4.

Table 48: ERA's amended conforming structure and equipment capital expenditure (AA4) ($m real as at 31 December 2019)

Capital expenditure – structures and equipment	Jul to Dec 2014	2015	2016	2017	2018 forecast	2019 forecast	Total
ATCO proposed conforming capital expenditure	2.2	3.9	6.1	5.0	16.6	8.4	42.1
Jandakot redevelopment and training facility	0.0	0.0	0.0	0.3	-3.2	0.0	-2.9
Blue Flame Kitchen	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Clean Energy Innovation Hub	0.0	0.0	0.0	0.0	-1.5	0.0	-1.5
ERA amended conforming capital expenditure	**2.1**	**3.9**	**6.1**	**5.3**	**11.9**	**8.4**	**37.7**

Source: ERA analysis. Some numbers may not add due to rounding.

Information technology capital expenditure

344. The ERA assessed ATCO's information technology capital expenditure for AA4 and noted that ATCO's actual expenditure was $1.3 million higher than the ERA's AA4 final decision forecast.[159]

345. Despite the small aggregate variance, there were some large movements of projects within the information technology capital expenditure portfolio. These projects include [redacted] million on the Springboard program, [redacted] million on Asset Management Optimisation and [redacted] million on the Geographical Information Systems (GIS)

[158] ERA, *Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution Systems, 30 June 2015*, p. 121.

[159] ATCO, *Access Arrangement Information*, p. 34.

upgrade. In its AA4 access arrangement information, ATCO explained that the GIS upgrade was a collection of applications and databases for its network design.[160]

346. ATCO demonstrated how the Springboard program delivery and ATCO's investment governance framework aligned. The Springboard program comprises Task Management System, Strategic Asset Management and Management Information System.[161] With EMCa's assistance, the ERA also reviewed the justification for the Springboard program and is satisfied that the program aligns with good practice and ATCO's approval of this program aligns with the investment governance framework.[162]

347. However, the ERA considers that ATCO has mistakenly included Asset Management Optimisation ([redacted] million) and the GIS upgrade ([redacted] million) in its AA4 proposed conforming capital expenditure. As both projects are part of the ATCO's AA5 project (Asset Management Optimisation) or expected to commence during AA5 (GIS upgrade), the ERA considers that these programs should not be included in ATCO's proposed conforming capital expenditure for AA4. As a result, the ERA determined that a total value of $1.3 million does not meet any capital expenditure criteria under rule 79 of the NGR.

348. After the total deduction of $1.3 million from the Asset Management Optimisation and GIS upgrade projects, the ERA considers that ATCO's information technology capital expenditure of $28.9 million for AA4 should be rolled into the regulatory asset base in AA5.

349. Table 49 shows ATCO's actual and estimated information technology capital expenditure, and the ERA's amended information technology capital expenditure for AA4.

Table 49: ERA's amended conforming information technology capital expenditure (AA4) ($m real as at 31 December 2019)

Capital expenditure – Information Technology	Jul to Dec 2014	2015	2016	2017	2018 forecast	2019 forecast	Total
ATCO's proposed conforming capital expenditure	5.3	3.1	8.8	7.7	3.1	2.2	30.2
Asset Management Optimisation	0.0	0.0	0.0	0.0	0.0	[redacted]	[redacted]
GIS upgrade	0.0	0.0	0.0	0.0	0.0	[redacted]	[redacted]
ERA amended conforming capital expenditure	**5.3**	**3.1**	**8.8**	**7.7**	**3.1**	**0.9**	**28.9**

Source: ERA's analysis. Some numbers may not add due to rounding.

AA4 overhead capitalisation

350. ATCO defined overheads as "all the necessary indirect costs of delivering the capex program, except for the labour and materials costs that can be directly allocated.

[160] ATCO, *Access Arrangement Information, AA4*, p. 204.

[161] EMCa's final report, p. 61.

[162] EMCa's final report, p. 62.

Overhead costs are not directly attributable to capex projects and activities via a source document such as a work order, invoice or a timesheet, but are incurred as a result of delivering the capex program".[163]

351. ATCO advised that it changed its overheads capitalisation method during the AA4 period.[164] In the first quarter of 2018, ATCO introduced a time writing tool which enabled office staff and field supervisors to allocate hours to both capital expenditure and operating expenditure projects. This enabled ATCO to capture direct and indirect labour costs separately.

352. Before the introduction of a time writing tool, ATCO's overhead capitalisation system allocated direct labour costs to be part of its reported overhead costs. As a result, ATCO's actual reported capitalised overhead value represented the estimated value of direct labour hours (rather than the actual hours) and true overheads (indirect costs) during AA3 and AA4 (until December 2017).

353. Table 50 summarises the overhead capitalisation in AA3, AA4 and AA5. As the Table shows, ATCO's actual capitalised overhead was broadly in line with the ERA's AA3 Final Decision. Under ATCO's revised capitalisation method that applied during AA4, ATCO capitalised overheads equivalent to 23.5 per cent of its "capital expenditure attracting overheads", or 8.5 per cent more than the ERA's AA4 allowance of 15.0 per cent.

354. By capitalising its overheads at a higher rate, ATCO proposed to roll the relevant operating expenditure into the regulatory asset base (that is, the estimated value of direct labour costs during AA4 under ATCO's previous overheads capitalisation method) that was included in AA4 tariffs, as conforming capital expenditure and recover this expenditure again over the life of the asset. This would result in customers paying twice for the recovery of this expenditure, which is inconsistent with the national gas objective. This regulatory accounting movement from operating expenditure to capital expenditure partly explains ATCO's reduced operating expenditure.

355. Based on the actual capital expenditure attracting overheads of $323.0 million during AA4, the additional capitalised overhead is around $27.6 million. After excluding the project-based overhead adjustment of $2.0 million, the ERA determined that a total of $25.6 million of overhead does not meet the capital expenditure criteria.

[163] ATCO, *Access Arrangement Information*, p. 116.

[164] At the ATCO onsite meeting; further information provided by ATCO in response to EMCa42 and EMCa43.

Table 50: Summary of overhead capitalisation in AA3, AA4 and AA5 driver ($m real as at 31 December 2019)

	AA3 Allowance	AA3 Actual	AA4 Allowance	AA4 Actual	AA5 Forecast
Capital expenditure attracting overheads	251.6	233.1	383.1	323.0 (a)	376.2
Overhead (%)	15.0	14.2	15.0 (b)	23.5 (c)	16.5
Difference (c-b) (%)	-	-	-	8.5 (d)	
Additional overheads in AA4 (a x d)				27.6	
Less overhead included in the project-based adjustment				2.0	
Overhead capitalisation adjustment				25.6	

Source: ATCO response to EMCa42; ERA analysis based on the ERA's approved overhead rate of 15 per cent in AA3 and AA4

Required amendments

356. Following the assessment of ATCO's proposed conforming AA4 capital expenditure, the ERA determined that:

- $421.6 million (85.0 per cent of ATCO's expenditure) complies with the criteria set out in rule 79 of the NGR and can be included in the opening value of the asset base for the AA5.
- $49.9 million (9.9 per cent of ATCO's expenditure) does not comply with the criteria set out in rule 79 of the NGR and should not be included in the opening value of the asset base for AA5.
- $25.6 million (5.2 per cent of ATCO's expenditure) of capitalised overhead does not comply with the criteria set out in rule 79 of the NGR and should not be included in the opening value for AA5.

357. The ERA determined that $421.6 million of ATCO's capital expenditure in AA4 is conforming:

- $194.7 million on network sustaining capital expenditure
- $184.7 million on network growth capital expenditure
- $28.9 million on IT capital expenditure
- $37.7 million on structures and equipment capital expenditure
- $1.1 million on equity raising costs
- Less $25.6 million on capitalised overhead.

358. Table 51 shows the ERA's amended conforming capital expenditure for AA4 by project driver.

Table 51: ERA's amended conforming capital expenditure by AA4 project driver ($m real as at 31 December 2019)

	Jul to Dec 2014	2015	2016	2017	2018 forecast	2019 forecast	Total
ATCO proposed conforming capital expenditure (a)	**43.9**	**80.9**	**92.9**	**92.4**	**98.0**	**87.9**	**496.0**
Sustaining amendments	-0.2	-0.2	-6.5	-11.6	-15.9	-7.1	-41.5
Growth amendments	0.0	0.0	2.2	-2.0	-2.0	-1.0	-2.8
Structures and equipment amendments	0.0	0.0	0.0	0.3	-4.6	0.0	-4.4
Information technology amendments	0.0	0.0	0.0	0.0	0.0	-1.3	-1.3
Total proposed reductions (b)	**-0.2**	**-0.2**	**-4.3**	**-13.3**	**-22.5**	**-9.4**	**-49.9**
Equity raising costs (c)	0.0	0.0	0.0	0.0	0.3	0.8	1.1
ERA amended conforming capital expenditure (by project) (a+b+c)	**43.7**	**80.7**	**88.6**	**79.1**	**75.8**	**79.3**	**447.1**
Overhead capitalisation adjustment	**-1.2**	**-7.7**	**-7.5**	**-6.5**	**-0.9**	**-1.9**	**-25.6**
Total ERA amended conforming capital expenditure	**42.5**	**73.0**	**81.1**	**72.6**	**74.9**	**77.4**	**421.6**

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019. Some numbers may not add due to rounding.

359. Table 52 breaks down the ERA's amended conforming capital expenditure for AA4 by asset class.

Table 52: ERA's amended conforming capital expenditure by AA4 asset class ($m real as at 31 December 2019)

Asset Class	Jul to Dec 2014	2015	2016	2017	2018 forecast	2019 forecast	Total
High pressure mains – steel	0.8	0.5	4.6	4.7	4.4	1.9	16.9
High pressure mains – polyethylene (PE)	0.7	1.5	0.6	0.5	0.1	0.0	3.4
Medium and low pressure mains	14.1	31.8	28.8	23.3	18.5	25.3	141.8
Regulators	1.5	2.6	4.1	4.9	2.1	0.2	15.5
Secondary gate stations	0.0	0.0	0.0	0.2	2.1	5.3	7.6
Buildings	0.2	0.4	0.6	1.6	7.2	4.0	14.0
Meter and services pipes	18.1	29.8	27.8	26.2	31.2	34.2	167.3
Equipment and vehicles	0.4	1.1	1.0	1.0	1.4	0.6	5.4
Vehicles	1.5	1.3	2.2	2.1	3.3	3.6	14.0
Information Technology (including telemetry)	5.2	3.0	9.0	7.8	4.5	1.5	31.0
Land	0.0	0.9	2.4	0.4	0.0	0.0	3.7
Equity raising costs	0.0	0.0	0.0	0.0	0.3	0.8	1.1
ERA amended conforming capital expenditure by asset class	**42.5**	**73.0**	**81.1**	**72.6**	**74.9**	**77.4**	**421.6**

Source: ERA's analysis. Some numbers may not add due to rounding.

360. The *straight-line method* is the depreciation method used for calculating the depreciation on ATCO's regulatory asset base for AA4. The current cost accounting approach is consistent with the criteria under rule 89(1) of the NGR, and complies with the NGL (see the depreciation chapter of this draft decision on page 143).

361. Table 53 shows the ERA's amended values for calculating the opening capital base for the fifth access arrangement period. The ERA requires that the opening capital base at 1 January 2020 be amended to $1,271.1 million.

Table 53: ERA's amended opening capital base at 1 January 2020 ($m real as at 31 December 2019)

	Jul to Dec 2014	2015	2016	2017	2018 (forecast)	2019 (forecast)
Opening Capital Base AA4	1,102.59	1,126.96	1,160.15	1,196.86	1,222.01	1,246.88
Plus: Capital expenditure	42.45	73.05	81.12	72.62	74.93	77.39
Less: Depreciation	(18.04)	(39.84)	(44.21)	(47.25)	(50.07)	(53.18)
Less: Asset disposals	(0.04)	(0.02)	(0.20)	(0.21)	-	-
Opening Capital Base for AA5	**1,126.96**	**1,160.15**	**1,196.86**	**1,222.01**	**1,246.88**	**1,271.09**

Source: ERA analysis. Some numbers may not add due to rounding.

Required Amendment 7

ATCO must amend the opening capital base (real) at 1 January 2020 to reflect the values set out in Table 53 of this draft decision.

Projected Capital Base

362. Rule 78 of the NGR establishes the approach to determine the projected capital base for a particular period. The approach involves commencing with the opening capital base and:

- Adding forecast conforming capital expenditure for the period.
- Subtracting forecast depreciation for the period and the forecast value of pipeline assets to be disposed of over the period.

363. Rule 79 of the NGR sets out the criteria that must be met for capital expenditure to be considered conforming capital expenditure. Capital expenditure must be equivalent to that incurred by a prudent service provider acting efficiently, and must be justifiable on economic, safety or regulatory grounds. The criteria that must be met for capital expenditure to be conforming is set out in paragraph 288.

ATCO's proposal

364. ATCO proposed a projected capital base of $1,562.5 million as at 31 December 2024. ATCO's calculated values of the projected capital base for the AA5 period are shown below in Table 54.

Table 54: ATCO's projected capital base ($m real as at 31 December 2019)

	2020	2021	2022	2023	2024
Opening capital base	1,347.5	1,402.4	1,446.2	1,486.1	1,526.0
Capital expenditure	103.4	102.2	100.4	102.2	101.3
Depreciation	-48.5	-58.4	-60.5	-62.2	-64.7
Asset disposals	-	-	-	-	-
Closing capital base	1,402.4	1,446.2	1,486.1	1,526.0	1,562.5

Source: ATCO, Access Arrangement Information, p. 122, Table 13.3

365. ATCO forecast $509.3 million of capital expenditure over AA5, which was 2 per cent (or $12.2 million) higher than the capital expenditure projected for the five and a half years of AA4. ATCO's forecasts are shown below in Table 55.

Table 55: Forecast AA5 capital expenditure by driver ($ million real as at 31 December 2019)

Category	2020	2021	2022	2023	2024	TOTAL
Network sustaining	**56.9**	**53.3**	**55.8**	**57.7**	**52.6**	**276.1**
Asset replacement	34.6	37.7	40.4	37.3	38.1	188.0
Asset performance and safety	22.3	15.6	15.4	20.4	14.5	88.1
Network growth	**33.8**	**34.1**	**34.9**	**35.0**	**36.5**	**174.3**
Customer-initiated	32.8	34.0	34.4	35.0	36.4	172.6
Demand-related	1.0	0.1	0.5	-	0.1	1.7
Information Technology	**7.4**	**8.8**	**6.4**	**5.5**	**8.0**	**36.1**
Structures and equipment	**5.3**	**6.0**	**3.2**	**4.1**	**4.3**	**22.7**
Fleet	3.6	4.7	1.9	3.0	3.2	16.3
Facilities, plant and equipment	1.7	1.3	1.3	1.1	1.1	6.5
TOTAL	**103.4**	**102.2**	**100.4**	**102.2**	**101.3**	**509.3**

Source: ATCO, Access Arrangement Information, p. 93, Table 12.1.

366. ATCO used a 'bottom-up' forecasting approach for each capital expenditure driver category, which comprised 'sustaining the network', 'growing the network', 'information technology' and 'structures and equipment'.

367. Of the total ATCO forecast conforming capital expenditure for AA5:

- Network sustaining expenditure accounts for 54.2 per cent ($276.1 million).

- Network growth expenditure accounts for 34.2 per cent ($174.3 million).
- Information technology capital expenditure accounts for 7.1 per cent (36.1 million).
- Structures and equipment expenditure accounts for 4.5 per cent ($22.7 million).

368. ATCO expected to expand its network by connecting 81,000 new domestic customers and installing 2,300 new commercial meters over AA5.[165]

369. ATCO's mains replacement program during AA5 will continue to replace PVC mains from its networks (which ATCO identified as an unacceptable risk) with polyethylene (PE) mains pursuant to rule 79(2)(c)(i) of the NGR. ATCO noted that the replacement of PVC mains with PE mains would reduce the risk of asset failure, thus reducing reactive maintenance costs and the potential for impact on customers.

370. ATCO forecast $49 million for three security of supply projects in Bunbury ($7.6 million), Caversham ($15 million) and Two Rocks ($26.5 million) over AA5.[166] These projects will focus on maintaining the natural gas supply to ATCO's customers.

371. ATCO forecast $27.3 million for its meter replacement program, which comprises the replacement of about 25,000 domestic meters and 661 commercial meters in AA5 to ensure accuracy retention.[167]

372. ATCO also forecast spending $36.1 million on information technology over AA5,[168] including:

- $24.9 million on 'application renewal' which comprises upgrades to the customer care and billing, geographic information system, document management, and integration systems.
- $2.0 million on 'asset management and service delivery excellence' which will extend the network asset management capability to fleet assets, and streamline the customer request process through automated workflows including the Meter Identification Reference Number address verification process.

Submissions

373. AGL noted that over half of ATCO's proposed $509 million capital expenditure for AA5 was for network asset replacement and performance. AGL had no concerns with ATCO's forecast expenditure for network growth, but encouraged the ERA to analyse whether the large investment in asset replacement and improvement was warranted given ATCO operates with a low level of UAFG and was forecasting reductions in gas demand.

374. AGL expected efficiency improvements in operating expenditure if the forecast asset replacement occurred, given the expected reduction in asset failure and maintenance costs.

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165 ATCO, Access Arrangement Information, p. 110.

166 ATCO, Access Arrangement Information, p. 103.

167 ATCO, Access Arrangement Information, p. 102.

168 ATCO, Access Arrangement Information, Table 12.14, p. 114.

375. AGL noted that it relied on the ERA to review the asset replacement programs of networks for efficiency and to avoid advanced asset replacement in the long term interests of consumers.

376. AGL expected IT capital expenditures to include the enhancements for the Western Australian retail gas market to align with other retail gas markets. AGL encouraged ATCO to revise the proposed expenditure if it did not, because AGL would be disappointed if market initiatives were delayed due to insufficient provisions for expenditure in AA5.[169]

377. Alinta Energy encouraged the ERA to review ATCO's proposed capital expenditure initiatives to ensure that ATCO could undertake the work proposed. Alinta Energy supported the proposed Automated Meter Reading projects to enable meters to be read wirelessly where physical access was restricted.

378. Alinta Energy noted that ATCO proposed increasing network sustaining capital expenditure as a share of total capital expenditure from 49 per cent during AA4 to 54 per cent in AA5. Alinta Energy urged the ERA to consider whether the reliability targets for AA5 justify this increase given some performance targets had been set at levels that could be achieved more easily than those attained over AA4.

379. Kleenheat raised concerns with proposed levels of capital expenditure over AA5. Kleenheat questioned the reasonableness of increases to network sustaining capital expenditures of $54 million or 24.5 per cent given continued improvements and outperformance in reliability of the network over the AA4 period. The historical trend in the System Average Interruption Frequency Index (SAIFI) has been year-on-year improvements. This appears to have been achieved with capital expenditures materially in line with limits approved by the ERA in AA4. Kleenheat noted that ATCO was also seeking to set the target for SAIFI in AA5 at a level above the current trend (that is, an easier target). Kleenheat considered this counter-intuitive although noting that not all of the capital expenditure related to reliability improvements.

380. Kleenheat also questioned the level of capital expenditure on network growth, noting an average cost increase of 10.6 per cent between AA4 and AA5. Kleenheat questioned why the average cost per new connection was expected to rise by nearly 11 per cent if, as ATCO stated, it used historical unit rates to calculate its forecast and these rates included cost-efficiencies from contractor rates.

381. Synergy submitted that the increase in revenue and therefore prices was largely driven by ATCO's significant forecast capital expenditure program. Synergy noted that ATCO's proposal indicated that the proposed capital expenditure program was only 2 per cent above the AA4 period. Synergy submitted that the increase in the proposed capital expenditure was closer to 10 per cent when compared to the five-year period of the access arrangement.

382. Synergy noted the AA5 proposal included very little information on the outcomes of the capital expenditure program for customers and there did not appear to be adequate substantiation of how it met the requirements of NGR 74 or 79.[170] As a

[169] The AGL submission seems to imply that if it does not include expenditure for enhancement for the Western Australian retail gas market, then it should. The AGL submission does not include the word *not*.

[170] Rule 74 requires that information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate. A forecast or estimate must be arrived at on a reasonable basis and must represent the best forecast or estimate possible in the circumstances.

Rule 79 establishes the criteria for new capital expenditure.

result, this made it difficult to assess the reasonableness, prudence or efficiency of the proposed capital expenditure program.

383. Synergy considered that all aspects of the capital expenditure program should be reviewed by the ERA, not just the network sustaining capital expenditure highlighted in the ERA's issues paper. Synergy recommended that the ERA scrutinise the following areas:

- The 5 per cent (adjusted) increase in growth capital expenditure, despite the modest growth in customer numbers and declining demand expected over the AA5 period.
- The 24 per cent (adjusted) increase in sustaining capital expenditure, despite exceptional reliability and security of supply performance, materially outperforming the benchmarks set for AA4.
- The significant amount of discretionary capital expenditure (for example, IT expenditure which is forecast to increase by 50 per cent).

Draft Decision

384. The ERA has considered whether ATCO's proposed value of the projected capital base for AA5 meets the requirements of the NGR.

385. The ERA appointed technical advisor EMCa to assist with the assessment of ATCO's proposed capital expenditure, operating expenditure, and associated governance processes for this expenditure.

Assessment of Capital Expenditure

386. ATCO forecast $509.3 million of capital expenditure over AA5 which is equivalent to an average annual expenditure of $101.9 million. This average annual expenditure for AA5 is 13 per cent higher than the average annual expenditure over the last five years. The major increase between the periods is for forecast network sustaining expenditure.

387. The ERA assessed ATCO's proposed capital expenditure forecast for AA5 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.

388. The ERA considered information provided by ATCO, public submissions and EMCa to determine the amount of capital expenditure which meets the requirements of the NGR.

389. The ERA reviewed ATCO's forecast capital expenditure under the following cost drivers:

- Sustaining expenditure
- Growth expenditure
- Structures and equipment expenditure

- IT expenditure.

Sustaining Capital Expenditure

390. ATCO forecast sustaining capital expenditure for AA5 of $276.1 million, split between the following categories:

- Asset Replacement
  - $127.4 million for PVC mains replacement
  - $27.3 million for meter replacement program
  - $33.6 million for end of life replacement program.
- Asset Performance and Safety
  - $49.1 million for security of supply projects
  - $12.6 million for SCADA projects
  - $13.5 million for PGP interconnection projects
  - $12.7 million for other network sustaining projects.

391. ATCO's sustaining capital expenditure is driven by its safety case and the need to reduce risk to as low as reasonably practicable. ATCO's Safety Case has been prepared to comply with AS4645.1:2008 Gas distribution networks - Part 1: Network management, AS2885.1:2007 Pipelines–Gas and liquid petroleum - Part 1: Design and constructions and AS2885.3:2001 Pipelines–Gas and liquid petroleum – Part 3: Operation and maintenance. It was accepted to form the primary reference to meet the safety and technical compliance of the ATCO gas network by the Director of EnergySafety on 28 July 2011 and was last revised on 1 December 2017 to incorporate feedback from EnergySafety.

392. EMCa noted that ATCO's safety case was prepared to comply with AS4645.1:2008 (among other things) and that ATCO's risk management documents referred variously to three main sources on managing network risk: AS4645.1:2008, AS4645.1:2018, and a British Standard Institution standard.

393. EMCa noted that it had not seen compelling reasons from ATCO to support its alternative measures, definitions and criteria. EMCa referred to the AS4645.1:2018 measures, definitions and criteria in its assessment of ATCO's proposed AA5 capital expenditure.

394. A copy of ATCO's risk matrix is set out below in Figure 11. As noted above, the risk matrix and risk assessment criteria published by ATCO is materially the same as AS4645.1:2008. A risk level is determined based on an assessment of the likelihood of frequency and the severity or consequence of the risk. These terms are used throughout the ERA's assessment of sustaining capital expenditure.

Figure 11: ATCO's risk matrix

FREQUENCY	CONSEQUENCE				
	1 Trivial	*2 Minor*	*3 Severe*	*4 Major*	*5 Catastrophic*
5 Frequent	5 Low	10 Intermediate	15 High	20 Extreme	25 Extreme
4 Occasional	4 Low	8 Low	12 Intermediate	16 High	20 Extreme
3 Unlikely	3 Negligible	6 Low	9 Intermediate	12 High	15 High
2 Remote	2 Negligible	4 Negligible	6 Low	8 Intermediate	10 High
1 Hypothetical	1 Negligible	2 Negligible	3 Negligible	4 Low	5 Intermediate

Source: ATCO Gas Australia Risk Management Matrix, page 2

395. Once a risk level has been allocated to a project, ATCO then uses its risk acceptance criteria to determine what needs to occur, if anything, to mitigate the risk. ATCO's risk acceptance criteria is set out below in Figure 12.

Figure 12: ATCO's risk acceptance criteria table

Extreme	Modify the threat, frequency or consequence so that the risk is reduced to "Intermediate" or lower. Reduce the risk immediately. Management responsibility must be specified.
High	Modify the threat, frequency or consequence so that the risk is reduced to "Intermediate" or lower. Management responsibility must be specified.
Intermediate	Where the risk rank is confirmed to be "Intermediate" and, if possible, modify the threat, frequency or consequence to reduce the risk rank to "Low" or "Negligible". Where the risk cannot be reduced to "Low" or "Negligible", action shall be taken to: a. Remove threats, reduce frequencies and/or reduce severity of consequences where reasonably practicable to do so; and b. Demonstrate ALARP. Management responsibility must be specified.
Low	Review risk control system and procedure and monitor to determine if the risk rating changes and requires reassessing. Management responsibility must be specified.
Negligible	Review the risk rating at the next review interval. Manage with routine procedures

Source: ATCO Risk Management Framework, Appendix B.

396. EMCa considered that the applicable Australian standard was AS4645.1:2018, and compared ATCO's measures and definitions with this standard. EMCa concluded that:

- ATCO's measures of risk likelihood were more risk averse.
- ATCO's and the Australian Standard AS4645.1 risk 'consequence' measures were the same for the service Supply (interruption to continuity) dimensions, and similar for the People (human injury or fatality) dimension.
- Risk matrix and risk assessment criteria published by ATCO and AS4645.1:2018 were materially the same.
- ATCO's guidance on the application of the "as low as reasonably practicable" test was inadequate.

PVC mains replacement

397. The largest program in the proposed AA5 network sustaining capital expenditure program is for PVC mains replacement. ATCO proposed to spend $127.4 million on replacing 305km of PVC mains and service connections with polyethylene mains over the AA5 period.

398. The driver for replacement is reducing safety-related risk for loss of containment, specifically of a fatality from exploding leaked gas in built-up areas. ATCO derived the risk of fatality from individual pipe sections (expressed as fatality risk per km per year) using its Mains Replacement tool.

399. ATCO's Mains Replacement tool is a software application that considers asset specification, historical leak data, remaining useful life, and risk from each pipeline to the public. ATCO stated that the semi-quantitative risk outcomes from the tool reflected the risk to public safety from each pipeline segment, and were correlated to the ATCO Risk Management Matrix in accordance with its Safety Case.

400. In its proposal, ATCO claimed that the PVC pipeline that was considered to present a high risk was replaced in the AA4 period. One of the differences between ATCO's definitions and AS4645.1:2018 is that ATCO has introduced risk rating definitions of 'upper intermediate' and 'lower intermediate'.[171]

401. ATCO has proposed to replace 171km of PVC mains in AA5 that present as 'upper intermediate' plus 106km of other PVC mains identified by the Mains Replacement tool as having a predicted leak rate higher than the average leak rate of the intermediate zone as well as an additional 10 per cent of PVC mains to achieve program efficiencies.

402. EMCa reviewed ATCO's proposal on AS4645.1:2018 and considered that the 277km of PVC mains regarded as intermediate was likely to be prudent and efficient expenditure from the information provided. However, ATCO did not provide adequate information regarding the risk profile of the additional 10 per cent (28km, $11.7 million) of mains to be replaced for 'efficiency purposes'. EMCa considered this expenditure was not prudent and efficient from the information provided.

403. The ERA reviewed ATCO's proposal including the options analysis undertaken and EMCa's analysis. The options ATCO considered included replacing the whole 1,890km of PVC mains identified as intermediate risk at a cost of $700 million, or replacing fittings along the selected 305km of PVC mains, rather than replacing the pipe itself, at a cost of $251 million.

404. The ERA reviewed the options for PVC mains replacement and considers that ATCO's preferred option of replacing the leakiest pipe is prudent and efficient. The ERA is satisfied that the 277km of PVC mains identified for replacement at a cost of $116 million meets the criteria for conforming capital expenditure.

405. However, the ERA is not satisfied that the 28km ($11.7 million) of proposed PVC mains replacement expenditure to be undertaken for program efficiencies meets the criteria of conforming capital expenditure. The concept of program efficiencies can make sense in some situations, but in this situation ATCO has not adequately justified

[171] Upper and lower intermediate are not set out in Figure 12 but on page 99 of its 2020-24 Plan (Access Arrangement Information), ATCO notes that an 'upper intermediate' risk is an intermediate risk that has the potential to move towards, or into, the 'high' risk category.

the case to undertake the extra 28km of replacement. This is required to be removed from inclusion into the projected capital base.

Meter replacement program

406. ATCO proposed to spend $26.6 million replacing [redacted] domestic meters over the AA5 period and $0.6 million replacing [redacted] rotary-type commercial meters.

407. The driver for replacement of the domestic meters is compliance with regulatory requirements for domestic and commercial meters in Gas Standards Regulations Part 3 – Metering (section 16),[172] which requires all domestic meters to be replaced at intervals not exceeding 18 years. Meters can be replaced at an older age if approved by the Director of Building and Energy.

408. ATCO received approval in September 2008 to extend replacement of M6EW meters' in service life to 25 years with ME602 meters remaining at 18 years for replacement. The meters identified by ATCO for replacement in AA5 will reach the approved end of service life during the period.

409. The driver for replacement of the [redacted] commercial rotary meters is to ensure metering accuracy.

410. For domestic meter replacement, ATCO considered one alternative; to take no action. ATCO assessed the risk of this option as high, on the basis of severe reputational and financial consequences. EMCa considered this rating to be reasonable.

411. EMCa asked ATCO why it had not presented the option of seeking a further extension. After receiving ATCO's response, EMCa was satisfied that the prospects for further extensions of time for either meter types was low.

412. For the commercial meter replacement, ATCO considered the alternative of taking no action. EMCa noted that ATCO's assessment of zero cost for the no action options contradicted statements in the main body of its business case, which stated that refurbishment was required as an alternative to replacement. The risk of no action was rated by ATCO as low.

413. The ERA has considered ATCO's proposed expenditure for the domestic and commercial meter replacement programs. For the domestic meters, the ERA notes ATCO's compliance obligation and that it had already received an extension for replacement previously for one type of meter to be replaced.

414. The ERA is satisfied that the $26.6 million for replacement of domestic meters in the AA5 period is conforming capital expenditure to be added to the projected capital base.

415. The ERA has considered the commercial replacement meter program expenditure of $0.6 million, noting that as the risk is regarded by ATCO as low and there is no cost associated with not replacing the meters, and the ERA considers that the alternative 'no action' approach is better than ATCO's recommended replacement option.

416. Also, given that ATCO's own documentation notes that refurbishment is an alternative to replacement but this was not proposed, the ERA has determined that the

[172] *Gas Standards (Gas Supply and System Safety) Regulations 2000*.

$0.6 million for replacement of commercial meters does not satisfy the criteria to be regarded as conforming capital expenditure for inclusion in the projected capital base.

End-of-life replacement program

417. ATCO proposed to spend $17.7 million replacing [redacted] risers and services each year in the AA5 period. ATCO commenced replacing risers and services that leak gas with fully fused polyethylene replacements in 2014. Approximately 1,600 leaking services have been replaced each year based on 'reactive' leak detection.

418. ATCO noted that the results of its Leak Survey indicated there were possibly an additional 1,600 leaks per annum from this source and that leak surveys should be undertaken to proactively detect the leaking risers and services.

419. EMCa considered ATCO's untreated risk rating of 'intermediate' to be reasonable. EMCa considered that ATCO did not provide any information to demonstrate that replacing [redacted] risers and services per annum satisfied the ALARP test. However, EMCa considered that ATCO was required to eliminate leaks when detected, and that it was prudent to undertake leak surveys, at least in built-up areas where the risk was highest, and that it was likely that leak surveys would reveal more leaks.

420. EMCa considered that ATCO selected the appropriate option and that the basis for its cost estimates was reasonable.

421. ATCO requires leaks to be eliminated when detected and prudently undertakes leak surveys to detect them. The ERA is satisfied that the $17.7 million of expenditure for risers and services meets the criteria to be conforming capital expenditure and included in the projected capital base.

422. ATCO proposed to spend $6.1 million on end-of-life replacement of seven different regulators and meter facility types. EMCa considered that ATCO's justification for the programs of work were in line with good asset management practice and that its expenditure forecasting was reasonable.

423. However, EMCa noted that, despite ATCO's expenditure forecasting approach resulting in no replacement of pressure regulating stations in AA5, ATCO brought forward replacement of pressure regulating stations from the AA6 period to AA5 at a cost of $2.5 million. EMCa did not consider that ATCO had provided sufficient information to support the need to replace the nominated pressure regulating stations in AA5.

424. The ERA reviewed the information provided by ATCO and is not satisfied that the $2.5 million for the brought-forward replacement of the pressure regulating stations has been adequately justified. Therefore it does not meet the criteria for conforming capital expenditure. The ERA is satisfied that the remaining $3.6 million does met the criteria to be regarded as conforming capital expenditure and to be included in the projected capital base.

425. ATCO proposed to spend $4.5 million over the AA5 period to replace mechanical compression fittings prone to leaking when they are identified during operational activities (that is, opportunistic replacement). The $4.5 million is based on historical costs and volumes.

426. EMCa noted that ATCO assessed the residual risk after it undertook the work to be intermediate and as low as reasonably practicable, although there was no analysis provided by ATCO to demonstrate this.

427. ATCO considered two other options; to wrap and leave the identified fitting when found, or take no action. ATCO's analysis of the wrap and leave option was more expensive over time than the preferred option of replacement due to double handling. Under the 'no action' option, ATCO assessed the risk as intermediate and not as low as reasonably practicable.

428. EMCa noted that although ATCO's documentation did not include quantified analysis to support this work, based on its engineering judgement, EMCa considered it likely that the opportunistic replacement program is prudent.

429. The ERA notes the lack of quantified analysis to support the work to replace the mechanical compression fittings but also notes the options analysis and the fact that the preferred option is regarded by ATCO as the only one that is as low as reasonably practicable.

430. The ERA also notes EMCa's consideration that the program is likely to be prudent, which is based on its engineering judgment. As a result, the ERA is satisfied that the $4.5 million proposed by ATCO for mechanical compression fitting replacement is conforming capital expenditure to be included in the projected capital base.

431. ATCO proposed to spend $3.6 million on a staged replacement of [redacted] telemetry units. Telemetry equipment provides accurate data for customer billing and it generates data on flow and pressure that informs distribution network operation, modelling and planning.

432. ATCO's primary driver for the project is improving the integrity of the telemetry in the network by replacing end of life devices with new modern devices. Prior to 2012, ATCO followed a run to failure replacement strategy until a proactive approach was introduced to replace telemetry assets to reduce operational costs.

433. EMCa noted in its review that ATCO provided sufficient information to demonstrate that the revised asset strategy was effective. EMCa considered that the proactive approach was the most preferable of the options considered.

434. The ERA reviewed the proposed telemetry expenditure proposed by ATCO including the proposed alternatives for the AA5 period. The ERA is satisfied with the replacement approach proposed as the most appropriate option. The ERA is satisfied that the proposed $3.6 million expenditure for telemetry replacement is conforming capital expenditure to be included in the projected capital base.

435. ATCO proposed as part of its end of life replacement program $1.7 million in expenditure for three smaller programs/projects. EMCa reviewed the project briefs and associated business cases provided and considered that the proposed expenditure was likely to satisfy the capital expenditure criteria.

436. The ERA reviewed the documentation provided by ATCO on the three projects:

- $0.8 million for replacement of exposed steel pipe on bridge crossings that is susceptible to corrosion and leakage over time;
- $0.6 million for cathodic protection assets installed to protect steel pipes from material fatigue and corrosion, which can lead to leaks or pipe blockages; and
- $0.3 million for High Pressure warning signs used as a control to reduce the likelihood of a third-party impact on ATCO's high-pressure assets.

437. The ERA is satisfied that the proposed expenditure in AA5 for the three projects set out above meets the criteria to be conforming capital expenditure to be included in the projected capital base.

Security of Supply

438. ATCO proposed three security of supply projects in AA5 totalling $49.0 million. ATCO identified the driver as the risk to security of gas supply from third-party damage. Security of supply projects focus on maintaining the natural gas supply to customers following an adverse event.

439. ATCO sought to justify the expenditure under Rule 79(2)(c)(ii) of the NGR, that the capital expenditure was necessary to maintain the integrity of services and avoid a major gas outage.

440. ATCO calculated the frequency of loss of gas supply to end customers from specific gas distribution system pipeline segments per annum and assessed the consequence in terms of customer weeks lost (that is, before gas supply was restored).

441. To assess these projects the ERA must first consider ATCO's risk assessment for the loss of gas supply frequency and the customer weeks lost consequence.

442. ATCO document its method for estimating the frequency of a third-party incident causing pipeline puncture (leading to a loss of containment) in its report 'HP Steel Pipeline Semi-Qualitative Risk Assessment'.

443. ATCO identified and applied four risk reduction factors to the baseline failure (puncture) rate to provide a more realistic prediction of failure probability for each pipeline segment. This assumed that a loss of containment via a puncture would result in a total supply outage, as ATCO stated that it assumed positive pressure would not be maintained for part of the network downstream in the event of a loss of containment.

444. EMCa noted that this was a conservative approach, as based on its experience the likelihood of shutting off the downstream system would vary with the location and size of the puncture, and other operational and repair methods would determine whether a complete shutdown was required. Also, EMCa noted that if a network must be shut down, positive network pressure could be maintained via other methods.

445. EMCa considered that ATCO should include a fifth risk reduction factor to account for the likelihood that no isolation was required, as EMCa was not aware of an instance where network isolation following a puncture was required anywhere in Australia.

446. ATCO documented its method for estimating customer weeks lost in its report, 'Supply Interruption Customer Weeks Lost Assessment (TCO RP 0287)'. To minimise the risk of air ingress into the network, ATCO assumed that "each impacted gas consumer downstream of the break will require isolation. In addition, the network will have to be isolated into manageable sections to allow effective gas purging during recommissioning".[173]

447. ATCO determined the number of personnel and equipment available for reconnection activities after an event. EMCa noted that ATCO appeared to be very conservative

[173] ATCO, Supply Interruption Customer Weeks Lost Assessment, p. 5.

with its estimates of the resources that could and would be brought to bear in an emergency. EMCa considered that vehicles, equipment and qualified personnel were unlikely to be a constraint for the customer isolation and reconnection work and the limiting factor was likely to be specialist gas equipment.

448. ATCO's modelling for its estimation of customer weeks lost results in a scenario with more than 100,000 customer weeks being lost when 30,000 customers are involved in the isolation, repair, reconnection sequence, for a loss of supply event, with the number of customer weeks lost increasing exponentially with increasing customers lost.

449. Under AS4645.1:2008, an interruption resulting in the loss of supply of greater than 100,000 customer weeks is determined to have a consequence severity rating of 'catastrophic' when rating the risk.

450. EMCa reviewed ATCO's customer reconnection activity assumptions and made a number of different assumptions around timings for the isolation, repair and reconnection of customers and considered the number of customer weeks lost was unlikely to be greater than 100,000 unless supply to more than 50,000 to 60,000 customers is lost.

Caversham Project

451. ATCO determined that third-party damage to several network pipeline segments presented a 'high' risk and proposed $15.0 million in capital expenditure to install bypasses on two pressure relief stations and link the Parmelia Gas Pipeline to a third pressure relief station.

452. ATCO has used scenario analysis and determined that the frequency of such a loss of supply was 'remote' and the number of customer weeks lost was a 'catastrophic' consequence with:

- 237,049 customer weeks lost when 50,121 customers were affected under one loss of supply scenario.
- 137,462 customer weeks lost when 37,197 customers were affected under another loss of supply scenario.

453. ATCO considered two network and two non-network options. The network options included 'no action' which was not feasible due to the risk rating of 'high' and the second network option was looping high risk segments and installing isolation values. This was a more expensive option than ATCO's proposed option.

454. The two non-network options included concrete slabbing and increased pipeline patrol frequency. ATCO claimed that neither option was sufficient to reduce the risk to an acceptable level.

455. EMCa noted that it considered increasing the surveillance would reduce the frequency rating down to 'hypothetical' (less than 1:10,000), and the customer weeks lost is likely to be less than 100,000 in either of ATCO's scenarios leading to a consequence level of 'major'; and that the scenarios would have an overall risk level of 'intermediate', under which an ALARP test would be required.

456. The ERA considers that ATCO has been overly conservative with its assessment of the risks for the Caversham project. The ERA is not satisfied with ATCO's risk ratings

and considers that ATCO should undertake an ALARP test in order to see if the proposed level of expenditure is required.

457. The ERA is not satisfied that the proposed expenditure of $15.0 million for the Caversham security of supply project is justified and considers it does not meet the criteria of rule 79 of the NGR for inclusion in the projected capital base.

Two Rocks Project

458. ATCO has determined that third-party damage to three segments of pipeline in the Two Rocks area presents a 'high' risk by 2024. The current risk is rated as 'intermediate'. ATCO has proposed capital expenditure of $26.5 million to install a new Gate Station on the DBNGP and [redacted]km of new pipeline looping.

459. ATCO has used scenario analysis and has determined that the frequency of such a loss of supply is 'remote' and the number of customer weeks lost is 'catastrophic' with 298,362 customer weeks lost with 56,737 customers affected under one loss of supply scenario and 166,224 customer weeks lost with 41,306 customers affected under another loss of supply scenario.

460. The risk is currently rated as 'intermediate' because ATCO installed remotely controlled isolation valves which has reduced the number of customers exposed to loss of supply to 19,000. The increase in affected customers is due to forecast growth in customer numbers.

461. ATCO evaluated five other network options: [redacted] and (v) no action.

462. [redacted] The 'no action' option is not feasible because of the 'high' risk rating assessment.

463. ATCO assessed two non-network options being concrete slabbing and increase pipeline patrol frequency. As with the Caversham project above, ATCO claimed that neither option was sufficient to reduce the risk levels to an acceptable level.

464. EMCa noted that as with the Caversham project, its assessment of the Two Rock project is that the frequency is 'hypothetical', the consequence is 'major' and the overall risk rating to be 'intermediate' and should also be subject to an ALARP test. EMCa further noted that it considers that the ALARP test is unlikely to be satisfied for this project.

465. As with the Caversham project, the ERA considers that ATCO has been overly conservative with its assessment of the risks for the Two Rocks project. The ERA is not satisfied with ATCO's risk ratings and consider that ATCO should undertake an ALARP test in order to see if the proposed level of expenditure is required, especially in the AA5 operating environment with the ERA not approving greenfield or brownfield new customer connections as discussed below in the Draft Decision.

466. The ERA is not satisfied that the proposed expenditure of $26.5 million for the Two Rocks security of supply project is justified and considers that it does not meet the criteria of rule 79 of the NGR for inclusion in the projected capital base.

Bunbury Project

467. ATCO has determined that third-party damage to a [redacted]km segment of the pipeline in the Bunbury area presents a High risk and has proposed $7.6 million of capital expenditure to install partial looping.

468. ATCO has used scenario analysis and has determined that the frequency of such a loss of supply is 'remote' and the number of customer weeks lost as 'catastrophic' with 137,083 customer weeks lost with 37,140 customers affected under a loss of supply scenario.

469. ATCO evaluated three other network options: (i) Kemerton connection; (ii) LNG virtual pipeline; and (iii) no action. The Kemerton and LNG options are significantly more expensive than ATCO's preferred option and the 'no action' option is not feasible due to the risk rating of 'high'.

470. ATCO also considered two non-network options of concrete slabbing and increased pipeline patrol frequency. As with the Caversham and Two Rocks projects, ATCO claimed that neither option was sufficient to reduce the risk levels to an acceptable level.

471. As with the two other security of supply projects evaluated above, EMCa in its assessment of the Bunbury security of supply project considered that the frequency is 'hypothetical', the consequence is 'major' and the overall risk rating to be 'intermediate' and should also be subject to an ALARP test. EMCa further noted that it considers that the ALARP test is unlikely to be satisfied for this project.

472. As with the two projects evaluated above, the ERA considers that ATCO has been overly conservative with its assessment of the risks for the Bunbury project. The ERA is not satisfied with ATCO's risk ratings and considers that ATCO should undertake an ALARP test in order to see if the proposed level of expenditure is required.

473. The ERA is not satisfied that the proposed expenditure of $7.6 million for the Bunbury security of supply project is justified and considers that it does not meet the criteria of rule 79 of the NGR for inclusion in the projected capital base

474. EMCa noted in its report that there are hundreds of supply pipelines in Australia which have been through AS 2885 Safety Management Studies that have concluded that similar supply threats to that described by ATCO have a 'hypothetical' or 'remote' likelihood and a 'major' (not 'catastrophic') consequence, giving a 'low' or 'intermediate' risk. The 'intermediate' risk scenarios are then considered ALARP as the cost to loop or otherwise backup supply is disproportionate to lowering the risk further.

475. EMCa noted that based on its experience, ATCO would be out of step with Australian industry practice if it was to proceed with the proposed security of supply projects, and the cost of doing so would place an unwarranted premium on its prices.

SCADA projects

476. ATCO has proposed to spend $12.6 million on Supervisory Control and Enhanced Data Acquisition (SCADA) projects. This is made up of SCADA systems and infrastructure, enhanced data acquisition and automated meter reading.

477. ATCO has sought to justify the expenditure for these projects under three different areas of the NGR as set out below:

- SCADA systems and infrastructure ([redacted] million which includes [redacted] million relating to IT expenditure) – involves introducing remote network isolation which increases the effectiveness of emergency isolation to increase public safety and reduce loss of supply events and therefore meets NGR 79(2)(c)(i).
- Enhanced data acquisition ([redacted] million) – will ensure that network pressures and the integrity of assets are maintained and therefore meets NGR 79(2)(c)(ii). ATCO stated that the project is also necessary to comply with a regulatory obligation or requirement and as a result meets NGR 79 (2)(c)(iii).
- Automated meter reading ([redacted] million) – will enable remote meter locking for identified customers to meet retailers' isolation expectations and safety for personnel attending a site. ATCO considered that this project meets NGR 79(2)(c)(i) to improve the safety of services and as the project enables ATCO to meet the majority of its compliance obligations against the AEMO market procedures it therefore meets NGR 79(2)(c)(iii).

478. ATCO noted that the investment drivers are to reduce emergency management risk and improve the operation of the gas network. The ability to remotely control equipment and resolve issues will enable ATCO to make better use of its assets and extend asset life.

479. In addition, ATCO stated that by increasing remote monitoring of assets and improving its data capture, its staff can be deployed more efficiently during emergencies as well as being able to optimise investments in capacity upgrades or asset replacement due to the greater visibility of asset condition.

480. EMCa noted that for the emergency risk management driver for the SCADA systems and infrastructure, ATCO is proposing expenditure to improve the response time for an event with a 'remote' frequency of occurrence (1:1,000 years to 1:100,000 years) or 'hypothetical' frequency (1:1,000,000 million years or lower), depending on the location of the pipeline.

481. As, discussed in the security of supply section above, EMCa did not consider that ATCO's assessment of 'high' risk from a pipeline loss of containment event is adequately substantiated and considered the overall risk to be Intermediate at most and therefore subject to the as *low as reasonably practicable test*.

482. ATCO noted the Net Present Value (NPV) for this project is $0.9 million, however, analysis of the NPV model revealed a number of concerns including the assumed benefits in the NPV analysis appear greater than described in the business case, no basis for the capital expenditure values provided and the present value breakeven period for the project is 35 years, well in excess of the 10 year economic asset life of SCADA and other infrastructure.

483. ATCO considered two alternatives to its preferred option. The first was developing its current data acquisition infrastructure to enhance remote control capability but this had a higher capital cost and lower NPV than the preferred option. The second alternative was to continue with current monitoring with remote isolation only which would incur [redacted] million in capital expenditure but had a negative NPV.

484. The ERA has reviewed ATCO's proposal and the advice from EMCa on the risk profile of the project. The ERA is not satisfied that the assessed risk by ATCO of 'high' is justifiable along with the NPV analysis which does not provide sufficient justification for the proposed expenditure.

485. The ERA is not satisfied that the proposed SCADA and systems infrastructure expenditure of [redacted] million, which includes [redacted] million of IT expenditure for a network digitisation and intelligence program, meets the criteria of rule 79 of the NGR to be treated as conforming capital expenditure.

486. ATCO stated that the enhanced data acquisition expenditure will ensure compliance with the Gas Standards Regulations and AS4645.1:2008 and ensure critical high pressure pipeline corrosion mitigation controls are functional to reduce the risk of asset deterioration to as low as reasonably practicable. ATCO also claimed that a tangible benefit will also be a reduction in uncounted for gas from 2025 onwards.

487. The expenditure for the enhanced data acquisition is linked to the SCADA infrastructure ATCO proposed installing in 2020 as reviewed above. ATCO has assessed the current and residual risk for the options presented to be Intermediate.

488. EMCa considered there is inadequate justification for the risk to be rated 'intermediate' and considered a rating of 'low' is more reasonable, in which case all options presented by ATCO would have a low or negligible rating. EMCa also considered that there are likely to be more cost-effective approaches to acquiring data to provide the benefits outlined by ATCO.

489. The ERA considers that ATCO has been overly conservative with its risk profile and assessed the risk at an 'intermediate' level and also that this work is linked to the expenditure for SCADA systems and infrastructure.

490. As the ERA has not accepted the SCADA systems and infrastructure expenditure proposed by ATCO in AA5, the enhanced data acquisition project which relies on the SCADA systems and infrastructure project being undertaken to work, is not viable and is considered by the ERA to not be conforming capital expenditure under rule 79 of the NGR.

491. ATCO has proposed to spend [redacted] million over the AA5 period to install automated meter reading device enabled meters (mainly domestic), different meter types (with in-built remote communication) or data acquisition (telemetry and communications) on existing metersets, over a 10 year trial period.

492. ATCO has assessed the risk for the project as negligible and has estimated a positive NPV for the project of $0.1 million, which appears to include the tangible benefit of reduced operating expenditure beginning in 2025.

493. ATCO noted that the key driver for this expenditure was that customers' preference for natural gas is being eroded over time by limited metering options, restricting developers' installation options and customers' ability to manage their future energy mix.

494. EMCa noted that it was not clear what new information would be gained from the trial that cannot be gleaned from other trials and studies undertaken from around the world.

495. The ERA has reviewed ATCO's proposed expenditure and is not satisfied that the detail provided in the business case is sufficient to support the project expenditure. The ERA does not consider on the basis of the current information that this project meets the criteria of rule 79 of the NGR for inclusion in the projected capital base.

Parmelia Gas Pipeline interconnection projects

496. ATCO proposes to spend $13.5 million to interconnect with the Parmelia Gas Pipeline (PGP) at two locations, being Forrestfield and Rockingham, to reduce what ATCO assesses to be an Intermediate risk of the loss of supply from the Dampier to Bunbury Natural Gas Pipeline (DBNGP).

497. ATCO has sought to justify the expenditure under Rule 78 (2)(c)(ii) in that the capital expenditure is necessary to maintain the integrity of services. ATCO proposes to spend [redacted] million on the Forrestfield interconnection and [redacted] million on the Rockingham interconnection.

498. ATCO's 'intermediate' risk rating for the Forrestfield interconnection is based on a frequency of 'hypothetical' and a consequence of 'catastrophic' due to the predicted loss of supply to 220,000 customers, resulting in 4 million customer weeks lost. This is based on ATCO's assumption of it taking 257 days to restore all customers.

499. EMCa reviewed ATCO's documentation and considered that ATCO's assessment of 4 million customer weeks lost is overstated. However, EMCa did accept that if ATCO's analysis that 220,000 customers do lose supply from the 'hypothetical' event, it is likely that the customer weeks lost would be greater than 100,000 and therefore rated as 'catastrophic'. As a result, EMCa considered ATCO's overall risk rating of 'intermediate' as reasonable.

500. ATCO considered two other network options in its business case being no action and for ATCO to build, own and maintain the gate station with APA operating it. The second option is more expensive than ATCO's preferred option which is based on APA maintaining and operating the gate station. The 'no action' option is not considered acceptable to ATCO as it does not address the risk of losing up to 220,000 customers as a result of a DBNGP failure for Forrestfield and 92,000 customers for Rockingham.

501. EMCa, however, did not consider that ATCO properly applied the *as low as reasonably practicable test* to demonstrate that the proposed expenditure satisfies, for either project, the capital expenditure criteria.

502. ATCO did plan in the AA4 period to undertake five interconnections with the PGP but will complete only one, having deferred two into the AA5 period (Forrestfield and Rockingham) and the remaining two interconnections beyond 2024.

503. The ERA has reviewed the proposed PGP interconnection expenditure for Forrestfield and Rockingham and is not satisfied that the expenditure is prudent and efficient based on the information provided. The ERA is not satisfied that the as low as reasonably practicable test has been applied properly to justify the expenditure.

504. As a result the ERA does not consider that any of the $13.5 million of proposed expenditure for PGP interconnections meets the criteria to be included in the projected capital base.

Other network sustaining capital expenditure projects and programs

505. ATCO has proposed to spend $9.2 million on inline inspection work in the AA5 period. ATCO identified seven pipelines to undergo internal inspection to detect steel defects, six of which will require modifications to enable the internal inspection. The modification is necessary to enable the pipeline inspection gauge to be safely introduced and removed from the pipeline without obstruction.

506. ATCO claimed the expenditure satisfies NGR 79(2)(c)(i), with the capital expenditure to maintain the safety of services by improving ATCO's ability to detect potential pipeline leakage locations, especially the locations that are currently inaccessible to direct current voltage gradient (DCVG) surveys.

507. ATCO also noted that the expenditure meets NGR 79(2)(c)(ii) because inline inspection provides the ability to detect an entire suite of pipeline anomalies to effectively maintain the integrity of services. ATCO claimed that the scope of the project ensures it can demonstrate compliance with AS2885 and therefore meets NGR 79(2)(c)(iii) as well.

508. ATCO has an obligation under AS2885 to demonstrate high-pressure pipeline structural integrity. EMCa noted an alternative to inline inspection is excavation and direct inspection at locations where DCVG surveys indicate defects. However, EMCa noted that relying on DCVG surveys alone is not good industry practice.

509. EMCa also noted that inline inspection is consistent with good industry practice and that the nominated pipelines are due for inspection. In addition, the cost estimate is based on similar work undertaken in the AA4 period.

510. ATCO's proposed expenditure is intended to maintain both the safety and integrity of services and to comply with its obligation under AS2885. ATCO's chosen method to undertake the work by using inline inspection is regarded as good industry practice and that the cost build up has been based on the most recent cost for this type of work which was undertaken in the AA4 period.

511. The ERA considers this expenditure to be consistent with that which would be incurred by a prudent service provider acting efficiently, in accordance with good industry practice at the lowest sustainable cost and approves the proposed expenditure as conforming under rule 79.

Table 56: ERA's amended conforming network Sustaining capital expenditure (AA5) ($ million real as at 31 December 2019)

Capital Expenditure – Network Sustaining	2020	2021	2022	2023	2024	Total
ATCO proposed conforming capital expenditure	56.9	53.3	55.8	57.6	52.5	276.1
PVC mains replacement	-2.6	-3.0	-3.3	-3.5	-3.9	-16.3
Meter replacement program	-0.2	-0.2	-0.3	-0.3	-0.4	-1.3
End of life replacement program	-0.1	-0.2	-2.7	-0.2	-0.2	-3.4
Security of supply projects	-15.0	-3.8	-3.8	-15.1	-11.3	-49.0
SCADA projects	-2.5	-2.5	-2.5	-2.5	-2.6	-12.6
PGP interconnection projects	-1.3	-7.4	-4.8	0.0	0.0	-13.5
Other network sustaining projects	-0.1	-0.1	-0.1	-0.1	0.0	-0.4
ERA amended conforming capital expenditure	**35.1**	**36.2**	**38.4**	**35.8**	**34.1**	**179.6**

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019. Some numbers may not add due to rounding.

Growth capital expenditure

512. ATCO forecast growth capital expenditure for AA5 of $174.3 million. ATCO's growth capital expenditure is driven by the number of new customers it expects to connect to the network in AA5. Based on its demand forecast, ATCO expects to connect 81,000 new domestic customers and 2,300 commercial customers during the AA5 period.

513. ATCO stated its growth capital expenditure satisfies rule 79(2)(b) of the NGR, in that the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the expenditure.

514. To justify the proposed expenditure, ATCO provided Net Present Value (NPV) models for both greenfield and brownfield connections of B2 and B3 customers. The greenfield model included a total capital cost of $144.5 million in which ATCO calculated an NPV of $18.7 million using a 50 year period, with a payback period of 37 years.

515. For AA5 brownfields proposed capital expenditure, ATCO has determined a total capital cost of $11.5 million with an NPV of $0.9 million using a 50 year period and a payback period of 24 years.

516. ATCO has provided no information as to why it has chosen an analysis period of 50 years in assessing the NPV's of the greenfield and brownfield growth expenditure. A 50 year NPV period is a very long period of time to forecast with any certainty.

517. The ERA has maintained ATCO's 50 year period when assessing ATCO's NPV models but would expect ATCO in its response to the Draft Decision to provide some further explanation as to why such a long period of time has been chosen to assess the proposed AA5 greenfield and brownfield growth expenditure.

518. The ERA reviewed ATCO's NPV models for greenfield and brownfield growth expenditure in AA5 and considers that the following amendments are necessary to the NPV models:

- The tariff used in the model should be an extrapolated cost reflective calculation of the prevailing tariff in 2019;
- The discount rate - Weighted Average Cost of Capital (WACC) parameters - should be that used in the tariff variation for 2019;
- The labour cost escalation should be applied to the labour portion of operating and capital costs over the 50 year analysis period;
- The B2 and B3 usage volumes should take into account the downward trend in gas usage by customers.

519. Each of these amendments is explained below.

Tariff

520. ATCO used its AA5 proposed tariff values in its NPV models. However, under rule 79(4)(a) of the NGR, 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.

521. ATCO's proposed tariff values are not consistent with the NGR. The prevailing tariffs would usually be the most appropriate value to use in the model. However, due to the timing of AA4 resulting in an interval of delay and the requirement to implement a smooth tariff path, the current prevailing tariff (2019) for ATCO under-recovers the cost of service for 2019.

522. Rule 79(4)(a) of the NGR, allows for an extrapolation from the prevailing reference tariff to be used. The ERA considers that under the circumstances noted above, as the prevailing tariff is not close to or representative of the cost of service, an extrapolated value should be used to ensure that a fair and accurate evaluation of capital expenditure can occur under rule 79 of the NGR.

523. The ERA has calculated, for each customer class, an extrapolated prevailing tariff value that results in tariff revenue in 2019 equalling the cost of service in 2019, using the 2019 tariff variation parameters. The ERA has used these extrapolated prevailing tariffs to calculate the NPV of growth capital expenditure.

524. The difference between the prevailing tariff and the extrapolated cost-recovery prevailing tariff is set out in Table 57 below:

Table 57: Comparison of 2019 prevailing tariff and the ERA extrapolated cost-recovery prevailing tariff

	2019 prevailing tariff	2019 cost-recovery tariff
B2 Tariffs		
Fixed Charge	226.74	297.43
Usage <= 100 GJ	5.77	7.57
Usage > 100 GJ	3.44	4.51
B3 Tariffs		
Fixed Charge	116.84	116.92
First 1.825 GJ	0.00	0.00
Usage >1.825 <= 9.855 GJ	4.89	9.96
Usage > 9.855 GJ	2.11	4.30

Discount rate

525. Under rule 79(4)(c) of the NGR, when determining the present value of expected incremental revenue, a discount rate is to be used equal to the rate of return implicit in the reference tariff.

526. As the ERA has amended the tariffs used in the NPV models to a 2019 cost reflective tariff, the ERA has also amended the WACC parameters, including the discount rate, to be the values used in the 2019 tariff variation process in order to be consistent and comply with the NGR.

Labour cost escalation

527. While both of ATCO's NPV models include escalation of operating and capital expenditure for inflation, neither includes any escalation for the increase in the cost of labour above inflation (real cost of labour) in the future years of the analysis period.

528. The ERA considers that a robust NPV model would include the best forecast of revenue and expenditure and would include an allowance for costs to increase above the rate of inflation where appropriate. This is required by rule 74 of the NGR.

529. Based on historical evidence and current short term forecasts, growth in the cost of labour has generally exceeded the rate of inflation. In past access arrangement periods, ATCO has proposed, and the ERA has included, an escalation factor for the real cost of labour.

530. ATCO proposed that growth in the cost of labour will again be above the rate of inflation during AA5 and included a 1.64 per cent per year escalation to the labour portion of its operating and capital expenditure forecasts. The ERA has calculated and considers that in the AA5 period, ATCO's labour costs will be required to be escalated above the rate of inflation in order for ATCO to recover its expenditure based on historical trends and forecasts over the AA5 period.

531. With historical and short term forecasts showing evidence that growth in the cost of labour will exceed the rate of inflation, it is reasonable to forecast that in the years beyond the AA5 period, the cost of labour will continue to increase above the forecast rate of inflation.

532. ATCO itself has included an average growth rate of 1.25 per cent in its forecast capital expenditure model for labour escalation for the AA6 period (2025 to 2029). Although it has not used this rate to escalate any of its forecast expenditure during the AA5 period (it uses a rate of 1.64 per cent during AA5), it shows that ATCO predicts that growth in the cost of labour will continue to exceed the rate of inflation in the years after AA5.

533. Since the ABS first published a Wage Price Index (WPI) series in 1998, growth in the WPI for Western Australia has averaged around 1 per cent more than growth in the CPI. The Australian Treasury's Intergenerational Report in 2015, which forecasts out 40 years, expected wages to increase by 1.5 per cent above inflation over the long term.

534. The ERA considers that a labour escalator of 1.25 per cent is a reasonable forecast to evaluate the greenfield and brownfield growth connection NPV models. The ERA has applied this labour escalator to the labour portion of both operating and capital expenditure in each of the models.

535. For operating costs, the labour escalation has been applied to 62 per cent of the operating costs which is the proportion that ATCO has used in its AA5 proposed operating costs model.

536. For capital expenditure, as the expenditure relates to meters and service pipes, the ERA has calculated the labour component of ATCO's AA5 proposal for the asset category of meters and service pipes. The labour portion of meters and service pipes in ATCO's proposal is 78.8 per cent. Labour escalation has been applied to capital expenditure using the 78.8 per cent split in the revised models.

Gas consumption

537. The ERA has reviewed ATCO's assumptions on the volumes of gas used per customer per year for B2 and B3 customers in its NPV models. ATCO has assumed that volumes for both customer classes will remain steady over the 50 year period with only minimal reductions in both.

538. For B2 customers at the end of AA5, ATCO has assumed usage of 89.7 GJ, which decreases to 88.5 GJ over the AA6 period. Over the following 40 years ATCO has assumed that B2 customers will decrease down to 88.2 GJ, a reduction of 0.3 GJ over the 40 year period.

539. For B3 customers, ATCO has assumed that once a customer reaches their peak usage in their third year after joining the network, a customer will either remain at that peak or reduce slightly by up to 0.03 GJ and then stay at that usage level to the end of the analysis period of 50 years.

540. Based on the current trend in customer demand for gas, as discussed in the demand section of this draft decision, the ERA does not agree with ATCO's assumption that customer volume usage will remain constant for the 50 year NPV analysis period.

541. For B2 customers, the ERA has included a reduction to the volumes per customer per year of 0.5 per cent, compared to the weighted average reduction rate of

1.4 per cent for volume per connection between 2010 and 2017. The ERA considers that this is a conservative estimate of the reduction in volume per customer given the recent trend. The 0.5 per cent reduction starts in year 2027 to allow for customers connected in 2024 to reach their peak volume usage before applying the volume reduction.

542. For B3 customers, the same 0.5 per cent reduction has been factored in to the NPV models, starting in 2025 for customers who connect in 2020 to 2022 and a 0.5 per cent reduction begins in 2026 for customers connecting in 2023 and 2027 for customers connecting in 2024. This allows customers to reach their peak or 'mature' usage before applying the volume reduction. The assumed reduction rate of 0.5 per cent is relatively moderate, compared to the average reduction of 5.5 per cent per year for new customer 'mature' consumption between 2010 and 2017.

543. ATCO in its models assumed a consumption floor amount for B3 customers of 8 GJ a year. For the purpose of this draft decision, the ERA has kept this consumption floor amount of 8 GJ in place. The average B3 consumption for customers connecting in the AA5 period reaches the floor consumption of 8 GJ by 2053.

Summary

544. Applying the amendments set out above to the greenfield and brownfield NPV models results in the greenfield model having a negative NPV of $14.2 million over the 50 year period. Applying the amendments to the brownfield model results in a negative NPV of $1.7 million over the 50 year period.

545. The reason why the NPV capital expenditure growth models for AA5 are now negative is in part due to ATCO's proposed changes to key assumptions and the ERA's corrections to the models to ensure compliance with the NGR. ATCO's NPV modelling assumptions for growth capital expenditure for the AA4 period resulted in a positive NPV. ATCO's assumptions in its AA5 growth capital expenditure NPV models were significantly different from those used in its AA4 growth capital expenditure NPV model. The corrections result in different assumptions about consumption per customer, connection costs and incremental operating expenditure. The following is a summary of the key differences:

- ATCO assumed a considerably lower consumption per B3 connection than it applied to its AA4 growth NPV model. This reflects the declining trend in consumption per B3 connection since AA4. The lower consumption results in lower tariff revenue for these customers, reducing the revenue and therefore reducing the NPV.
- ATCO used higher connection costs in its AA5 NPV model compared to its AA4 NPV model. For example, ATCO assumed a weighted average of [redacted] per B3 connection for meters and services, compared with [redacted] in its AA4 model. Higher connection costs increase the incremental cost and reduce the NPV.
- ATCO applied higher incremental operating cost assumptions in its AA5 NPV model compared to its AA4 model. For example, ATCO assumed an incremental operating cost of [redacted] per customer per year for the AA5 period, compared with [redacted] per customer per year during AA4. This reflects a change to the method used to calculate the incremental operating expenditure. ATCO provided its workings for the AA5 method which were robust.

546. The ERA has carefully analysed the information provided to it by ATCO and has determined that it is not able to approve the proposed levels of forecast growth capital expenditure for inclusion in the AA5 total revenue and tariffs. The ERA considers

that the information it has been provided does not demonstrate that the requirements of the NGR and the NGO have been met. The ERA expects that ATCO in its response to this draft decision will need to reconsider the level of growth capital that can be demonstrated to meet the NGR requirements and the NGO.

547. The ERA considers that a prudent service provider would not undertake non-conforming capital expenditure of this magnitude without users paying either a capital contribution or a surcharge to ensure that existing customers were no worse off. There are other mechanisms under the NGR that ATCO could consider in its response to the draft decision, including rule 84 in seeking that any amount of non-conforming capital expenditure would be added to a 'speculative capital expenditure account' which increases each year by the rate of return and is rolled back into the capital base if it can be later proved to be conforming capital expenditure.

548. Without the reasonable use of other mechanisms in the NGR described above to treat an amount of non-conforming capital expenditure, the ERA does not consider that it is in the long term interests of consumers (the NGO) to approve a partial amount that may meet rule 79(2)(b). On the basis of the information before the ERA the forecast does not comply with rule 74 of the NGR in that it has not been arrived at on a reasonable basis.

Discounted weighted average tariff analysis

549. The ERA undertook separate analysis using a discounted weighted average tariff (DWAT) approach to confirm the NPV results discussed above.

550. The ERA calculated the DWAT for:[174]

- Existing customers
- Existing customers with the addition of new greenfield customers
- Existing customers with the addition of brownfields customers

551. Table 58 shows the DWAT for each scenario.

Table 58: Discounted weighted average tariff ($/GJ)

	Discounted Weighted Average Tariff ($/GJ)
Existing Customers	8.28
Existing and greenfield customers	8.67
Existing and brownfield customers	8.30

Source: ERA calculations

552. The DWAT analysis confirms the NPV results presented above in this draft decision. As the DWAT is higher under the scenarios with greenfield or brownfield customers connected, the existing customers would pay more than if these customers were not connected.

[174] ERA, Confidential DWAT modelling, April 2019.

553. The intent of rule 79(2) of the NGR is that new customers must at least not cause existing customers to pay more unless there is also a regulatory or safety of services benefit for the capital expenditure.

554. Based on the information provided by ATCO and reasonable assumptions made by the ERA for a 50 year period, the ERA cannot approve the greenfield or brownfield connection capital expenditure under the NGR as conforming capital expenditure. The main reasons are the greenfield and brownfield capital and operating expenditure is higher per GJ than for the existing customers. The consumption per customer for existing customers (around 13.5 GJ per customer) is higher than the consumption per new customer (around 9.5 GJ per customer), meaning that for a given level of expenditure, the expenditure per GJ for new customers is higher.

555. The DWAT formula and an outline of the assumptions used by the ERA are in Appendix 6.

Other growth capital expenditure

556. ATCO proposed $1.7 million for six network reinforcement projects in the AA5 period. ATCO state that analysis of forecast new connections, coupled with hydraulic modelling of the gas network, has identified several expansion projects that will be required to maintain capacity during AA5. These include capacity upgrades to regulating facilities and mains extensions that maintain gas supply.

557. ATCO has sought to justify this expenditure under rule 79(2)(b) of the NGR in that the economic evaluation shows that the present value of the expected incremental revenue to be generated as a result of the expenditure, exceeds the present value of the expenditure.

558. The $1.7 million of network reinforcement expenditure has been included by ATCO in the greenfields and brownfields NPV calculation models. As set out above, the greenfield and brownfield models as amended by the ERA result in a negative NPV and the growth related expenditure has not been deemed conforming capital expenditure.

559. As a result of not approving any greenfield or brownfield growth expenditure, the ERA has also determined that the network reinforcement project expenditure does not meet the criteria of rule 79(2)(b) of the NGR for inclusion in the projected capital base.

560. ATCO has proposed two growth-related meter projects being $10.7 million for customer initiated commercial (CIC) metersets and $0.7 million for AL18 meters in AA5.

561. The CIC meterset connection project covers meter installations larger than AL18 and ATCO forecasts connection of [redacted] CIC metersets in the AA5 period. The forecast provided by ATCO show a reducing number of connections over the AA5 period with a forecast of 62 occurring in 2020 down to 49 in 2024. This downward connection trend is forecast to continue in AA6 with connections forecast to be down to 44 in 2028.

562. EMCa has reviewed the information provided by ATCO and is satisfied based on the information provided that it is prudent expenditure.

563. The AL18 meters are meter connections that are customer-initiated standard installations that form part of the variable volume activities. ATCO has proposed connecting 22 new AL18 meters a year. ATCO forecast a consistent connection of

22 new AL18 meters a year despite noting in its asset lifecycle management document that the forecast for commercial connections is decreasing for light commercial connections (B2 tariff).[175]

564. EMCa reviewed the information provided by ATCO and was not satisfied based on the information provided that all of the proposed expenditure on AL18 meter installations is prudent expenditure.

565. The ERA has reviewed the supporting information provided by ATCO and the analysis from EMCa and is satisfied that the $10.7 million for CIC metersets expenditure complies with rule 79 of the NGR and can be considered conforming capital expenditure.

566. The ERA is not satisfied that the total proposed expenditure for AL18 meter connections is the best forecast for the AA5 period as required by rule 74 of the NGR. With the ERA removing greenfield and brownfield growth expenditure and ATCO noting that light commercial connections are decreasing, maintaining a consistent connection rate of 22 meters a year for AA5 and AA6 does not appear to be the best forecast.

567. For the purpose of this draft decision, the ERA has determined that AL18 meter connections should decrease over the AA5 period and that only half of the $0.7 million of the AL18 meter connection program is likely to satisfy the NGR criteria to be conforming capital expenditure.

568. ATCO has proposed $10.4 million in growth development expenditure in the AA5 period. This expenditure would be offset by capital contributions of $7.6 million.

569. Growth development expenditure is for the cost to connect subdivisions far away from the existing gas network. ATCO forecasts that a large capital contribution would be required to fund these assets to achieve a positive project NPV. Only the net capital expenditure would be added to the capital base.

570. Growth development expenditure is in addition to the separate cost to connect the customer once the gas infrastructure has reached the developed land. The costs of connection of the customer were considered above and the ERA found that there was a negative NPV of undertaking that investment. As a result, there is not a positive NPV as ATCO has assumed for the connection expenditure which could be used to offset some of the $10.4 million in growth development expenditure.

571. This would mean that developers would have to fund the entire $10.4 million cost as well as contributing to the connection of each customer to have the project become NPV positive. Alternatively, ATCO could fund the investment as non-conforming expenditure. As a result, there would be no conforming capital expenditure for growth development which complies with rule 79 of the NGR.

572. Even if the developer or ATCO funded the entire cost, there would still be a shortfall for the connection costs of greenfields customers which would need to be funded by a further capital contribution.

[175] ATCO, Asset Lifecycle Strategy Metering Facilities, Attachment 12.5 0 ATCO 2020-2024 plan, 31 August 2018.

573. ATCO has proposed two other growth-related projects in AA5. The first is for $1.3 million for meter upgrades to respond to customer initiated requests. This has been forecast based on historical volume and unit rates.

574. The ERA is satisfied that the $1.3 million for meter upgrades complies with rule 79 of the NGR and can be considered conforming capital expenditure.

575. The second project is $2.8 million over AA5 for sub-meter to master-meter conversions, which are described as customer initiated. EMCa requested ATCO to identify the documentation to support the proposed expenditure, but insufficient information was provided by ATCO in its response to form a view that the proposed expenditure is prudent and efficient.

576. The ERA also has found that insufficient information is available on the sub-meter to master-meter conversion project to satisfy the criteria for inclusion as conforming capital expenditure. As a result, the ERA determines that the $2.8 million for sub-meter to master-meter conversion project does not met the criteria for inclusion in the projected capital base.

Table 59: ERA's amended conforming network growth capital expenditure (AA5) ($m real as at 31 December 2019)

Capital Expenditure – Network Growth	2020	2021	2022	2023	2024	Total
ATCO proposed conforming capital expenditure	33.8	34.1	34.9	35.0	36.5	174.3
Greenfield and Brownfield connections	-28.5	-29.8	-30.9	-32.0	-33.3	-154.3
AL18 commercial meters	-0.1	-0.1	-0.1	-0.1	-0.1	-0.3
Network reinforcement	-1.0	-0.1	-0.5	0.0	-0.1	-1.7
Growth development	-3.1	-3.2	-2.7	-2.1	-2.1	-13.2
(Capital contributions)	1.5	1.5	1.5	1.5	1.5	7.5
ERA amended conforming capital expenditure	**2.6**	**2.4**	**2.3**	**2.3**	**2.4**	**12.1**

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019. Some numbers may not add due to rounding.

Structures and equipment capital expenditure

577. ATCO has forecast structures and equipment capital expenditure for AA5 of $22.8 million, split between the following categories:

- $16.4 million for fleet
- $6.4 million for facilities, plant and equipment.

578. ATCO states the forecast structures and equipment capital expenditure for both fleet and facilities, plant and equipment, satisfies rule 79(2)(c)(ii) of the NGR to maintain and improve the safety of services and maintain the integrity of services.[176]

579. ATCO's AA5 expenditure forecast is 43 per cent less than the last five years of AA4, primarily due to less depot-related work. The proposed fleet capital expenditure is dominated by age-based replacement at $14.8 million with the balance of $1.6 million being growth-driven.

580. The facilities, plant and equipment forecast expenditure of $6.5 million is also largely age-based replacement expenditure.

581. The ERA has reviewed ATCO's proposed AA5 structures and equipment capital expenditure. As the ERA's draft decision determined above that most of ATCO's proposed growth related expenditure does not satisfy the NGR as conforming capital expenditure, the fleet expenditure related to increased demand from growth of the network is also not conforming capital expenditure.

582. The ERA considers that $1.6 million of the proposed fleet expenditure does not satisfy the requirements of NGR 79 to be considered conforming capital expenditure.

583. The ERA is satisfied that the remaining $21.2 million of proposed structures and equipment capital expenditure meets the requirements of rule 79 of the NGR and can be considered conforming capital expenditure.

Table 60: ERA's amended conforming structures and equipment capital expenditure (AA5) ($m real as at 31 December 2019)

Capital Expenditure – structures and equipment	2020	2021	2022	2023	2024	Total
ATCO proposed conforming capital expenditure	5.3	6.0	3.2	4.1	4.3	22.8
Fleet – Growth related	-0.6	-0.3	-0.2	-0.4	-0.1	-1.6
ERA amended conforming capital expenditure	**4.7**	**5.7**	**3.0**	**3.7**	**4.2**	**21.2**

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019. Some numbers may not add due to rounding.

Information technology capital expenditure

584. ATCO proposed to spend $36.1 million on information technology (IT) capital expenditure in AA5:

- $2.9 million for energised and responsive customer engagement
- $1.3 million for network digitization and intelligence
- $2.0 million for asset management and service delivery excellence
- $4.9 million for enterprise and employee enablement
- $24.9 million for application renewal.

[176] ATCO, Access Arrangement Information, p. 114-115.

585. ATCO stated that its forecast IT capital expenditure is justified under a number of sections of rule 79(2) of the NGR. ATCO has provided a table in the access arrangement information that sets out which section of rule 79(2) of the NGR each proposed IT program meets. A copy of this table is shown below (Figure 13).

Figure 13 ATCO Proposed IT Capital Expenditure compliance with NGR 79

NGR 79	ENERGISED & RESPONSIVE CUSTOMER ENGAGEMENT	NETWORK DIGITISATION & INTELLIGENCE	ASSET MGT & SERVICE DELIVERY EXCELLENCE	ENTERPRISE &EMPLOYEE ENABLEMENT	APPLICATION RENEWAL
(2)(a) Economic value.	Yes	**Yes**	Yes	Yes	N/A
(2)(b) Incremental revenue vs present value of capex.	N/A	N/A	N/A	N/A	N/A
(2)(c)(i) Safety of services.	Yes	Yes	Yes	**Yes**	Yes
(2)(c)(ii) Integrity of services.	Yes	Yes	**Yes**	Yes	Yes
(2)(c)(iii) Regulatory obligation.	Yes	N/A	Yes	Yes	Yes
(2)(c)(iv) Meeting demand.	**Yes**	N/A	Yes	Yes	**Yes**

Source: ATCO, Access Arrangement Information, 31 August 2018, Table 12.13, p. 112.

586. ATCO's proposed AA5 IT capital expenditure of $36.1 million is $5.9 million more than its actual/forecast expenditure for the five and a half years of AA4.

587. EMCa has reviewed ATCO's proposal and notes that ATCO has provided five business cases to support the five programs listed in ATCO's expenditure proposal. EMCa also notes that the business cases provided have not been through ATCO's designated capital expenditure governance process.

588. EMCa noted that whilst ATCO's IT strategy provides the context for the upgrade work, it is of the opinion that the quality of the business case information would fall well short of that which would be required to justify the expenditure in most cases.

589. EMCa found in one or more instances in the business cases that:

- Only one option other than the preferred approach is presented and it is a 'no action' option.
- The claimed safety, reliability, productivity, and efficiency benefits are largely vague, unsubstantiated qualitative statements.
- Cost estimates are preliminary and engagement with vendors is only in the preliminary stages.

590. EMCa reviewed ATCO's IT Asset Strategy document and noted that it provided sufficient information to support the case for at least considering each of the recommended projects and how they fit within ATCO's information technology and operational technology systems. However, being strategy documents, EMCa was of the opinion they do not provide sufficient justification for individual programs of work.

591. The ERA determined in the assessment of network sustaining capital expenditure section of the draft decision (above) that a reduction is required to ATCO's proposed SCADA expenditure. As a result, the IT expenditure for network digitisation and

intelligence, which is linked with the network sustaining SCADA expenditure, is not justified under NGR 79 and is required to be removed from ATCO's proposed AA5 IT expenditure.

592. The ERA has reviewed ATCO's proposed AA5 IT expenditure and notes EMCa's analysis that the business cases provided by ATCO appear to have all been prepared specifically for the AA5 process and have not been subject to the rigour and review that the ERA would expect a board to require before providing approval to progress.

593. EMCa concluded from its review that, with the exception of the network digitisation and intelligence project, there is a reasonable case for the identified projects progressing in one form or another. However, as the cost and timing of the projects is far from certain, EMCa considered that a 20 per cent reduction to the balance of the proposed IT expenditure would better represent a level of expenditure that is likely to be prudent and efficient.

594. EMCa considered this reduction is more representative of efficient expenditure on the basis of future progressive refinement of the business cases and cost estimates and that a rigorous portfolio level review of the corporate risk of trying to deliver so many projects in a five year period, will lead to less expenditure being required in the AA5 period.

595. Most of the AA5 IT expenditure in its proposed state does not meet the criteria under Rule 79(1) of the NGR in that it would achieve the lowest sustainable cost of providing the services set out. The ERA also notes EMCa's opinion that, while the cost and timing are uncertain, there is a reasonable case for ATCO to undertake the work at some point in the AA5 period or beyond.

596. While removing all IT expenditure from ATCO's AA5 proposal due to the limited information and costings provided is an option available to the ERA in the Draft Decision, the ERA considers this would be an unrealistic outcome as ATCO will require some level of capital expenditure for IT in the AA5 period.

597. For the purpose of this draft decision, the ERA has determined that an across-the-board reduction of 20 per cent will apply to the remaining proposed AA5 IT capital expenditure after excluding the network digitisation and intelligence project. The ERA considers this reduction reflects a better forecast of IT expenditure once ATCO further progresses its business cases and reviews the IT portfolio expenditure programs.

598. The ERA has determined that $26.8 million of IT expenditure will be treated as conforming capital expenditure for the purpose of this draft decision, but it still requires additional supporting information from ATCO to satisfy rule 79 of the NGR for the purpose of the final decision.

599. The ERA requires ATCO to provide additional information in its response to this draft decision to justify its AA5 IT expenditure proposed costs.

Table 61: ERA's amended conforming information technology capital expenditure (AA5) ($m real as at 31 December 2019)

Capital Expenditure – information technology	2020	2021	2022	2023	2024	Total
ATCO proposed conforming capital expenditure	7.4	8.8	6.4	5.5	8.0	36.1
Network digitisation and intelligence	-0.2	-0.2	-0.4	-0.4	-0.2	-1.3
Energised and responsive customer engagement	-0.3	-0.2	-0.1	-0.1	0.0	-0.7
Asset management and service delivery excellence	-0.1	-0.1	-0.1	-0.1	-0.1	-0.5
Enterprise and employee enablement	-0.3	-0.3	-0.3	-0.2	0.0	-1.1
Application renewal	-0.9	-1.3	-0.9	-0.8	-1.8	-5.7
ERA amended conforming capital expenditure	**5.7**	**6.8**	**4.7**	**4.0**	**6.1**	**26.8**

Equity Raising Cost

600. Equity raising costs reflect the direct transaction costs of raising equity. Equity is assumed to be raised to fund a capital investment program and is used to maintain the benchmark gearing assumption adopted.

601. The ERA has provided an allowance for equity raising costs in the capital expenditure building block. Equity raising costs are capitalised and incorporated into capital expenditure allowances, which are then recovered overtime. Equity raising costs do not form part of the rate of return.

602. ATCO proposed to continue the equity raising cost method adopted in AA4. This method estimates equity raising costs based on the following assumptions:[177]

- Retained earnings of 30 per cent of after-tax profits will be available to increase equity at zero cost.
- Dividends will be assumed to be paid at the benchmark payout ratio of 70 per cent of after-tax profits.
- 25 per cent of dividends paid out will be treated as being reinvested through dividend reinvestment plans, with an equity raising cost allowance of 1 per cent.
- Any further required equity is raised at the seasoned equity offering cost of 3 per cent.

603. ATCO proposed that equity raising costs are capitalised into the regulatory asset base and recovered over 53 years (based on the weighted average economic life of the

[177] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, pp. 136-137.

regulatory asset base as at 1 January 2020).[178] Depreciating the equity raising costs based on the weighted average economic life of the regulatory asset base is the same method used during AA4. The ERA considers this a reasonable basis to recover the equity raising costs as the calculation of equity raising costs is not tied to funding one asset category over another.

604. To determine whether equity funding is required the formula below is used. If the equity required is less than zero then equity raising is not required.

Equity Required = capital expenditure - debt component of the capital expenditure - (retained cash flow – dividend payout + dividend reinvestment)

605. The equity raising cost is the sum of external equity raising cost and dividend reinvestment cost. When equity raising costs are greater than zero they are capitalised, otherwise the equity raising cost is zero.

606. ATCO has calculated that no equity will need to be raised and therefore no equity raising costs will be required over AA5.[179]

607. The ERA supports the continuation of the equity raising cost method adopted in AA4.

608. The ERA has confirmed that equity required is less than zero and equity raising costs are zero.

Required amendments

609. Following the assessment of ATCO's proposed conforming AA5 capital expenditure, the ERA has determined that:

- $239.8 million (47.1 per cent of ATCO's proposed expenditure) complies with the criteria set out in rule 79 of the NGR and can be included in the projected capital base for AA5.
- $269.5 million (52.9 per cent of ATCO's proposed expenditure) does not comply with the criteria set out in rule 79 of the NGR and should not be included in the projected capital base for AA5.

610. The ERA has determined that $239.8 million of ATCO's capital expenditure in AA5 is conforming capital expenditure:

- $179.7 million for network sustaining capital expenditure
- $12.1 million for network growth capital expenditure
- $26.8 million for IT capital expenditure
- $21.2 million for structures and equipment capital expenditure

611. Table 62 shows the ERA's amended conforming capital expenditure for AA5 by project driver.

[178] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 137.

[179] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 136.

Table 62: ERA's amended conforming capital expenditure by AA5 project driver ($ million real as at 31 December 2019)

	2020	2021	2022	2023	2024	Total
ATCO proposed conforming capital expenditure (a)	**103.3**	**102.2**	**100.4**	**102.2**	**101.2**	**509.3**
Sustaining amendments	-21.8	-17.1	-17.4	-21.8	-18.4	-96.5
Growth amendments	-31.2	-31.7	-32.6	-32.7	-34.1	-162.3
Structures and equipment amendments	-0.6	-0.3	-0.2	-0.4	-0.1	-1.6
Information technology amendments	-1.7	-2.1	-1.8	-1.6	-2.1	-9.2
Total proposed reductions (b)	**-55.2**	**-51.2**	**-52.0**	**-56.4**	**-54.7**	**-269.6**
Equity raising costs (c)	0.0	0.0	0.0	0.0	0.0	0.0
ERA amended conforming capital expenditure (by project) (a+b+c)	**48.1**	**51.0**	**48.3**	**45.8**	**46.6**	**239.7**

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019. Some numbers may not add due to rounding.

612. Table 63 breaks down the ERA's amended conforming capital expenditure for AA5 by asset class.

Table 63: ERA's amended conforming capital expenditure by AA5 asset class ($ million real as at 31 December 2019)

Asset Class	2020	2021	2022	2023	2024	Total
High pressure mains - steel	2.7	1.9	4.1	2.5	0.5	11.7
High pressure mains – polyethylene (PE)	0.0	0.0	0.0	0.0	0.0	0.0
Medium and low pressure mains	21.7	24.5	23.8	22.9	23.3	116.3
Regulators	0.4	0.4	0.7	0.4	0.2	2.1
Secondary gate stations	0.1	0.1	0.1	0.1	0.1	0.3
Buildings	0.7	0.3	0.2	0.0	0.0	1.2
Meter and services pipes	12.2	11.0	11.1	11.4	11.5	57.2
Equipment and vehicles	0.9	0.9	1.0	1.0	1.0	4.7
Vehicles	3.0	4.4	1.7	2.6	3.1	14.8
Information Technology	5.8	6.8	4.7	4.0	6.1	27.4
Telemetry	0.8	0.9	0.8	0.8	0.8	4.1
Land	0.0	0.0	0.0	0.0	0.0	0.0
Equity raising costs	0.0	0.0	0.0	0.0	0.0	0.0
ERA amended conforming capital expenditure by asset class	48.3	51.1	48.3	45.6	46.5	**239.8**

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019. Some numbers may not add due to rounding.

613. Table 64 shows the ERA's amended values for calculating the projected capital base for AA5.

614. The *straight-line method* is the depreciation method used for calculating the depreciation on ATCO's regulatory asset base for AA4. The current cost accounting approach is consistent with the criteria under rule 89(1) of the NGR, and complies with the NGL (see the depreciation chapter of this draft decision on page 143).

Table 64: ERA's amended projected capital base for AA5 ($m real as at 31 December 2019)

	2020	2021	2022	2023	2024
Opening capital base	1,271.1	1,274.3	1,271.9	1,266.9	1,259.0
Plus: Capital expenditure	48.3	51.1	48.3	45.6	46.5
Less: Depreciation	45.1	53.5	53.9	53.9	54.5
Less: Asset disposals	0.0	0.0	0.0	0.0	0.0
Closing capital base	**1,274.3**	**1,271.9**	**1,266.3**	**1,258.0**	**1,250.1**

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019. Some numbers may not add due to rounding.

615. Table 65 shows the ERA's amended values for calculating the projected capital base for AA5 in nominal dollars.

Table 65: ERA's amended projected capital base for AA5 ($m nominal)

	2020	2021	2022	2023	2024
Opening capital base (start of period)	1,271.1	1,296.1	1,315.8	1,332.3	1,346.3
Inflation	21.7	22.2	22.5	22.8	23.0
Opening capital base (end of period)	1,292.8	1,318.3	1,338.3	1,355.1	1,369.3
Plus: Capital expenditure	49.1	52.8	50.8	48.8	50.6
Less: Depreciation	45.8	55.3	56.7	57.7	59.3
Less: Asset disposals	0.0	0.0	0.0	0.0	0.0
Closing capital base	**1,296.1**	**1,315.8**	**1,332.3**	**1,346.3**	**1,360.7**

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019. Some numbers may not add due to rounding.

Required Amendment 8

ATCO must amend the projected capital base (nominal) to reflect the values set out in Table 65 of this draft decision.

Return on the Regulatory Capital Base

Rate of return

Requirement to produce guidelines

616. The rate of return, based on the Weighted Average Cost of Capital (WACC), provides for a return on the regulatory asset base.

617. Rule 87 of the NGR requires the ERA to make and publish rate of return guidelines. The guidelines must set out:

- The methodologies that the ERA proposes to use in estimating the allowed rate of return.
- The estimation methods, financial models, market data and other evidence the ERA proposes to take into account in estimating the return on equity, the return on debt and the value of imputation credits referred to in rule 87A.

2018 guideline review

618. The ERA was required to complete its first review of the (2013) rate of return guidelines by December 2018.

619. Draft updated guidelines and a draft explanatory statement were published on 29 June 2018 for public comment. The ERA considered submissions received on the draft guidelines before making and publishing final updated guidelines. ATCO provided submissions throughout the review.

620. The 2018 guideline review has allowed the ERA to assess its approach to setting the rate of return for covered gas pipeline access arrangements. Final guidelines and explanatory statement were published on 18 December 2018.

621. Where relevant, as a means of illustration, the ERA set out current indicative estimates of the rate of return and associated parameters in the guidelines. However, the specific values arising from the application of the ERA's approach to estimating the rate of return will be determined at each access arrangement review, by applying the approaches set out in the rate of return guidelines.

622. Further information about the rate of return guidelines and relevant documents can be obtained from the ERA's website.

Application of the guidelines

623. The Council of Australian Governments' Energy Council has developed a framework for binding rate of return guidelines.[180] The new rate of return rules have been gazetted in the South Australian government gazette and the rate of return guidelines have become a binding instrument in Western Australia.[181]

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[180] COAG Energy Council, *Binding Rate of Return Guideline*, October 2017, available at: www.coagenergycouncil.gov.au/publications/binding-rate-return-guideline

AER, *Consultation paper: Process for reviewing the rate of return guidelines*, Commonwealth of Australia, July 2017, p. 7.

[181] *National Gas Access (WA) (Act Amendment) Regulations 2019*, Government Gazette, WA, 5 April 2019, pp. 1009-1010.

624. The ERA or service providers may not depart from the guidelines when reviewing an access arrangement.

625. ATCO acknowledged that the rate of return guidelines were to become binding:[182]

> We expect to adopt the ERA's updated Rate of Return Guidelines to determine the rate of return for AA5 once it is finalised later in 2018. The updated guidelines are expected to be binding on both ATCO and the ERA. We anticipate that the necessary legislative changes to implement the binding Rate of Return Guidelines will be gazetted by December 2018.

ATCO's proposal

626. ATCO's proposal was submitted in September 2018, prior to the release of the final gas rate of return guidelines in December 2018.

627. ATCO's proposed estimate of the rate of return was 6.03 per cent (vanilla nominal after-tax) and was based on the methods and values detailed in the ERA's draft rate of return guidelines (with some exceptions) and market data to the end of 29 March 2018. Table 66 details the individual rate of return components estimated by ATCO for AA5 compared to the existing rate of return components for AA4.

[182] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 126.

Table 66: ATCO's rate of return estimate

Component	AA4 Actual*	AA5 Proposed
Return on debt		
5-year interest rate swap (effective yield)	2.430%	2.590%
Debt Risk Premium (DRP) (10-year average)	2.605%	2.267%
Debt issuing cost + hedging	0.24%	0.214%
Nominal return on debt	*5.275%*	*5.07%*
Return on equity		
Nominal risk-free rate	1.96%	2.37%
Market Risk Premium (MRP)	7.50%	6.90%
Equity beta	0.7	0.7
Nominal return on equity	*7.21%*	*7.20%*
Other parameters		
Debt proportion	60%	55%
Inflation rate	1.90%	1.84%
Corporate tax rate	30%	30%
Franking credit	0.25	0.34
Nominal after-tax WACC	**6.05%**	**6.03%**
Real after-tax WACC	4.07%	4.11%

* Based on 2018 debt risk premium values

Source: ATCO, 2020-24 Plan (Access Arrangement Information), pp. 129-130, Table 14.3.

628. While ATCO used the draft rate of return guidelines to determine the rate of return for AA5, ATCO did not accept the ERA's draft rate of return guidelines for the following components:

- Debt risk premium - ATCO considered that the guidelines needed to be modified to include sufficient detail to allow for a mechanical calculation.
- Market risk premium - ATCO did not accept the draft guidelines and submitted that the market risk premium should be determined mechanically by applying equal weight to the dividend growth model and arithmetic mean of the historical market risk premium to derive the point estimate of the market risk premium.
- Gamma (tax imputation credits) - ATCO did not accept the draft guidelines and supported the adoption of the Australian Taxation Office's tax statistics as the best and most direct estimate of gamma.

629. ATCO expected to adopt the ERA's updated rate of return guidelines to determine the rate of return for AA5 once it was finalised in 2018.

Submissions

630. No public submissions addressed the rate of return.

Draft decision

631. In determining the 2018 rate of return guidelines, the ERA considered all available information including ATCO's AA5 proposal, ATCO's submissions throughout the rate of return guideline review process, other public submissions and expert reports.

632. The ERA's considerations of the rate of return can be found in the ERA's rate of return guidelines explanatory statement.[183]

633. The rate of return guidelines have now become a binding instrument in Western Australia.[184]

634. This draft decision is consistent with the 2018 gas rate of return guidelines.

Overall rate of return approach

635. The rate of return, based on a WACC, provides a service provider with a return on the capital it has invested in its business.

636. The NGR require the ERA to adopt a 'nominal vanilla' WACC to develop the rate of return for the benchmark efficient entity.[185]

637. A vanilla WACC does not include any adjustment for tax impacts, such as the effect of imputation credits on the rate of return. The impact of tax on the returns must be accounted for separately, as an explicit deduction from the relevant cash flows. A vanilla WACC is therefore a 'post-tax' framework.

638. The ERA will adopt a WACC for a benchmark efficient entity in its simplest 'vanilla' form, expressed as:

$$WACC_{vanilla} = E(r_e)\frac{E}{V} + E(r_d)\frac{D}{V}$$

where

$E(r_e)$ is the expected return on equity

$E(r_d)$ is the expected return on debt

E/V is the proportion of equity in total financing (comprising equity and debt)

[183] ERA, Final Gas Rate of Return Guidelines Explanatory Statement, 18 December 2018.

[184] *National Gas Access (WA) (Act Amendment) Regulations 2019*, Government Gazette, WA, 5 April 2019, pp. 1009-1010.

[185] National Gas Rules 87(4).

D/V is the proportion of debt in total financing.

Return on debt approach

639. The estimate of the return on debt is based on a risk premium over and above the risk free rate, combined with an additional margin for administrative costs:

Return on debt = risk free rate + debt risk premium + debt raising costs + hedging costs

Risk free rate (debt)

640. The risk free rate is the return an investor would expect when investing in an asset with no risk.

641. The interbank rate can represent a risk free rate for the purposes of debt financing. Though interbank lending has a cost above that of Commonwealth Government Securities used to calculate the cost of equity, the use of the interbank rate is equivalent to using a Government Security and separately adjusting the debt risk premium. For the purposes of determining the cost of debt the use of the interbank rate is more convenient for businesses and regulators. The ERA therefore considers the five-year bank bill swap rate as a proxy for the risk free rate when calculating the cost of debt.

642. The ERA has used the 20-day averaging period to 30 November 2018 as placeholder. The final decision will be updated for ATCO's final averaging period.

643. For this draft decision the ERA estimates a risk free rate for the cost of debt of 2.537 per cent for the 20-day averaging period to 30 November 2018.

Debt risk premium

644. The debt risk premium is the return above the risk free rate that lenders require to compensate them for the risk of providing debt funding to a benchmark business. The debt risk premium compensates holders of debt securities for the possibility of default by the issuer.

645. The ERA's approach to estimating the debt risk premium involves the following steps:

- Step 1: Determining the benchmark sample – identifying a sample of relevant corporate bonds that reflect the credit rating of the benchmark efficient entity.
- Step 2: Collecting data and converting yields to Australian dollar equivalents – converting the bond yields from the sample into hedged Australian dollar equivalent yields inclusive of Australian swap rates.
- Step 3: Averaging yields over the averaging period – calculating an average Australian dollar equivalent bond yield for each bond across the averaging period.
- Step 4: Estimating curves – estimating yield curves on this data by applying the Gaussian Kernel, Nelson-Siegel and Nelson-Siegel-Svensson techniques.
- Step 5: Estimating cost of debt – calculating the simple average of their three yield curves' 10-year cost of debt to arrive at a market estimate of the 10-year cost of debt.

- Step 6: Calculating the debt risk premium – calculating the debt risk premium by subtracting the 10-year interest rate swap rate from the 10-year cost of debt.

646. These steps determine the debt risk premium at a point in time, being the date of calculation. The ERA refers to this method as the 'revised bond yield approach'. The ERA's revised bond yield approach uses international and domestic BBB+ bonds – identified by Bloomberg as having Australia as their country of risk – to estimate the cost of debt each year.

647. To determine the debt risk premium used to calculate the rate of return, the ERA constructs a 10-year trailing average debt risk premium. This will consist of a debt risk premium for the current year and a debt risk premium for each of the nine prior years. The 10-year trailing average debt risk premium is updated each year.

648. The detailed process for the debt risk premium is provided in the 2018 gas rate of return guidelines explanatory statement.[186]

649. The following table details ATCO's trailing average debt risk premium. Historic annual debt risk premium estimates are unchanged. The current year is updated for the averaging period of 30 November 2018, as a placeholder.

Table 67: ERA estimated trailing average debt risk premium for ATCO AA5 draft decision

Year	Debt risk premium (%)
2011	2.371
2012	3.172
2013	3.068
2014	2.250
2015	1.953
2016	2.467
2017	2.326
2018	1.689
2019	1.663
2020	1.577
Trailing average debt risk premium	**2.254**

** Debt risk premium estimate for 20-day averaging period to 30 November 2018, as a placeholder.*

650. For the draft decision the ERA estimates a trailing average debt risk premium of 2.254 per cent for the 20-day averaging period to 30 November 2018.

Debt raising and hedging costs

651. Debt raising costs and hedging costs are the administrative costs and other charges incurred by businesses when obtaining and hedging finance.

[186] ERA, Final Gas Rate of Return Guidelines Explanatory Statement, 18 December 2018, Chapter 10.

652. The ERA provides for the recovery of direct debt financing costs and considers that an allowance of 0.100 per cent for debt raising costs appropriate.

653. The ERA also provides for the recovery of an annual swap allowance of 0.114 per cent to compensate for the cost of conducting hedging for exposure to movements in the risk free rate.

Return on equity approach

654. The return on equity is the return that investors require from a firm to compensate them for the risk they take by investing their capital.

655. There are no readily observable proxies for the expected return on equity. While estimates of the cost of debt can be obtained by observing debt instruments, financial markets do not provide a directly observable proxy for the cost of equity, for either individual firms or for the market as a whole.

656. Estimating a forward-looking return on equity – sufficient to enable regulated firms to recoup their prevailing equity financing costs – requires the use of models. Generally, these models seek to explain the required return on equity through a relationship with some portfolio of risk factors, or else in terms of the present value of the expected stream of future cash flows.

657. The model most used by Australian regulators for quantifying the return on equity and associated risk has been the Sharpe Lintner CAPM.

658. The ERA will determine a single point estimate for the return on equity using the Sharpe Lintner CAPM:

$$R_i = R_f + \beta_i \left(R_m - R_f \right)$$

where:

R_i is the required rate of return on equity for the asset, firm or industry in question

R_f is the risk free rate

β_i is the equity beta that describes how a particular portfolio i will follow the market which is defined as $\beta_i = \text{cov}\left(R_i, R_m\right) / \text{var}\left(R_m\right)$

$\left(R_m - R_f \right)$ is the market risk premium.

Risk free rate (equity)

659. The ERA will use observed yields from five-year Commonwealth Government Security bonds to estimate the risk free rate of return for the purpose of estimating the return on equity.

660. For this draft decision the ERA estimates a risk free rate for the cost of equity of 2.34 per cent for the 20-day averaging period to 30 November 2018.

Market risk premium

661. The market risk premium is the expected rate of return over and above the risk free rate that investors require to invest in a fully-diversified portfolio.

662. The market risk premium compensates an investor for the systematic risk of investing in a fully diversified portfolio. Systematic risk is risk that cannot be diversified away by investors because it affects all firms in the market.[187] Therefore, the market risk premium represents an investor's required expected return, over and above the risk free rate of return, on a fully diversified portfolio of assets. This is a forward-looking concept.

663. Consistent with the 2018 gas rate of return guidelines, the ERA has determined a market risk premium of 6.0 per cent.

Equity beta

664. Equity beta is the 'slope' parameter β_i in the Sharpe Lintner CAPM. The slope parameter β_i correlates the return on the specific asset, in excess of the risk free rate of return, to the rise and fall of the return on the market portfolio.

665. The equity beta is a parameter that measures the systematic risk of a security or a portfolio in comparison to the market as a whole.

666. Consistent with the 2018 gas rate of return guidelines, the ERA has determined an equity beta of 0.7.

Gearing

667. Gearing is the proportion of a business's assets assumed to be financed by debt and equity. Gearing is defined as the ratio of the value of debt to total capital (that is, including debt and equity) and so is generally expressed as follows:

$$Gearing = \frac{Debt}{Debt + Equity}$$

668. This ratio is used to weight the costs of debt and equity when the regulated WACC is determined.

669. Under the NGR, the allowed rate of return for a regulatory year should be a weighted average of the return on equity for the access arrangement period in which that year occurs and the return on debt for that year.[188]

[187] The foundation of the Sharpe Lintner CAPM is the proposition that adding an asset to a portfolio reduces risk via the diversification effect but not beyond the risks that the assets in a portfolio share in common, that is, their systematic risk. At the limit, when one has invested in all available assets in the market portfolio, there is only systematic risk left. An important assumption of the CAPM is that assets are priced as though it is only their systematic risk that is relevant to investors.

[188] National Gas Rules 87(4).

670. Consistent with the 2018 gas rate of return guidelines, the ERA has determined a gearing of 55 per cent.

Inflation

671. Inflation is the rate of change in the general level of prices of goods and services.

672. Forecast inflation can be used to translate the nominal post-tax WACC to a real post-tax WACC.

673. A nominal rate of return incorporates the real rate of return, compounded with a rate that reflects expectations of inflation. In line with the requirements of the NGR, the ERA will use a nominal vanilla rate of return for its decisions.[189]

674. The ERA will estimate the expected inflation rate using the Treasury bond implied inflation approach.

675. This approach uses the Fisher equation[190] and the observed yields of:

- Five-year Commonwealth Government Securities, which reflect a market-based estimate of the nominal risk free rate.
- Five-year indexed Treasury bonds, which reflect a market-based estimate of a real risk free rate.

676. The ERA will estimate the expected inflation rate consistent with the estimate of the risk free rate by adopting an averaging period of 20 trading days.

677. The approach uses linear interpolation to derive the daily point estimates of both the nominal five-year risk free rate and the real five-year risk free rate, for use in the Fisher equation.[191] The term of the resulting average expected inflation rate is five years, consistent with the length of the access arrangement period.

678. For this draft decision the ERA estimates a forecast inflation of 1.71 per cent as at the 20-day averaging period to 30 November 2018.

Value of imputation credits (gamma)

679. The NGR require the ERA to set out its approach to estimating the value of imputation credits (gamma), a parameter in the post-tax revenue model.

680. The imputation tax system prevents corporate profits from being taxed twice. Prior to the introduction of imputation on 1 July 1987, company profits were taxed once at the corporate level and again at the dividend recipient level (for example, as personal income tax). Under the Australian imputation tax system, franking credits are distributed to investors at the time dividends are paid and provide an offset to those investors' taxation liabilities.

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189 National Gas Rules 87(4).

190 The formal Fisher equation is: $1+i=(1+r)(1+\pi^e)$

where: *i* is the nominal interest rate, *r* is the real interest rate and π^e is the expected inflation rate.

191 It is not common to observe a CGS bond with an expiry date that exactly matches that of the regulatory period end. To overcome this, two bonds are selected that fall on either side of the end day of the regulatory period. The dates on these bonds are referred to as the 'straddle' dates. Linear interpolation estimates the yields on the regulatory period end date by assuming a linear increase in yields between the straddle dates on the two bonds observed.

681. The gamma parameter accounts for the reduction in the effective corporate taxation that is generated by the distribution of franking credits to investors. As a general rule, investors who are able to utilise franking credits will accept a lower required rate of return, before personal tax, on an investment that has franking credits, compared with an investment that has similar risk and no franking credits.

682. The ERA determines gamma through the Monkhouse formula as the product of the distribution rate and utilisation rate. The distribution rate and utilisation rate are separately estimated.

683. The distribution rate represents the proportion of imputation credits generated by a benchmark efficient entity that is expected to be distributed to investors. The ERA considers that the distribution rate is a firm-specific rather than a market-wide parameter.

684. In estimating the distribution rate, the ERA relies on 0.9 for the distribution rate from financial reports of the 50 largest ASX-listed firms.[192]

685. The ERA considers that the distribution rate is at least 0.9. As detailed by Lally, the three energy network businesses for which data is available produce a higher distribution rate of one. Addressing the problems of limited available data and ability for firm manipulation, the ERA considers the use of the 50 largest ASX listed firms as the best proxy for the distribution rate for the benchmark efficient entity. Lally also found that the distribution rate may be slightly higher with the removal of foreign operations.[193]

686. The utilisation rate is the weighted average over the utilisation rates of individual investors, with investors able to fully use the credits having a rate of one and those unable to use them having a rate of zero. The ERA considers that the utilisation rate is a market-wide rather than a firm wide parameter.

687. To estimate the utilisation rate, the ERA relies on the equity ownership approach to determine the percentage of domestic investors in the Australian equity market. The utilisation rate is estimated for all Australian equity from the national accounts of the Australian Bureau of Statistics. The ERA considers that an utilisation rate of 0.60 is appropriate.

688. Consistent with the 2018 gas rate of return guidelines, the ERA has determined a gamma of 0.5.

Weighted average cost of capital

689. Based on the 2018 gas rate of return guidelines and the above assessment, the point estimates for each of the parameters that the ERA considers are consistent with the National Gas Law, NGR and national gas objective are shown in Table 68 below.

- The ERA estimates the nominal after tax cost of equity as 6.54 per cent.
- The ERA estimates the nominal cost of debt of 5.01 per cent.
- The ERA's rate of return estimate is 5.70 per cent.

[192] Lally, M., *Estimating the Distribution Rate for Imputation Credits for the Top 50 ASX Companies*, October 2018, p. 4.

[193] Lally, M., *The Estimation of Gamma: Review of Recent Evidence*, December 2018.

690. The ERA uses a 20-day averaging period to 30 November 2018, as a placeholder. The final decision will be updated for ACTO's final nominated averaging period.

Table 68: ERA's draft decision rate of return estimate

Component	AA5 Proposed	Draft Decision
Averaging period	29 March 2018	30 November 2018
Return on debt		
5-year interest rate swap (effective yield)	2.59%	2.54%
Debt Risk Premium (DRP) (10-year average)	2.267%	2.254%
Debt issuing cost (0.100%) + hedging (0.114%)	0.214%	0.214%
Nominal return on debt	***5.07%***	***5.01%***
Return on equity		
Nominal risk-free rate	2.37%	2.34%
Market Risk Premium (MRP)	6.90%	6.00%
Equity beta	0.7	0.7
Nominal return on equity	***7.20%***	***6.54%***
Other parameters		
Debt proportion	55%	55%
Inflation rate	1.84%	1.71%
Corporate tax rate	30%	30%
Franking credit	0.34	0.5
Nominal after-tax WACC	**6.03%**	**5.70%**
Real after-tax WACC	4.11%	3.92%

691. Consistent with the rate of return guidelines, the return on debt will be updated annually, by updating the debt risk premium (which is estimated as a historical trailing average), and the reference tariff will be automatically updated.

Required Amendment 9

ATCO must amend its rate of return estimate to be 5.70 per cent (vanilla nominal after-tax).

Depreciation

692. Rule 88(1) of the NGR provides that the 'depreciation schedule sets out the basis on which the pipeline assets constituting the capital base are to be depreciated for the

purpose of determining a reference tariff'. Rule 88(2) of the NGR provides that the 'depreciation schedule may consist of a number of separate schedules, each relating to a particular asset or class of assets'.

693. Rules 89 and 90 of the NGR specify particular depreciation criteria and requirements for the calculation of depreciation for establishing the opening capital base for the subsequent access arrangement.

694. The depreciation criteria specified by rule 89 are as follows:

> **89 Depreciation criteria**
>
> (1) The depreciation schedule should be designed:
>
> (a) so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services; and
>
> (b) so that each asset or group of assets is depreciated over the economic life of that asset or group of assets; and
>
> (c) so as to allow, as far as reasonably practicable, for adjustment reflecting changes in the expected economic life of a particular asset, or a particular group of assets; and
>
> (d) so that (subject to the rules about capital redundancy), an asset is depreciated only once (ie that the amount by which the asset is depreciated over its economic life does not exceed the value of the asset at the time of its inclusion in the capital base (adjusted, if the accounting method approved by the AER permits, for inflation)); and
>
> (e) so as to allow for the service provider's reasonable needs for cash flow to meet financing, non-capital and other costs.
>
> (2) Compliance with subrule (1)(a) may involve deferral of a substantial proportion of the depreciation, particularly where:
>
> (a) the present market for pipeline services is relatively immature; and
>
> (b) the reference tariffs have been calculated on the assumption of significant market growth; and
>
> (c) the pipeline has been designed and constructed so as to accommodate future growth in demand.
>
> (3) The [ERA's] discretion under this rule is limited.

695. Rule 40(2) of the NGR sets out the ERA's limited discretion powers, effectively stating that where a provision of the NGL or NGR states that the ERA's discretion is limited, the ERA must not withhold its approval of an element of an access arrangement proposal if it is satisfied that the element complies with the applicable requirements of the NGL and the NGR and is consistent with applicable criteria (if any) prescribed by the NGL and the NGR.

696. Rule 40(2) of the NGR provides the following example:

> The [ERA] has limited discretion under rule 89. (See rule 89(3).) This rule governs the design of a depreciation schedule. In dealing with a full access arrangement submitted for its approval, the [ERA] cannot, in its draft decision, insist on change to an aspect of a depreciation schedule governed by rule 89 unless the [ERA] considers change necessary to correct non-compliance with a provision of the Law or an inconsistency between the schedule and the applicable criteria. Even though the [ERA] might

consider change desirable to achieve more complete conformity between the schedule and the principles and objectives of the Law, it would not be entitled to give effect to that view in the decision making process.

697. Rule 90 of the NGR specifies that a full access arrangement must contain provisions governing the calculation of depreciation for establishing the opening capital base for the next access arrangement period after the one to which the access arrangement currently relates. The provisions must resolve whether depreciation of the capital base is to be based on forecast or actual capital expenditure.

ATCO's proposal

698. ATCO proposed to use the straight-line method (i.e. a current cost accounting approach) to forecast depreciation of all assets for AA5. The straight-line method is also the depreciation method set out by ATCO's fourth access arrangement. ATCO has proposed total forecast depreciation of $294.3 million for AA5 (Table 69).

Table 69 ATCO's proposed forecast depreciation for AA5 ($m real as at 31 December 2019)

Asset categories	2020	2021	2022	2023	2024
High pressure mains – steel	3.5	3.7	3.8	3.9	4.1
High pressure mains – PE	0.1	0.1	0.1	0.1	0.1
Medium pressure mains	6.0	6.0	6.0	6.0	6.0
Medium and low pressure mains	10.2	10.8	11.3	11.9	12.5
Low pressure mains	1.4	1.4	1.4	1.4	1.4
Regulators	1.2	1.2	1.3	1.3	1.3
Secondary gate stations	0.2	0.5	0.7	0.8	0.7
Buildings	-	0.9	0.9	0.9	0.9
Meter and services pipes	20.9	22.3	23.6	25.0	26.5
Equipment and vehicles	2.0	2.0	2.0	1.8	1.3
Vehicles	-0.1*	1.4	1.8	2.0	2.3
Information technology	3.2	7.8	6.8	6.0	6.2
Telemetry and monitoring	-	0.3	0.7	1.0	1.3
Full retail contestability	-	-	-	-	-
Land	-	-	-	-	-
Equity raising costs	-	-	-	-	-
Total depreciation	**48.5**	**58.4**	**60.5**	**62.2**	**64.7**

* Due to clawback of over-depreciation of $0.9 million relating to 2015 capex.

Source: ATCO, 2020-24 Plan (Access Arrangement Information), p. 124, Table 13.5.

699. Table 70 shows the asset lives applicable for calculating depreciation for ATCO for AA4 and ATCO's proposed asset lives for AA5.

Table 70: ATCO AA4 asset lives and proposed AA5 asset lives

Asset categories	Economic Lives	
	AA4	AA5
Current and new asset categories		
HP mains - steel	80.0	80.0
HP mains - PE	60.0	60.0
Medium and low pressure mains	60.0	60.0
Regulators	40.0	40.0
Secondary gate stations	40.0	40.0
Buildings	40.0	40.0
Meter and services pipes	25.0	25.0
Plant and equipment	10.0	10.0
Vehicles	10.0	10.0
Information technology	5.0	5.0
Land	-	-
Equity raising cost	65.8	53.1
Telemetry	n/a*	10.0
Historical asset categories - no longer used for new capex		
Medium pressure mains	60.0	60.0
Low pressure mains	60.0	60.0
Full retail contestability (historical IT costs)	5.0	5.0

** Prior to AA5, telemetry was included in the information technology category.*

Source: ATCO, 2020-24 Plan (Access Arrangement Information), p. 123, Table 13.4

700. As shown in Table 70, the proposed asset lives for AA5 are the same as for AA4 except for the equity raising cost asset category. ATCO has stated that it has proposed to reduce the asset life of equity raising costs to align with the average life of assets at 31 December 2019, rather than 30 June 2014.

701. ATCO has proposed telemetry as a new asset category for AA5. The assets within the proposed telemetry asset category were included in the information technology asset category for the fourth access arrangement. ATCO has stated that it created the telemetry asset category due to an increased need for remote monitoring of its assets.

702. ATCO has proposed that the opening capital base for the sixth access arrangement period (AA6) will be calculated using AA5 forecast depreciation. This is the same approach set out by ATCO's fourth access arrangement.

Submissions

703. No submissions to the ERA addressed ATCO's proposed forecast depreciation for AA5.

Draft decision

704. The current cost accounting approach is to be used for calculating the depreciation on ATCO's regulatory asset base for AA5. The current cost accounting approach is consistent with the criteria under rule 89(1) of the NGR, and complies with the NGL. The current cost accounting approach:

- Promotes efficient growth in the market for reference services by allowing for efficient use of the Mid-West and South-West Gas Distribution Systems (GDS).
- Encourages efficient production and investment decisions by the service provider, thereby contributing to efficient growth in the market for reference services.
- Avoids price shocks for consumers when major assets reach the end of their effective life and are replaced.
- Ensures outcomes that are in the long-term interest of consumers with respect to price by avoiding subsidies between current and future consumers.

705. ATCO's proposal to include telemetry as a new asset category is, in principle, acceptable. Rule 89(1)(c) of the NGR specifies that the depreciation schedule should be designed so as to allow for adjustment reflecting changes in the expected economic life of a particular asset or group of assets. ATCO stated that the proposal for this new asset class was due to its increased need for remote monitoring of its assets, which has also driven its proposal to incur $12.6 million of capital expenditure during AA5 for supervisory control and enhanced data acquisition assets. Although this proposed capital expenditure has not been included as conforming capital expenditure in this draft decision, as discussed in paragraphs 479 to 498, the inclusion of the telemetry as a new category is accepted as being in line with rule 89(1)(c) of the NGR.

706. EMCa considered that the asset life of 25 years that ATCO has proposed for the meters and service pipes category is significantly different from the ranges of asset lives for meters and service pipes applied by other Australian utilities providers. EMCa stated that other utilities apply asset lives of 50 to 60 years for service pipes and 15 years for meters.[194] For the purposes of this draft decision, the ERA has not separated out the economic lives of meters and service pipes which have been combined in previous access arrangements. The ERA may consider this further for the final decision if interested parties raised valid arguments which would support this change being consistent with the NGO.

[194] Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* 15 January 2019, paragraphs 152 - 153.

707. Notwithstanding the further consideration to be given to the meters and service pipes category stated in paragraph 706, ATCO's proposed asset lives for the asset categories are in line with the requirements of rule 88 of the NGR and the criteria set by rule 89 of the NGR. The proposed asset lives will therefore be applied for this draft decision.

708. Table 71 shows the required depreciation amounts for AA5.

Table 71: ERA's forecast depreciation for AA5 ($m real as at 31 December 2019)

Asset categories	2020	2021	2022	2023	2024	AA5 Total
High Pressure Mains - Steel	3.48	3.52	3.54	3.59	3.62	17.75
High Pressure Mains - PE	0.06	0.06	0.06	0.06	0.06	0.28
Medium Pressure Mains	5.97	5.97	5.97	5.97	5.97	29.86
Medium / Low Pressure Mains	9.46	9.82	10.23	10.63	11.01	51.15
Low Pressure Mains	1.43	1.43	1.43	1.43	1.43	7.14
Regulators	1.18	1.19	1.20	1.21	1.22	6.00
Secondary Gate Stations	0.14	0.43	0.43	0.44	0.30	1.74
Buildings	-0.09	0.83	0.84	0.82	0.82	3.22
Meter and Services Pipes	20.02	20.51	20.95	21.40	21.85	104.74
Equipment & Vehicles	1.77	1.81	1.78	1.54	1.11	8.01
Vehicle	-0.13	1.31	1.75	1.91	2.18	7.02
Information Technology	1.76	6.48	5.55	4.64	4.53	22.97
Telemetry and Monitoring	0.00	0.08	0.17	0.25	0.32	0.82
FRC	0.00	0.00	0.00	0.00	0.00	0.00
Land	0.00	0.00	0.00	0.00	0.00	0.00
Equity Raising Cost	0.02	0.02	0.02	0.02	0.02	0.08
Total depreciation	45.06	53.46	53.91	53.90	54.45	260.79

Required Amendment 10

ATCO must amend its proposed depreciation schedule in accordance with Table 71 of this draft decision.

Taxation

709. One of the building blocks used to determine ATCO's total revenue requirement is the estimated cost of corporate income tax. Rule 87A of the NGR sets out the formula for calculating corporate income tax.

87A. Estimated cost of corporate income tax

(1) The estimated cost of corporate income tax of a service provider for each regulatory year of an access arrangement period (ETC_t) is to be estimated in accordance with the following formula:

$ETC_t = (ETI_t \times r_t)\ (1-\gamma)$

Where

ETI_t is an estimate of the taxable income for that regulatory year that would be earned by a benchmark efficient entity as a result of the provision of reference services if such an entity, rather than the service provider, operated the business of the service provider;

r_t is the expected statutory income tax rate for that regulatory year as determined by the [ERA]; and

γ is the *allowed imputation credits* for the regulatory year.

ATCO's proposal

710. ATCO's calculation of corporate income tax for AA5 is shown in Table 72. ATCO has submitted that its calculation uses the same method applied in AA4. It has estimated the cost of corporate income tax by multiplying its estimated taxable income by an assumed statutory income tax rate of 30 per cent, and then reducing this tax payable amount by the value of imputation credits.

Table 72: ATCO's calculation of corporate income tax ($m nominal)

	2020	2021	2022	2023	2024
Estimated taxable income	22.4	18.3	15.1	13.3	11.4
Tax payable (30 per cent)	6.7	5.5	4.5	4.0	3.4
Value of imputation credits	-2.3	-1.9	-1.5	-1.4	-1.2
Estimate of corporate income tax	**4.4**	**3.6**	**3.0**	**2.6**	**2.3**

Source: ATCO, 2020-24 Plan (Access Arrangement Information), p. 143, Table 15.6.

711. ATCO has estimated its taxable income as follows.[195]

Smoothed tariff revenue

plus revenue from prudent discounts

plus ancillary reference service revenue

minus approved forecast opex

minus depreciation of the tax asset base, excluding capital contributions (tax depreciation is applied on a straight-line basis)

minus debt servicing costs, calculated by multiplying the debt portion of the opening RAB by the debt to equity ratio (assumed at 60%) and the nominal hybrid trailing average cost of debt (based on the trailing average estimate of the debt risk margin, annually updated, plus the 'on the day' nominal risk-free rate)

[195] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 143.

equals estimated taxable income

712. ATCO has used a value of imputation credits (gamma) of 0.34.[196]

713. For depreciation of the tax asset base, ATCO has applied tax asset lives that are consistent with guidance provided by the Australian Taxation Office (ATO). For AA5, a new *telemetry* asset category has been added with a tax asset life of 10 years. ATCO has submitted:[197]

- The tax life of 10 years is consistent with the guidance from the Commissioner for Taxation in taxation ruling TR 2017/2 for the gas supply industry.
- The new telemetry category is needed given its increasing investment in telemetry and monitoring systems, including SCADA.[198]

714. ATCO has used the roll forward method to roll forward the value from the Tax Asset Base (TAB) from the closing value of the AA4 TAB into the AA5 period. Then to calculate the TAB in the AA5 period from 1 January 2020 to 31 December 2024, it has added forecast capital expenditure and deducted forecast depreciation.

715. Table 73 sets out ATCO's proposed TAB over the AA4 period and its closing AA4 balance to be rolled into the AA5 period. ATCO has determined a closing TAB value of $654.6 million (nominal) to be rolled forward as the opening value for the AA5 TAB.

Table 73: ATCO's proposed tax asset base (AA4) ($m nominal)

	2014	2015	2016	2017	2018	2019
Opening Tax Asset Base	467.17	483.08	502.51	527.08	544.73	566.91
Capital expenditure	38.97	68.18	76.83	70.10	73.62	77.39
Tax depreciation	(23.02)	(48.74)	(52.07)	(52.24)	(51.44)	(54.17)
Asset disposals	(0.04)	(0.01)	(0.19)	(0.21)	-	-
Closing Value	**483.08**	**502.51**	**527.08**	**544.73**	**566.91**	**590.12**

716. Table 74 sets out ATCO's calculation of the TAB for the AA5 period.

Table 74: ATCO's proposed tax asset base (AA5) ($m nominal)

	2020	2021	2022	2023	2024
Opening Tax Asset Base	654.6	697.7	736.5	771.9	807.7
Capital expenditure	105.3	106.0	106.0	109.9	110.9
Tax depreciation	(62.2)	(67.2)	(70.6)	(74.1)	(78.7)
Asset disposals	0.0	0.0	0.0	0.0	0.0
Closing Value	**697.7**	**736.5**	**771.9**	**807.7**	**839.9**

196 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 138.

197 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 141.

198 Supervisory Control and Data Acquisition.

Submissions

717. Alinta Energy supported the introduction of the new telemetry asset category with a tax asset life of 10 years. Alinta recognised there is increasing demand for enhanced flow measurement technologies.

718. AGL Energy noted the difficulties the AER has to identify the many causes for the difference between its efficient tax calculation and the statutory tax paid by different network owners to the ATO. AGL submitted that unless the ERA believed that ATCO was paying materially less tax than estimated in AA5, AGL did not support any fundamental changes to the treatment of tax. However, AGL encouraged the ERA to consider the AER's final positon on this matter when assessing ATCO's proposal.

Draft decision

Tax asset lives

719. For taxation purposes, the life of a depreciating asset can either be determined through self-assessment or by using an effective life determined by the Commissioner of Taxation.

720. Statutory caps on the effective lives of some assets were introduced from 1 July 2002. Capped asset lives are shorter than the effective lives determined by the Commissioner. If a taxpayer uses the Commissioner's determination to determine asset lives, they are required to use the capped life for an asset if it is shorter than the effective life in the Commissioner's determination.[199]

721. The Commissioner's determination TR 2018/4 establishes 20 year capped lives for some assets in the gas distribution industry.[200] The following table compares the tax asset lives proposed by ATCO, the effective asset lives determined by the Commissioner, and the capped asset lives.

[199] Australian Taxation Office, *Guide to depreciating assets 2018*, Canberra, June 2018, p. 12.

[200] Australian Taxation Office, *Income tax: effective life of depreciating asset*, TR2018/4, Gas supply (27000), 1 July 2018, p. 181.

Table 75: Comparison of tax asset lives (years)

Asset categories	ATCO AA5 proposed asset lives	Commissioner determined effective asset lives for the gas distribution industry	Capped asset lives for the gas distribution industry
High pressure mains - steel	20	50	20
High pressure mains - PE	20	50	20
Medium and low pressure mains	20	50	20
Regulators	40	40	20
Secondary gate stations	40	40	20
Buildings	40	NA	NA
Meter and service pipes	15	50 for service pipes 15 for meters	20 for service pipes NA for meters
Equipment and vehicles	10	NA	NA
Information technology	4	NA	NA
Telemetry	10	10 (control systems)	NA
Land	-	-	-
Equity raising cost	5	NA	NA

Source: ATCO, 2020-24 Plan (Access Arrangement Information), p. 141, Table 15.3. Australian Taxation Office, Income tax: effective life of depreciating asset, TR2018/4, Gas supply (27000), 1 July 2018, p. 181.

722. The ERA is aware that the AER has reviewed its approach to estimating the tax allowance in its regulatory determinations. The AER released its final report in December 2018.

- The AER considered the 20-year cap should be used when calculating the efficient tax costs of gas transmission and distribution assets, since it is prescribed in tax legislation. The AER noted that where the asset life was capped at 20 years, the shorter tax asset life front-loaded the depreciation and resulted in a depreciation deduction with higher Net Present Value (NPV) to the business.[201]
- The AER considered that it would expect a network service provider acting rationally to choose front-loaded depreciation on an NPV basis as this maximises the value of the investment by reducing the costs of taxation. In the AER's view, this would reflect the method that a benchmark efficient entity would select.[202]
- The AER noted that there were several options for introducing capped asset lives in its discussion paper. In its final report the AER recommended that the

[201] Australian Energy Regulator, *Review of regulatory tax approach 2018*, December 2018, p. 81.

[202] Australian Energy Regulator, *Review of regulatory tax approach 2018*, December 2018, p. 82.

> tax asset life cap should be applied only to new assets as this allows the affected networks to transition to the new benchmark.[203]

723. ATCO indicated that it applied tax asset lives to the tax asset base that were consistent with guidance provided by the ATO. It is not clear whether ATCO has self-assessed asset lives or has applied the Commissioner's determination. In any event, ATCO has not applied capped asset lives, which it would be required to do if using the Commissioner's determination.

724. ATCO has the option of self-assessing an asset life that is different to that established by the Commissioner's determination or the 20-year cap on certain gas distribution assets. However, the ERA is required by rule 87A of the NGR to estimate the taxable income that would be earned by a *benchmark efficient service provider* and therefore will not take into account any self-assessed asset life.

725. ATCO made a submission to the AER's discussion paper on its review of the regulatory tax approach in November 2018. ATCO's submission to the AER recognised that the tax law allowed a cap of 20 years to be adopted for certain gas distribution assets. ATCO considered that if the AER were to require the application of the 20 year cap that it should be applied only to new capital expenditure to avoid any unintended pricing effects.[204]

726. In its submission, ATCO included a table setting out its position on the issues raised in the AER's discussion paper, which showed that it accepted the AER's position on the capping of the tax lives for gas assets to 20 years.[205]

727. The ERA considers that a 20-year cap on certain distribution assets, for which ATCO had proposed longer asset lives, should be applied for the calculation of taxable income as required by rule 87A. A benchmark efficient entity would seek to minimise its tax payable through applying a 20-year cap which would maximise the NPV of its investment. The 20-year cap will only apply to new assets from 1 January 2020, with existing tax asset lives to continue for prior assets.

728. Accordingly, the ERA has revised the calculation of tax depreciation to use the statutory capped asset lives where these are shorter than the asset life suggested by ATCO. This will affect the regulators and secondary gate stations asset categories with all other categories either equal to or below the capped asset life.

729. The ERA accepts all of ATCO's other proposed asset lives which are consistent with the ERA's determination of asset lives in AA4. Table 76 below sets out the asset lives to be used by ATCO for existing and new capital expenditure.

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[203] Australian Energy Regulator, *Review of regulatory tax approach 2018*, December 2018, p. 83.

[204] ATCO, Submission to AER's Review of Regulatory Tax Approach - Discussion Paper, 23 November 2018, p. 8.

[205] ATCO, Submission to AER's Review of Regulatory Tax Approach - Discussion Paper, 23 November 2018, p. 1.

Table 76: ERA determined asset lives

Asset categories	ATCO asset lives for capital expenditure prior to 1 January 2020	ATCO asset lives for capital expenditure on or after 1 January 2020
High pressure mains - steel	20	20
High pressure mains - PE	20	20
Medium and low pressure mains	20	20
Regulators	40	20
Secondary gate stations	40	20
Buildings	40	40
Meters and service pipes to 31 December 2007	25	N/A
Meters and service pipes from 1 January 2008	15	15
Equipment and vehicles	10	10
Information technology	4	4
Telemetry	10	10
Land	-	-
Equity raising cost	5	5

Telemetry

730. ATCO has added a new asset category to the tax asset base in AA5 for telemetry, reflecting its increasing investment in telemetry and monitoring systems, including SCADA.

731. The ERA has considered guidance by the ATO, industry practice, and public submissions to come to a conclusion on whether to approve the proposed telemetry asset category with a 10-year asset life.

732. ATCO submitted that the tax asset life of 10 years proposed for the telemetry category was consistent with the guidance from the Commissioner for Taxation in taxation ruling TR 2017/2 for the gas supply industry.[206]

733. Taxation ruling TR 2017/2 was withdrawn effective 1 July 2018 and replaced by TR 2018/4. TR 2018/4 establishes a 10-year asset life for control systems (excluding computers) in the gas distribution sector of the gas supply industry.[207] This appears to be the category most relevant to telemetry, although the ERA notes that the ATO did not elaborate on what it includes in the control system category.

[206] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 141.

[207] Australian Taxation Office, *Income tax: effective life of depreciating asset*, TR2018/4, Gas supply (27000), 1 July 2018, p. 181.

734. "Control system" is a suitable description of the type of assets ATCO intends to include in the telemetry category. Telemetry projects proposed over the AA5 period include SCADA systems and infrastructure, enhanced data acquisition, and automated meter reading. ATCO notes:

> We rely on telemetry monitoring to provide information on network gas flow and pressure conditions. The information is used to optimise system performance and maximise safety.[208]

735. The use of a 10-year asset life for telemetry assets is consistent with the final decisions made by the AER in November 2017 for the 2018-2022 gas access arrangements for Multinet, AGN and AusNet. Multinet and AGN use SCADA as a category.[209,210] AusNet has a SCADA and remote control category.[211]

736. Alinta Energy, which was the only interested party that commented on this aspect of the access arrangement, supported the introduction of the telemetry asset category.

737. The ERA considers ATCO's proposed introduction of a telemetry asset category with a 10-year tax asset life is consistent with the guidance from the Commissioner for Taxation in taxation ruling TR 2018/4. The ERA also considers the inclusion of a telemetry asset category is consistent with what a benchmark efficient firm would include as part of its tax depreciation for the purposes of rule 87A of the NGR.

Depreciation method

738. ATCO used the straight-line method to calculate tax depreciation in its proposed access arrangement for AA4. In its draft decision for AA4, the ERA required ATCO to use the diminishing value method because this would be consistent with the behaviour of a benchmark efficient entity seeking to minimise its tax liabilities.

739. ATCO rejected the ERA's required amendment to apply the diminishing value method to depreciate the tax asset base. ATCO provided a report from Ernst & Young that concluded that there would be circumstances in which the diminishing value method would not result in overall minimisation of income tax liabilities.[212]

740. The ERA accepted ATCO's use of the straight-line depreciation method to depreciate new capital expenditure in the tax asset base in the final decision for AA4 because:

- ATCO provided evidence that it used the straight-line method of depreciation in its tax returns. ATCO had the incentive to select the most efficient tax depreciation method.

208 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 106.

209 Australian Energy Regulator, *Final Decision Multinet gas access arrangement 2018 to 2022, Attachment 8 – Corporate income tax*, November 2017, p. 7.

210 Australian Energy Regulator, *Final Decision Australian Gas Networks Victoria and Albury gas access arrangement 2018 to 2022, Attachment 8 – Corporate income tax*, November 2017, p. 7.

211 Australian Energy Regulator, *Final Decision AusNet Services gas access arrangement 2018 to 2022, Attachment 8 – Corporate income tax*, November 2017, p. 7.

212 Ernst & Young, *Review of the regulated tax asset base for regulated revenue purposes- addendum to the report of Vaughan Lindfield*, 21 November 2014.

- A benchmark efficient entity would choose a depreciation method that minimises tax liabilities over the life of an asset rather than a single regulatory period.[213]

741. The AER reviewed its approach to estimating the tax allowance in its regulatory determinations following its concerns about material differences between the regulatory forecast of tax costs for regulated electricity networks and gas pipelines and the actual tax payments made to the ATO by these regulated businesses.

742. The AER released a discussion paper in November 2018 that proposed adopting the diminishing value method of tax depreciation. The AER released its final report in December 2018 in which it confirmed its adoption of the diminishing value method for tax depreciation.[214]

743. The AER concluded in its final report that it would maintain the current regulatory tax depreciation method of straight-line for existing assets and apply the diminishing value method to all new assets and capital expenditure with the exception of assets qualified under section 40.72 of the *Income Tax Assessment Act 1997* which are required to be depreciated using the straight-line method.[215]

744. The AER considered it was reasonable to assume that a benchmark efficient entity would select the diminishing value tax depreciation approach because the faster depreciation under the diminishing value method meant that the regulated entity received more in net present value terms after accounting for the cost of capital.[216] A worked example by the AER in its discussion paper showed that the net present value of the tax depreciation over the life of a hypothetical asset was higher under the diminishing value method than the straight-line method when a rate was applied to reflect inflation and the time value of money (that is, the weighted average cost of capital).[217]

745. Similarly, the AER's consultant, Dr Martin Lally, supported the use of the diminishing value method because it was consistent with the NPV = 0 principle.[218] This principle requires that the present value of the revenue earned from an asset in a regulated environment in which output prices are set or capped must be equal to the initial investment to ensure that the total costs incurred are recovered.[219]

> …in respect of the use of Diminishing Value (DV) depreciation by businesses rather than the Straight Line (SL) method used by the AER, the former is superior in present value terms for any asset life and discount rate because it front-loads the depreciation and this always raises the present value. So, adoption of this approach by the AER would reduce the allowed revenues of businesses to the level consistent with the NPV = 0 principle, which is in the long-term interests of consumers. Furthermore, the effect is material, there are no adverse incentive effects on businesses from doing so, and it is as simple for the

213 Economic Regulation Authority, *Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System*, 30 June 2015, p. 459.

214 Australian Energy Regulator, *Final Report*, *Review of regulatory tax approach 2018*, December 2018.

215 Australian Energy Regulator, *Final Report*, *Review of regulatory tax approach 2018*, December 2018, p. 73.

216 Australian Energy Regulator, *Final Report*, *Review of regulatory tax approach 2018*, December 2018, p. 76.

217 Australian Energy Regulator, *Review of regulatory tax approach 2018*, 2 November 2018, p. 66.

218 Dr M. Lally, *Tax payments versus the AER's allowances for regulated businesses*, 16 June 2018, p. 5.

219 Economic Regulation Authority, *Appendices to the Explanatory Statement for the Rate of Return Guidelines: Meeting the requirements of the National Gas Rules*, 16 December 2013, p. 1.

> AER to use DV as it is to use SL. So, there is a clear case for the AER to use DV for all firms.[220]

746. The AER also found that use of the diminishing value method is consistent with the actual practice of regulated entities that are not subject to the National Tax Equivalent Regime (non-NTER entities). Analysis by PwC of the tax fixed asset registers of network service providers found that non-NTER entities used the diminishing value approach for 60 per cent of assets by value.[221]

747. In its submission to the ERA's issues paper, AGL Energy advised that it did not support any fundamental changes to the treatment of tax unless the ERA believed that ATCO was paying materially less tax than it had estimated in AA5.[222]

748. The materiality of the differences between a regulated entity's actual tax liability and the tax liability calculated for regulatory purposes is not the determining factor in selecting a depreciation method. Actual tax liabilities and regulatory tax liabilities vary for many reasons, including because of the ownership structure of the regulated entity, the aggregated tax outcomes of the entity (which may include regulated and unregulated activities), and tax losses accrued in previous years.[223]

749. The objective is to try to set tax liabilities to reflect those of a *benchmark efficient entity*, rather than trying to match the actual tax liability of an entity. The ERA could simply adopt a tax pass through approach if the objective was to match the tax liability of an entity. The ERA agrees with the AER that a tax pass through approach would not be in the long term interests of consumers. The AER noted that:[224]

> The tax costs passed through to consumers would likely increase over time, as service providers would have no incentive to minimise their tax costs. This is a pervasive problem under any form of cost-plus regulation, and would result in consumers paying more than the efficient costs of providing electricity and gas.

750. ATCO[225] and its consultant, Ernst & Young[226] raised several arguments against adopting the diminishing value method of depreciation in response to the ERA's draft decision on AA4. The ERA addresses these arguments in the following paragraphs.

751. ATCO argued that it used the straight-line method to calculate depreciation for taxation purposes. ATCO submitted that it chose the straight-line method in the pre-tax regime when ATCO was subject to strong incentives to minimise its tax liability. ATCO considered those were the actions of a prudent and benchmark efficient entity and remain so in the future.[227]

752. The ERA accepted ATCO's use of the straight-line method for taxation purposes as a reason to continue to apply this method for regulatory purposes in AA4. The ERA

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220 Dr M. Lally, *Tax payments versus the AER's allowances for regulated businesses*, 16 June 2018, p. 5.

221 Australian Energy Regulator, *Review of regulatory tax approach 2018*, 2 November 2018, p. 67.

222 AGL Energy Ltd, Submission to the ERA issues paper, 14 November 2018, p. 4.

223 Australian Energy Regulator, *Review of regulatory tax approach 2018*, 2 November 2018, pp. 12 - 14.

224 Australian Energy Regulator, *Review of regulatory tax approach 2018*, 2 November 2018, pp. 17.

225 ATCO Gas Australia, *Response to ERA Draft Decision on Required Amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System*, 27 November 2014, pp. 237-238.

226 Ernst & Young, *Review of the regulated tax asset base for regulated revenue purposes – addendum to the report of Vaughan Lindfield*, 27 November 2014, pp. 4-6.

227 ATCO Gas Australia, *Response to ERA Draft Decision on Required Amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System*, 27 November 2014, p. 237.

no longer considers this argument to be sufficient. As discussed (at paragraph 749), the ERA is not using a tax pass-through approach and so there is no requirement to adopt the method applied by ATCO for tax purposes. Instead, the focus should be on applying a method that sets NPV = 0.

753. ATCO also argued that applying the diminishing value method would result in an amount of depreciation that would remain un-deducted and which could not be recovered unless the asset was sold.[228] The ERA acknowledges this would be the case, but notes that a regulated entity would still be better off using the diminishing value method for taxation purposes because it results in a higher net present value for tax depreciation than the straight-line method.

754. ATCO further argued that it could not apply a different method to future assets in the nature of improvements or alterations because taxpayers cannot change the depreciation method for assets to which it has already applied a particular method. The diminishing value method could only apply to new assets identified to not be improvements or alterations to existing assets or else ATCO would not be able to recover efficient asset costs.[229]

755. The application of the diminishing value method in the regulatory decision would not prevent ATCO from continuing to use the straight-line method to existing assets for taxation purposes, consistent with the requirements of tax law. In making a determination on the depreciation method to be applied, the ERA is making a determination on the most applicable method to a benchmark efficient entity and is not seeking to replicate or determine ATCO's own practices.

756. ATCO's consultant Ernst & Young argued that, under tax law, an improvement or alteration to an existing depreciable asset was treated as being part of that depreciable asset and such costs (together with the remaining cost base of the depreciable asset) were depreciated over the remaining effective life of that asset under the depreciation method that was adopted for that asset. The diminishing value tax depreciation could discourage improvements or alterations to existing assets, especially during the later stages of their lives, given the risk of remaining un-deducted capital costs at the end of their lives.[230]

757. However, Ernst & Young also noted that:

> Improvements or alterations to an existing depreciable asset are treated as being part of that depreciable asset. Costs of such improvements are added to the cost base of that depreciable asset and depreciated over the remaining effective life of that asset under the depreciation method that has been adopted for that asset.[231]

758. Section 40.110 of the *Income Tax Assessment Act 1997* states that a taxpayer may choose to recalculate the effective life of a depreciating asset from a later income year if the effective life is no longer accurate because of changed circumstances relating to the nature of the use of the asset. The new estimate of effective life is then

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228 ATCO Gas Australia, *Response to ERA Draft Decision on Required Amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System*, 27 November 2014, p. 237.

229 ATCO Gas Australia, *Response to ERA Draft Decision on Required Amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System*, 27 November 2014, p. 238.

230 Ernst & Young, *Review of the regulated tax asset base for regulated revenue purposes – addendum to the report of Vaughan Lindfield*, 27 November 2014, p. 5.

231 Ernst & Young, *Review of the regulated tax asset base for regulated revenue purposes – addendum to the report of Vaughan Lindfield*, 27 November 2014, p. 3.

used in the formula for calculating depreciation if the diminishing value method is being applied.[232]

759. Ernst & Young noted that ERA's proposed approach of using diminishing value in AA4 would not be consistent with decisions of the AER, which had accepted both methods.[233] This argument no longer holds given the AER is proposing to use the diminishing value method in the future and remaining with the straight-line method would now be inconsistent with the AER.

760. Ernst & Young, in its report for ATCO, argued that straight-line depreciation will result in a smoother tariff profile over future access arrangement periods.[234] The ERA agrees that the linear nature of the straight-line method would result in a more predictable price path across access arrangements than the exponential nature of the diminishing value method.

761. However, according to the AER, the tax building block (of which tax depreciation is a small part) only comprises about 4 per cent of the total regulated revenue for an energy network.[235] ATCO's tax building block for the AA5 period is 2.4 per cent. Any fluctuations in tax depreciation would be immaterial in terms of total regulated revenue.

762. ATCO argued that the diminishing value method defers the recovery of tax costs to future regulatory periods. ATCO has questioned why future customers should bear a higher proportion of tax costs than current customers.[236] The ERA considers this argument over-simplifies ATCO's capital investment profile. Capital investment is ongoing. ATCO regularly invests in new assets with a range of different asset lives. This will result in the taxation profile being 'smoothed' across time periods.

763. Ernst & Young noted that ATCO would have had a negative tax liability over the fourth access arrangement period under the diminishing value approach, which would not be consistent with the behaviour of a benchmark efficient entity.[237]

764. The ERA considers this to not be a compelling reason to reject the diminishing value approach. Regulatory approaches should be designed to achieve the national gas objective, rather than designed to ensure the returns of an entity are optimised in a particular regulatory period. The ERA also notes that ATCO still had a negative tax liability in AA4 while using the straight-line depreciation method.

765. On balance, the ERA considers that the diminishing value method should be applied as the benchmark practice in AA5 because it is consistent with the principle of setting NPV = 0, and will ensure that regulated entities cannot over-recover revenue. The

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232 Australian Taxation Office, *Guide to depreciating assets 2018*, Canberra, June 2018, p. 14.

233 Ernst & Young, *Review of the regulated tax asset base for regulated revenue purposes – addendum to the report of Vaughan Lindfield*, 27 November 2014, p. 5.

234 Ernst & Young, *Review of the regulated tax asset base for regulated revenue purposes – addendum to the report of Vaughan Lindfield*, 27 November 2014, p. 6.

235 Australian Energy Regulator, *Review of regulatory tax approach 2018*, 2 November 2018, p. 11.

236 ATCO Gas Australia, *Response to ERA Draft Decision on Required Amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System*, 27 November 2014, p. 238.

237 Ernst & Young, *Review of the regulated tax asset base for regulated revenue purposes – addendum to the report of Vaughan Lindfield*, 27 November 2014, p. 6.

ERA considers that the diminishing value method best meets the long term interests of consumers as required by the NGO.

766. Section 40-130 of the *Income Tax Assessment Act 1997* prevents asset owners from switching between depreciation methods for a given asset.[238]

767. While the ERA considers that the benchmark efficient entity would now apply the diminishing value method for tax purposes to its new assets, it has not applied this to the existing assets. This treatment is consistent with the AER's approach.[239]

768. As noted above, the ERA considered that the benchmark efficient entity during AA4 could use either the straight-line or diminishing value method and the depreciation method used for ATCO was the straight-line method. As asset owners can't switch depreciation methods for existing assets, nor could the benchmark efficient entity. ATCO, using a benchmark efficient entity approach, was allowed to adopt straight-line depreciation for existing assets and this approach should continue in the future for these assets.

769. The AER's consultant PwC found that changes to the opening TAB starting base to change depreciation methods could give rise to permanent differences as opposed to timing differences.[240] This magnitude of the difference (higher or lower) would depend on the age and profile of the individual network assets.

Immediate expensing of capex

770. In its review of regulatory tax approach, the AER proposed allowing entities to expense particular types of capital expenditure in the year it is incurred, as entities have the option of doing for actual taxation.

771. One type of capital expenditure the AER proposed to be expensed was expenditure for the refurbishment of network assets. The AER noted that for some costs which are capitalised into the asset base in the regulatory environment, it may be possible for service providers to immediately deduct these expenses for tax purposes if they meet certain criteria.

772. Stakeholder submissions to the AER acknowledged the potential for different treatment of refurbishment expenditure for regulatory and tax purposes. The AER itself noted in an example that the risk profile of the service provider would determine its approach to claiming tax.

773. In ATCO's submission to the AER, ATCO said that the AER should consider the incentive effect of any amendments to the regulatory approach that resulted in expensing refurbishment capital expenditure. In addition, ATCO said that it was important that network businesses continued to be incentivised to adopt the lowest sustainable cost solution to address issues with ageing assets, a point the AER's consultant PwC also makes in its report.[241]

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238 Specifically, this section requires that a choice made about depreciation methods must be made by the day the taxpayer lodges their income tax return for the income year to which the choice relates or within a further time period allowed by the Commissioner. That choice, once made applies to that income year and all later income years. Section 40.130 of the ITAA.

239 Australian Energy Regulator, *Review of regulatory tax approach 2018*, 2 November 2018, p. 73.

240 PwC, *AER Tax review 2018*, Expert advice, 26 October 2018, p. 79.

241 PwC, *AER Tax review 2018*, Expert advice, 26 October 2018, p. 20.

774. ATCO noted that expensing refurbishment capital expenditure must not create a perverse incentive to replace assets rather than refurbish them.

775. The AER in its Final Report has proposed to adopt the immediate expensing of refurbishment capital expenditure. The AER considered that this approach is in the long term interests of consumers.

776. ATCO has not proposed to expense any refurbishment capital expenditure in its proposal and has included all capital expenditure that meets the requirements in the tax asset base.

777. The ERA notes that submissions to the AER, including ATCO's submission, identified there may be an incentive to refurbish assets when it is not the most prudent and efficient option by allowing immediate expensing. The ERA considers that this incentive can be overcome by the use of the propose/respond regulatory approach where capital expenditure is subject to the requirements of Rule 79 of the NGR to ensure that the expenditure is prudent and efficient and at the lowest sustainable cost.

778. However, as mentioned at the beginning of this section, immediate expensing of refurbishment capital expenditure is not a requirement by the ATO and can be at the discretion of a service provider depending on their risk profile.

779. For this draft decision, the ERA has not implemented the immediate expensing of refurbishment capital expenditure. However, the ERA seeks the following additional information from ATCO in its response to this draft decision:

- ATCO's current tax policy for refurbishment capital expenditure; and
- The amount of capital expenditure that would be regarded as refurbishment capital expenditure in the AA5 period.

Tax Asset Base

780. The ERA has determined the roll forward tax asset base for the AA4 period in Table 77 below. The TAB has been calculated as follows:

Opening value at 1 July 2014

plus the actual capital expenditure (net of capital contributions) incurred in AA4

less the depreciation based on the actual capital expenditure

less any actual asset disposals during AA4

Table 77: ERA's draft decision tax asset base for AA4 ($m nominal)

	2014	2015	2016	2017	2018	2019
Opening Tax Asset Base	467.17	483.08	502.51	527.08	544.73	566.91
Capital expenditure	38.97	68.18	76.83	70.10	73.62	77.39
Tax depreciation	(23.02)	(48.74)	(52.07)	(52.24)	(51.44)	(54.17)
Asset disposals	(0.04)	(0.01)	(0.19)	(0.21)	-	-
Closing Value	**483.08**	**502.51**	**527.08**	**544.73**	**566.91**	**590.12**

781. ATCO's proposed closing TAB for the AA5 period has been amended to update:

- forecast capital expenditure based on this Draft Decision while maintaining a one-year lag between incurring capital expenditure and commissioning the relevant asset as was used in AA4.
- tax depreciation by capping certain tax asset lives and revising the depreciation method from straight-line to diminishing value for capital expenditure in AA5.

782. Table 78 shows the ERA's estimated closing TAB by year over the AA5 period.

Table 78: ERA's draft decision tax asset base for AA5 ($m nominal)

	2020	2021	2022	2023	2024
Opening Tax Asset Base	590.123	581.525	575.045	566.890	557.820
Capital expenditure	49.099	52.820	50.791	48.828	50.644
Tax depreciation	- 57.697	- 59.300	- 58.947	- 57.898	- 57.540
Asset disposals	-	-	-	-	-
Closing Value	**581.525**	**575.045**	**566.890**	**557.820**	**550.924**

Accrued Tax Losses

783. In the ERA's AA4 final decision, tax losses were forecast in the final three years of the AA4 period resulting in a total tax loss carried forward of $54.41 million ($ nominal).[242]

784. ATCO has not carried forward its AA4 tax losses in its AA5 corporate income tax calculations. ATCO should include the carried forward tax losses calculated in the AA4 final decision in the AA5 corporate income tax calculation.

785. As a result of the annual reference tariff variation process, the estimated cost of corporate income tax was recalculated to update the debt risk premium and to add additional operating expenditure during AA4. After the reference tariff revision that came into effect on 1 January 2019, the total tax losses to be brought into the AA5 period by ATCO have been revalued to $51.93 million ($ nominal).

786. The $51.93 million in tax losses have been offset against net income to reduce ATCO's taxable income in the first four years of AA5 until they are exhausted. This is set out in Table 79.

Estimated Cost of Corporate Income Tax

787. The ERA has estimated the cost of corporate income tax based on its considerations above.

788. The ERA has calculated taxable income as assessable income *less* tax deductible costs that are recognised by the ATO, as follows:

[242] Economic Regulation Authority, *Amended Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution Systems*, 10 September 2015, Table 106, p. 461.

Smoothed tariff revenue:

plus	revenue from prudent discounts
plus	ancillary service revenue
minus	approved forecast operating expenditure
minus	depreciation of the TAB, which excludes capital contributions[243]
minus	debt servicing costs[244]
equals	estimated taxable income

789. The estimated cost of corporate income tax will be recalculated in each year of AA5 as part of the tariff variation process. This includes the change to reflect the annually updated debt risk premium.

790. Table 79 breaks down the calculation of the ERA estimated cost of corporate income tax.

[243] The ERA has applied straight-line depreciation on the tax asset base to expenditure prior to 1 January 2020 and diminishing value on the TAB to expenditure incurred on or after 1 January 2020.

[244] Calculated by multiplying the debt portion of the opening regulatory asset base by the debt to equity ratio (assumed at 55 per cent) and the ERA's determined nominal cost of debt based on the Rate of Return chapter of this draft decision.

Table 79: ERA's draft decision estimated cost of corporate income tax net of imputation credits for AA5 ($m nominal)

	2020	2021	2022	2023	2024
Revenue					
Tariff Revenue (smoothed)	166.5	169.7	172.1	174.5	177.3
Prudent Discount Revenue	0.2	0.2	0.2	0.2	0.2
Ancillary Service Revenue	3.5	3.6	3.6	3.6	3.7
Total Revenue	*170.2*	*173.4*	*175.8*	*178.3*	*181.2*
Expenses					
Operating Expenditure	-64.1	-65.2	-66.6	-68.4	-69.2
Depreciation of the TAB	-35.0	-36.6	-37.2	-37.7	-38.1
Debt Servicing Costs	-57.7	-59.3	-58.9	-57.9	-57.5
Total Expenses	*-156.8*	*-161.1*	*-162.8*	*-163.9*	*-164.8*
Tax					
Net Income	13.4	12.3	13.0	14.4	16.3
Tax Loss Carried Forward from previous year	-51.9	-38.6	-26.2	-13.2	
Taxable Income	-38.6	-26.2	-13.2	1.2	16.3
Income Tax Expense	-	-	-	-0.3	-4.9
Value of Imputation Credits	-	-	-	0.2	2.5
ERA Estimated Cost of Corporate Income Tax Net of Imputation Credits	-	-	-	*-0.2*	*-2.5*

Required Amendment 11

ATCO must amend its calculation of income tax and tax depreciation methods as follows:

- Amend the asset lives for regulators and secondary gate stations to be capped to 20 years from 1 January 2020 as set out in Table 76 of this draft decision.
- Amend the depreciation method to the diminishing value method for new assets from 1 January 2020.
- Amend the estimated cost of corporate income tax in accordance with Table 79 of this draft decision.

Working Capital

791. Working capital refers to a stock of funds that must be maintained by a service provider to pay costs as they fall due. In circumstances where it is the norm for the costs of providing services to be incurred before the revenues from the provision of services are received, a stock of working capital may need to be derived from a capital investment in the business. The cost of this stock of working capital (that is, the required return on the capital investment) is a cost to the service provider of operating its business and providing services.

792. The NGL and NGR do not make reference to the cost of working capital used by a service provider. Rule 76 of the NGR states that total revenue is to be determined for each regulatory year of the access arrangement period using the building block approach (see paragraph 146). While the cost of working capital is not specifically included as a building block, ATCO has separately included the cost of working capital as a line item in its building block calculations (see Table 21).

ATCO's proposal

793. ATCO submitted that its working capital refers to a stock of funds that it must maintain to pay costs as they fall due and inventory held to meet service requirements within service delivery times.[245]

> The requirement to maintain a stock of funds arises from the misalignment (on average) between incurring the costs of providing services and recovering the revenues associated with the provision of those services. In addition, a stock of materials is held to allow the efficient and timely provision of services. The cost of working capital reflects the return on the capital funds required to be maintained. These costs represent the efficient costs of a business that receives revenue at a different time to when it incurs costs.

794. ATCO calculated its working capital in accordance with the "working capital cycle model", with updated parameters to reflect current working capital requirements. The parameters (or components) of the model include:[246]

- Inventory
  - ATCO has maintained the assumption that an efficient level of inventory is 0.89 per cent of annual capital expenditure (capex). Using available data for 2017, ATCO has calculated inventory as a percentage of capex to be 1.04 per cent. ATCO does not consider the difference to be material to justify a change from the previously used value of 0.89 per cent.
- Creditors
  - ATCO has adjusted its creditors assumptions for AA5. The accounts payable creditor days have been re-evaluated taking into account the payment terms for labour costs, general creditors and payment for unaccounted for gas (UAFG). ATCO's calculation of the weighted average creditor days for AA5 is 19 days, which is four days more than the days used for AA4.

[245] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 144.

[246] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 145.

- Receivables
  - ATCO has re-evaluated the calculation of receivable days to take into account unbilled haulage days that were inadvertently excluded in the calculation for AA4. Unbilled haulage reflects the costs incurred to provide reference services for which revenue has not yet been received. ATCO's calculation of receivables days is 62 days, which is 44 days more than the days used for AA4.

795. ATCO's updated parameters are shown in Table 80. ATCO's calculation of its working capital for AA5 is based on these parameters and is shown in Table 81.

Table 80: ATCO's working capital parameters

Parameter	AA4 (actual)	AA5 (proposed)	Basis of Calculation
Inventory as a % of capex	0.89%	0.89%	Based on 2017 inventory as a percentage of 2017 capex.
Creditors	15 days	19 days	Determined from the standard terms of payment to suppliers, labour, and suppliers of UAFG. The amount relates to total expenditure including capex.
Receivables	18 days	62 days	Determined from the payment terms of our contracts with retailers.

Source: ATCO, 2020-24 Plan (Access Arrangement Information), p. 146, Table 16.4.

Table 81: ATCO's working capital calculation for AA5

Return on Working Capital	2020	2021	2022	2023	2024
Opening working capital ($nominal)	1.3	24.3	25.3	26.2	27.0
WACC (nominal)	6.03%	6.03%	6.03%	6.03%	6.03%
Return on working capital ($nominal)	0.1	1.5	1.5	1.6	1.6
Deflator to $real 2009	*1.018*	*1.037*	*1.056*	*1.076*	*1.095*
Return on working capital ($real)	*0.1*	*1.4*	*1.4*	*1.5*	*1.5*

Source: ATCO, 2020-24 Plan (Access Arrangement Information), p. 146, Table 16.5.

Submissions

796. Alinta Energy questioned ATCO's proposed change to increase receivables from 18 to 62 days, given the 10 business day payment terms for reference services in the template service agreement.[247] Alinta also noted the significant step increase in ATCO's (nominal) opening working capital from $1.3 million in 2020 to $24.3 million in 2021.

[247] Alinta Energy submission, 14 November 2018, p. 8.

Draft decision

797. ATCO submitted that it calculated the return on working capital using the same working capital model that was used in AA4, with updated parameters for AA5

798. As part of its considerations for AA4, the ERA asked ATCO to clarify how it calculated the individual components of the working capital model; that is, the inventory as a percentage of capital expenditure, creditor and receivable parameters. Based on the explanations provided by ATCO, the ERA considered that "ATCO had adopted a reasonable method in producing its forecast return on working capital".[248]

> [The] inventory as a percentage of capital expenditure [parameter] was calculated by taking the average of monthly inventory levels from its general ledger for the years of 2011, 2012 and 2013. These were then divided by the actual capital expenditure in each year to determine inventory as a percentage of capital expenditure for each year. These three percentages were then averaged to produce an inventory as a percentage of capital expenditure figure of 0.89 per cent.
>
> [The creditors parameter was calculated by taking] the creditor balances from [ATCO's] general ledger for the 12 month period beginning November 2012 to October 2013 and calculating an average monthly creditor balance. This was then divided by the average of capital expenditure and operating expenditure (excluding UAFG) over the same period to produce the creditor payment days figure of 15 days.
>
> [The receivables parameter was calculated by taking] the receivable balances from [ATCO's] general ledger for the 12 month period beginning November 2012 to October 2013 and calculating an average monthly receivable balance. This was then divided by the total haulage revenue over the same period to produce a receivable days figure of 18 days.

799. Information to substantiate ATCO's forecast return on working capital for AA5 is contained in the access arrangement information.[249]

Inventory as a percentage of capex

800. Using data for 2017, ATCO has calculated the *inventory as percentage of capex* parameter to be 1.04 per cent. However, ATCO decided to maintain the assumption that an efficient level of inventory is 0.89 per cent of annual capital expenditure. ATCO does not consider the difference (of 0.15 percentage points) to be material to justify amending the value that was used in AA4.

801. ATCO's access arrangement information does not indicate any changes to the way in which the parameter was calculated, hence the method to calculate the parameter is still consistent with the ERA's AA4 decision.

802. ATCO decided to keep the *inventory as a percentage of capex* parameter as 0.89 per cent and unchanged from AA4 on the basis that the difference is not material. The effect of the difference is approximately $0.8 million over AA5 (Table 82). The ERA considers ATCO's decision is not inconsistent with the requirements of the NGR or national gas objective.

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248 ERA, *Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution Systems*, 30 June 2015, pp. 460 to 461.

249 Chapter 16, pp. 144 to 146.

Table 82: Inventory as a percentage of capex forecasts ($m nominal)

Inventory as a % of capex	2020	2021	2022	2023	2024	Total
0.89%	0.937	0.943	0.943	0.978	0.987	**4.789**
1.04%	1.095	1.102	1.102	1.143	1.154	**5.596**
difference	*0.158*	*0.159*	*0.159*	*0.165*	*0.166*	*0.807*

Source: ATCO, AA5 supporting information – revenue and pricing model.

Creditors

803. ATCO calculated the *creditors* parameter to be 19 days, based on a weighted average of creditor days for labour, non-labour and unaccounted for gas (Table 83).

Table 83: ATCO's calculation of creditor days for AA5

Creditor Element	Weighting	Days
Labour	32%	1.7
Non-labour	64%	27
Unaccounted for gas (UAFG)	4%	44
Total Creditor Days		**19**

Source: ATCO, 2020-24 Plan (Access Arrangement Information), p. 145, Table 16.2.

804. Information supporting ATCO's calculation of creditor days is limited to the access arrangement information, which is reproduced above. The information suggests a change to the way in which the parameter has been calculated. ATCO's calculation for AA5 is based on a weighted average of creditor days. The ERA asked ATCO to clarify and substantiate its calculation of creditor days for AA5.

805. ATCO provided additional information to explain its calculation of creditor days.[250]

806. The ERA considered the additional information provided by ATCO to explain the calculation of creditor days. ATCO's determination of individual weightings and creditor days for each of the creditor elements follows a reasonable method to calculate a total of 19 creditor days.

Receivables

807. ATCO calculated the *receivables* parameter to be 62 days, based on meter reading and invoicing schedules and invoice payment terms (Table 84).

[250] ATCO response to Information Request ERA 12, 8 March 2019.

Table 84: ATCO's calculation of receivable days for AA5

Receivable Element	Days
Average unbilled revenue days – based on the meter reading schedule	40
Average days from meter read to invoice – based on billing twice a month	7
Days to issue invoice	1
Days from invoice to payment – payment terms are 10 business days	14
Total Receivable Days	**62**

Source: ATCO, 2020-24 Plan (Access Arrangement Information), p. 145, Table 16.3.

808. Information supporting ATCO's calculation of receivable days is limited to the access arrangement information, which is reproduced above. The information suggests a change to the way in which the parameter has been calculated. ATCO's calculation of 62 days for AA5 takes into account the average days of unbilled haulage (being 40 days), which ATCO claims was "inadvertently excluded" in the calculation for AA4. ATCO states:

> Unbilled haulage reflects the incurred costs to provide reference services, for which revenue has not yet been received. The inclusion of this amount in working capital is consistent with the ERA's AA3 Western Power Final Decision.

809. As noted by Alinta Energy in its submission, there is significant step increase in ATCO's (nominal) opening working capital from $1.3 million in 2020 to $24.3 million in 2021. This increase is the result of ATCO's calculation of receivable days for AA5 being 62 days (compared to 18 days for AA4).

810. The ERA's latest decision on revisions to Western Power's access arrangement (for the fourth access arrangement period – 2017 to 2022) did not require any material amendments to Western Power's method of calculating its working capital.[251] The calculation method used was substantially the same as the method used for the previous (third) access arrangement period. In each case, Western Power included a receivables parameter of 45 days, which corresponded with its meter reading cycles and invoicing and payment terms in the electricity transfer access contract. The ERA noted that:[252]

> The majority of meters are read on a bi-monthly basis with the remainder read on a monthly basis. The standard terms of the electricity transfer access contract are that an invoice is raised within 14 business days of the month following the meter read and the user is required to pay within 10 business days.

811. The ERA asked ATCO to clarify and substantiate its calculation of receivable days for AA5.[253]

[251] ERA, *Final Decision on Proposed Revisions for the Access Arrangement for the Western Power Network 2017/18 – 2021/22*, 20 September 2018, pp. 187-191.

[252] ERA, *Final Decision on Proposed Revisions to the Access Arrangement for the Western Power Network*, 5 September 2012, p. 256, paragraph 1127.

[253] ATCO response to Information Request ERA 12, 8 March 2019.

812. The ERA considered the additional information provided by ATCO to explain the calculation of receivable days. ATCO's determination of individual receivable elements follows a reasonable method to calculate a total of 62 receivable days.

Calculation of working capital

813. For the reasons outlined above, the ERA considers ATCO's proposed working capital parameters of the level of inventory, creditors and receivables to calculate the return on working capital are consistent with the requirements of the NGR and national gas objective.

814. The return on working capital will change as a result of required amendments to other aspects of ATCO's proposal, for example, the rate of return (WACC), target revenue, capital (capex) and operating (opex) expenditure. Consistent with the required amendments detailed in the sections of this draft decision dealing with these aspects, the ERA has recalculated the return on working capital for AA5 (Table 85).

Table 85: ERA's draft decision calculation of working capital for AA5

Return on Working Capital	2020	2021	2022	2023	2024
Opening working capital ($nominal)	1.23	35.24	35.97	36.43	36.82
WACC (nominal)	5.70%	5.70%	5.70%	5.70%	5.70%
Return on working capital ($nominal)	0.07	2.01	2.05	2.07	2.10

Required Amendment 12

ATCO must amend its return on working capital calculation to be consistent with this draft decision and as set out in Table 85.

Allocation of Total Revenue

815. The NGR require total revenue to be allocated between reference services and other services on an allocation of cost basis. Rule 93(2) states that costs are to be allocated between reference and other services as follows:

- Costs directly attributed to reference services are to be allocated to those services.
- Costs directly attributed to pipeline services that are not reference services are to be allocated to those services.
- 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.

816. The rules further allow some services, other than reference services, to be classed as *rebateable services*, with part of the revenue from the sale of these services to be rebated or refunded to users of reference services.

ATCO's proposal

817. Table 86 shows ATCO's forecast total revenue allocation for AA5. Total revenue will be recovered from haulage reference services, ancillary reference services and from customers receiving prudent discounts. Prudent discounts are offered by ATCO to some customers in circumstances where the discount is necessary because of competition from other energy sources and the loss of the customer would lead to higher tariffs for existing customers.

Table 86: ATCO's forecast revenue allocation between reference services and other services for AA5 ($m nominal)

	2020	2021	2022	2023	2024	Total
Haulage reference services	187.9	197.7	201.1	207.8	215.5	1,006.6
Ancillary reference services	2.9	3.0	3.1	3.2	3.3	15.5
Customers receiving prudent discounts	0.2	0.2	0.2	0.2	0.2	0.8
Total revenue	**191.0**	**197.8**	**204.4**	**211.1**	**218.6**	1,022.9

Source: ATCO, Revenue & Pricing Model Public, 31 August 2018.

Submissions

818. No public submissions were received on ATCO's proposed forecast revenue allocation between reference services and other services for AA5.

Draft decision

819. The ERA determined the total revenue that is to be recovered from haulage reference services by deducting the forecast revenue of customers receiving prudent discounts and ancillary reference services from the annual total revenue. The ancillary service revenue and tariffs are on a cost recovery basis. This is the same method to allocate revenue that ATCO applied in its proposal and that the ERA has used in previous access arrangement reviews.

820. The total revenue for each year of AA5 has been calculated based on the decisions in the preceding building block chapters. It is different to the total revenue proposed by ATCO due to the adjustments explained in those building block chapters.

Table 87: ERA's draft decision forecast revenue allocation between reference services and other services for AA5 ($m nominal)

	2020	2021	2022	2023	2024	Total
Haulage reference services	166.5	169.7	172.1	174.5	177.3	860.1
Ancillary reference services	3.5	3.6	3.6	3.6	3.7	18.0
Customers receiving prudent discounts	0.2	0.2	0.2	0.2	0.2	0.8
Total revenue	**170.204**	**173.415**	**175.828**	**178.289**	**181.186**	**878.9**

Source: ERA, GDS Tariff Model, April 2019.

Required Amendment 13

ATCO must amend the allocation of forecast total revenue (nominal) between reference services and other services in accordance with Table 87 of this draft decision.

Reference Tariffs

821. Rule 92 of the NGR requires the equalisation (in terms of present values) of the portion of total revenue allocated to reference services and the forecast revenue from reference services over the access arrangement period.

822. Rule 94 of the NGR sets out the requirements for determining reference tariffs for distribution pipelines. For the purpose of determining reference tariffs, customers of reference services provided by a distribution pipeline must be divided into tariff classes. For each tariff class, the revenue expected to be recovered should lie on or between:

- An upper bound representing the standalone cost of providing the reference service to customers who belong to that class.
- A lower bound representing the avoidable cost of not providing the reference service to those customers.

823. The NGR further state that where there are two or more charging parameters, each charging parameter for a tariff class must take into account the long run marginal costs for the service, transaction costs and whether customers are able to respond to price signals.

824. Rule 96 of the NGR allows the service provider to propose a discount for a particular user or prospective user or a particular class of users or prospective users. The ERA may only approve a discount if it is necessary to respond to competition from other providers of pipeline services or other sources of energy; or maintain efficient use of the pipeline. The provision of the discount must also likely lead to reference or equivalent tariffs lower than they would otherwise have been.

825. In addition to the rules, the *National Gas Access (WA) (Local Provisions) Regulations 2009* require consideration to be given to the effects on small use customers and retailers who supply small use customers. The regulations require uniform tariffs to be applied to small use customers for the same service irrespective of their location.

ATCO's proposal

826. For haulage reference services, ATCO proposes retaining the existing (AA4) tariff classes for AA5 because "there are no material changes in the types of haulage services required by customers in each tariff class, or [the] types of customers requiring reference services".[254] The tariff classes are defined by the type of delivery facilities that are provided to certain customer groups and are summarised in Table 88. For ancillary reference services, ATCO proposes a single tariff class for each service.

Table 88: ATCO's proposed tariff classes for haulage reference services

Tariff Class	Customer Characteristics	Delivery Facilities
A1	Large industrial customers that use over 35TJ per year.	These customers require specific facilities to supply their gas consumption including peak load requirements.
A2	Industrial and commercial customers that use 10TJ to 35TJ per year.	These customers require specific facilities to supply their gas consumption including peak load requirements.
B1	Smaller industrial and commercial customers that use from 1TJ up to 10TJ per year.	These customers usually require specific facilities to supply their gas consumption including peak load requirements.
B2	Commercial enterprises using up to 1TJ per year.	Standard 12m^3 per hour meter.
B3	Generally, residential customers but may include some small commercial enterprises. Median consumption is in the 10GJ to 12GJ per annum range.	Standard 6m^3 to 10m^3 per hour meter.

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Attachment 19.1, 31 August 2018.

827. ATCO has also proposed to retain the existing (AA4) tariff structures for both haulage and ancillary reference services for AA5. The basic tariff structure for haulage services includes a fixed charge and declining block usage charge component (Table 89). Ancillary services are charged at the same rate to all customers within the relevant tariff class, or at a rate reflecting the costs of the individual service provided (Table 93). ATCO's calculation of individual reference tariffs is discussed as part of the ERA's draft decision considerations (see paragraph 838).

[254] ATCO, *2020-24 Plan (Access Arrangement Information), Attachment 19.1 AA5 Reference Tariffs,* 31 August 2018, p. 7.

Table 89: ATCO's proposed tariff structures for haulage reference services

Service (Tariff Class)	Service Element	Charging Parameter
A1	Fixed charge for using the distribution system	Standing Charge ($/year)
	Fixed charge for the capacity of network utilised	Demand Charge ($/MHQ GJ/km)
	Variable charge based on throughput and haulage distance	Usage Charge ($/GJ/km)
	Charge to reflect the specific costs associated with the customer for service pipe, regulators, metering, and telemetry	User specific Charge ($)
A2	Fixed charge for using the distribution system	Standing Charge ($/year)
	Variable charge based on throughput	Usage Charge ($/GJ)
	Charge to reflect the specific costs associated with the customer for service pipe, regulators, metering, and telemetry	User specific Charge ($)
B1	Fixed charge for using the distribution system	Standing Charge ($/year)
	Variable charge based on throughput	Usage Charge ($/GJ) with two blocks
	Charge to reflect the specific costs associated with the customer for service pipe, regulators, metering, and telemetry	User specific Charge ($)
B2	Fixed charge for using the distribution system	Standing Charge ($/year)
	Variable charge based on throughput	Usage Charge ($/GJ) with two blocks
B3	Fixed charge for using the distribution system	Standing Charge ($/year)
	Variable charge based on throughput	Usage Charge ($/GJ) with three blocks

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Table 19.2, 31 August 2018.

828. ATCO's proposed haulage price path in real terms is shown in Table 90. ATCO proposed larger tariff increases in the first year with yearly changes of 2.3 per cent during the remainder of the access arrangement period.

Table 90: ATCO's proposed haulage price path in real terms

Tariff	Price change on 1 January 2020	Subsequent annual price changes
A1, A2, B1 and B2	22.4%	2.3%
B3 Standing Charge	0%	0%
B3 First 1.825 GJ [255]	-	-
B3 Volume > 1.825 GJ, < 9.855 GJ	71.7%	2.3%
B3 Volume > 9.855 GJ	194.8%	2.3%

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Table 19.4, 31 August 2018. ATCO, 18.1 Revenue & Pricing Model PUBLIC, 31 August 2018.

829. ATCO's proposed haulage reference services for AA5 are shown in Table 91.

[255] There is no charge for the first 1.825 GJ of gas consumed.

Table 91: ATCO's proposed haulage reference services

Charging Parameter	Units	1 Jan 20	1 Jan 21	1 Jan 22	1 Jan 23	1 Jan 24
Reference Tariff A1						
Standing charge	$/year	39,712.90	40,626.30	41,560.70	42,516.60	43,494.48
Demand charges						
First 10 km	$/GJ km	167.42	171.27	175.21	179.24	183.36
Distance > 10 km	$/GJ km	88.13	90.16	92.23	94.35	96.52
Usage Charges						
First 10 km	$/GJ km	0.03542	0.03623	0.03706	0.03791	0.03878
Distance > 10 km	$/GJ km	0.01784	0.01825	0.01867	0.01910	0.01954
Reference tariff A2						
Standing charge	$/year	21,977.90	22,483.39	23,000.51	23,529.52	24,070.70
First 10 TJ	$GJ	2.13	2.18	2.23	2.28	2.33
Volume > 10 TJ	$GJ	1.14	1.17	1.20	1.23	1.26
Reference tariff B1						
Standing charge	$/year	1,114.12	1,139.74	1,165.95	1,192.77	1,220.20
First 5 TJ	$GJ	4.22	4.32	4.42	4.52	4.62
Volume > 5 TJ	$GJ	3.63	3.71	3.80	3.89	3.98
Reference tariff B2						
Standing charge	$/year	277.70	284.09	290.62	297.30	304.14
First 100 GJ	$GJ	7.08	7.24	7.41	7.58	7.75
Volume > 100 GJ	$GJ	4.21	4.31	4.41	4.51	4.61
Reference tariff B3						
Standing charge	$/year	116.97	116.97	116.97	116.97	116.97
First 1.825 GJ	$GJ	-	-	-	-	-
Volume > 1.825 GJ, < 9.855 GJ	$GJ	8.38	8.57	8.77	8.97	9.18
Volume > 9.855 GJ	$GJ	6.22	6.36	6.51	6.66	6.81

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Table 19.7, 31 August 2018.

830. ATCO has noted that its expected tariff revenue from its proposed prices for each tariff class are between the lower bound of the avoidable cost of not providing the

reference service and the upper bound of standalone cost of providing the reference service as required by rule 94(3) of the NGR (Table 92).

Table 92: ATCO's haulage reference service compliance with rule 94(3) ($m real as at 31 December 2019)

Tariff Class	Total Costs Allocated	Avoidable Costs	Expected Revenue	Standalone Costs
A1	32.4	7.1	35.3	183.5
A2	22.1	2.8	21.4	277.3
B1	54.9	9.5	51.7	433.9
B2	48.7	8.1	52.7	442.0
B3	686.3	120.8	683.6	781.9

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Table 19.8, 31 August 2018.

831. ATCO's proposed tariff structures for its ancillary references services are shown in Table 93.

Table 93: ATCO's proposed tariff structures for ancillary reference services

Ancillary Service	Charging Parameter
Apply a meter lock	Published tariff per activity
Remove a meter lock	Published tariff per activity
Deregistering a delivery point	Published tariff per activity, plus the reasonable cost to ATCO to deregister the delivery point
Disconnect service	Published tariff per activity
Reconnect service	Published tariff per activity
Special meter reading	Published tariff per activity

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Table 19.3, 31 August 2018.

832. ATCO's proposed ancillary reference service tariffs are shown in Table 94. The tariffs were derived to recover the net present value of total revenue allocated to ancillary reference services. Ancillary reference service revenue is designed on a cost recovery basis.

Table 94: ATCO's proposed ancillary reference tariffs for ancillary services

	2020	2021	2022	2023	2024
Applying a meter lock	49.14	49.14	49.14	49.14	49.14
Removing a meter lock	26.73	26.73	26.73	26.73	26.73
Deregistering a delivery point	122.54	122.54	122.54	122.54	122.54
Disconnecting a delivery point	97.92	97.92	97.92	97.92	97.92
Reconnecting a delivery point	138.62	138.62	138.62	138.62	138.62
Special meter reading	12.82	12.82	12.82	12.82	12.82

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Table 19.9, 31 August 2018.

833. ATCO has noted that its expected tariff revenue from its proposed prices for ancillary reference services are between the lower bound of the avoidable cost of not providing the reference service and the upper bound of standalone cost of providing the reference service as required by rule 94(3) of the NGR as shown in Table 95.

Table 95: ATCO's ancillary reference services compliance with rule 94(3) ($m real as at 31 December 2019)

Tariff Class	Total Costs Allocated	Avoidable Costs	Expected Revenue	Stand Alone Costs
Ancillary Services	13.3	11.7	13.0	13.3

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Table 19.8, 31 August 2018.

Submissions

834. Several submissions to the ERA addressed ATCO's proposed reference tariffs. A summary of the matters raised in submissions is contained in Table 96.

Table 96: Summary of submissions to the ERA addressing ATCO's proposed reference tariffs for AA5

Submission	Summary of matters raised
Alinta Energy[256]	• Supported ATCO's proposal to retain existing tariff classes and tariff structures for AA5, but indicated concern over the magnitude of the proposed step increase in the reference tariff for an average customer in each tariff class at the start of AA5. For example, for B3 tariff (residential) customers the proposed increase is $38. • Acknowledged the preferences of end-use customers who participated in ATCO's *Voice of Customer* program for an initial price increase and then price stability, but believed many residential (B3) customers would consider the magnitude of the increase unreasonable if retailers could pass the increase directly through to the customer. – The regulated (maximum) gas tariff for small use customers is set by the Western Australian Government via tariff regulations,[257] which restricts tariff increases to a CPI-based formula each financial year. – Any increases to the network tariff above CPI will be borne by retailers, and predominately by Alinta as the incumbent gas retailer with a significant number of small use customers on the regulated gas tariff. – New entrant retailers can offer discounted retail tariffs to "high value" customers, leaving Alinta to supply, at below cost, "low use" customers on regulated retail tariffs. • Supported long term price stability, but believed this could be achieved without the initial steep price increase in 2020. Recommended a smaller initial price increase in 2020 for B3 tariff customers, followed by a smooth increase over AA5. • Supported changes to include B2 and B3 customers in the weighted average price cap, consistent with access arrangements prior to AA4. A price cap provides an incentive for ATCO to increase customer connections and usage to generate additional revenue. A revenue yield approach does not provide the same incentive.
AGL Energy[258]	• Concerned with the proposed significant increase in haulage tariffs for 2020 and believed the proposed price-path is untenable. • Submitted that: – Because gas is an optional fuel, any spike in gas prices could drive customers away from gas, or discourage customers from seeking a gas connection. – While there may be no significant increase in gazetted (regulated) retail tariffs, as suggest by ATCO, there will still be a significant effect on the contestable retail gas market and on the actual gas prices paid by customers. – Current competitive gas market offers to Western Australian customers are more than 30 per cent below the regulated retail tariffs. Without increases to the regulated retail tariffs, the proposed increase in network tariffs in 2020 will affect the gas offers to customers (for example, a reduction in the competitive discounts being offered by gas retailers).

256 Alinta Energy submission, 14 November 2018, pp. 4-5.

257 *Energy Coordination (Gas Tariffs) Regulations 2000*.

258 AGL Energy submission, 14 November 2018, p. 3.

Submission	Summary of matters raised
	• Believed a moderation of the step increase in 2020 followed by smaller annual increases over AA5 would be a compromise between competing objectives and provide a better outcome than the current proposal.
Kleenheat[259]	• Concerned that ATCO is proposing significant increases in reference tariffs and a high level of operating and capital expenditure in AA5. • Noted that, while the increase in reference tariffs has been described as "just $14 more a year per household (on average)", the actual price increase from the end of AA4 is much more. The proposed reference tariff increases by $38 or 23 per cent between 2019 and 2020, followed by increases of around $6 or 3 per cent in subsequent years. • Concerned that information may not have been presented in an unbiased manner during ATCO's customer engagement process. Kleenheat conducted its own survey of customers using the two price paths presented by ATCO and found that 61 per cent of customers voted against the ATCO proposal, in favour of steady, moderate increases over a five year period.
Synergy[260]	• Concerned that large industrial and commercial customers have limited ability to mitigate ATCO's proposed tariff increases. Unlike residential customers, many industrial users cannot move away from gas as a fuel source due to the high capital costs invested in operations. • Submitted that: – A price increase of around 24 per cent between 2019 and 2020 is untenable for customers and constitutes a price shock. – The effect of significant increases in the energy costs of industrial/commercial gas customers would likely need to be passed through by retailers to their customers to remain commercial. This would have a negative effect on competition and the legitimate business interests of gas retailers, making gas less competitive in the short-term. – There are alternative price paths that would better achieve the pricing principles in the National Gas Law or the national gas objective. ATCO has not demonstrated how its proposed price path will meet these pricing principles and/or the national gas objective. • On ATCO's stakeholder engagement process, submitted that: – Little weight should be placed on ATCO's *Voice of Customer* outcomes. ATCO's findings from its stakeholder engagement process were: – not adequately weighted to reflect the interest in, and impact on, various stakeholders – targeted towards end-use customers rather than network users (i.e. retailers) – heard, but not actioned; and in some instances, potentially misrepresented. – Considered the statement that "ATCO found that customers tolerated the larger cost increase in the initial year as they viewed the step change as relatively modest" to be misinformed. While 86 per cent of residential customers preferred a step change, these customers will not see the step change fully reflected in their bills because tariffs for small use customers are capped.

[259] Kleenheat submission, 13 November 2018, pp. 1-2.

[260] Synergy submission, 14 November 2018, pp. 2-5.

Submission	Summary of matters raised
	– Only 25 per cent of commercial and industrial customers, who will experience the full effect of the price increase, were in favour of the large initial price increase.

835. Alinta, AGL Energy and Kleenheat also addressed ATCO's proposed tariff for the special meter reading reference service.

- Alinta indicated that it supported the proposed tariff (of $12.82) for the special meter reading reference service and noted that the proposed tariff was less than the current non-reference service charge (of $18.33).[261]
- AGL considered the proposed $12.82 tariff was consistent with other gas distributors' charges for a special meter read.[262]
- Kleenheat questioned the reasonableness of the proposed tariff when compared to the tariffs charged by other gas distribution networks. Based on its comparisons (reproduced below), Kleenheat submitted that ATCO's proposed tariff would be the second most expensive.[263]

Network Operator	Cost of Special Meter Read
Multinet (Vic)	$6.54
Australian Gas Networks (Vic/NSW)	$9.00 (metropolitan rate)
Australian Gas Networks (SA)	$10.20
AusNet (Vic)	$9.05
Jemena (NSW)	$14.80
ATCO (WA)	$12.82 – proposed tariff

Draft decision

836. Several submissions address ATCO's Voice of Customer program and the program findings reported by ATCO. These submissions appear to question the credibility of the program. Details of ATCO's Voice of Customer program are set out in the access arrangement information.[264] There is no regulatory role under the NGL or NGR for the ERA to directly assess such customer/stakeholder engagement programs. However, the consultation requirements of the NGR for the review of access arrangement provisions provides ATCO's customers, and other interested parties, with opportunities to dispute information that is submitted by ATCO and to provide alternate views and evidence for consideration by the ERA.

837. The forecast revenue from reference tariffs for haulage and ancillary services discussed below are derived to equalise (in terms of present value) the portion of total revenue allocated to these services, as required by rule 92(2) of the NGR. The portion of total revenue allocated to these services is provided in net present value terms in Table 97.

261 Alinta Energy submission, 14 November 2018, p. 8.

262 AGL Energy submission, 14 November 2018, p. 4.

263 Kleenheat submission, 13 November 2018, p. 4.

264 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, Chapter 4.

Table 97: Draft Decision total revenue allocated to reference services for AA5

	Nominal $ millions NPV
Haulage reference services	729.4
Ancillary reference services	15.3

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019.

Haulage reference service tariffs

838. ATCO has maintained the same tariff structure and classes from AA4. The ERA did not receive any submissions on the tariff class structure. In the absence of any reason to amend the tariff class structures, the ERA considers that these tariff structures are consistent with the NGR.

839. The ERA has reviewed ATCO's proposed tariffs with reference to rules 92 and 94 of the NGR and the revenue and pricing principles in the NGL. The ERA has taken into account the possible effect of the proposed reference tariffs, the method of determining the tariffs and the reference tariff variation mechanism on small use customers, as required by the local regulations. The ERA must still approve an access arrangement that includes tariffs that comply with rule 92, which allows ATCO to recover the portion of total revenue allocated to reference services.

840. Submissions from AGL, Alinta Energy and Kleenheat focussed predominantly on residential and small business customers, while Synergy noted different issues faced by larger industrial and commercial customers.

841. The ERA reviewed ATCO's proposed tariffs against the following criteria to ensure that the:

- Expected revenue to be recovered from each tariff class is between the avoidable cost of not providing the reference service and the standalone cost of providing the reference.
- Tariffs take account of the long-run marginal cost for the reference service.
- Tariffs recover the efficient costs of service with minimal distortion to efficient pricing signals.
- Effects on small use customers and those that supply small use customers are considered as required by local regulations.
- Forecast revenue to be recovered in the last year of AA5 is +/- 3 per cent of total revenue for that year.

842. Given that ATCO's proposed tariffs and price path would recover in excess of the expected revenue allocated to the haulage reference service, the ERA assessed other price path options that would best meet the NGO, the pricing principles, rule 92 and rule 94 of the NGR. The ERA used the criteria in paragraph 841 and applied this to ATCO's pricing intentions while taking account of concerns raised by stakeholders.

843. As there is expected to be declining demand during AA5, the long-run marginal cost will equal the short-run marginal cost. The short-run marginal cost should be low given the declining demand forecast as there should be sufficient capacity in the network, as peak demand is also declining. As a result, the ERA gave little weight to this criterion in its assessment.

844. In taking account of efficient pricing signals, the ERA notes that the volume tariffs for B3 customers became lower than the volume tariffs for B2 customers during AA4. This was due to the increases to the fixed charge to get that charge to at least recover the incremental cost of connecting a customer by the end of AA4. No submissions received raised specific issues with maintaining the B3 fixed charge constant in real dollars. The ERA has maintained this fixed charge constant for the AA5 tariffs.

845. ATCO determined its proposed B3 tariffs by targeting a recovery of 81 per cent of total revenue. This is a slight increase on the portion of total revenue to be recovered in 2019 of 80.6 per cent. The ERA maintained this target in calculating B3 volume tariffs. The B3 volume tariff for consumption greater than 9.855 GJ was set to increase by $3 per GJ in 2020. The B3 volume tariff between 1.825 GJ and 9.855 GJ was allowed to vary so that B3 forecast tariff revenue recovered 81 per cent of total revenue.[265]

846. The B3 volume tariffs used for this draft decision are now at least above the B2 volume tariffs.

847. ATCO had applied some small hard-coded adjustments to the tariffs for B2 for 2020. The ERA removed these minor adjustments and considers that these tariffs should follow the same price path as A1, A2 and B1 customers as there was no clear benefit from these adjustments.

848. The ERA then applied the same real price increase of 2.30 per cent each year from 2021 to 2024 to all tariff classes as proposed by ATCO. This is to reduce the initial tariff increase in 2020. The tariff increase for 2020 was then calculated to ensure that the forecast revenue from haulage reference services equalled (in terms of present value) the portion of total revenue allocated to haulage reference services.

849. ATCO's proposed prudent discounts were accepted in determining haulage reference tariffs.

850. The tariff increase in 2020 for A1, A2, B1 and B2 customers is 7.56 per cent which is less than half the increase proposed by ATCO of 22.4 per cent. The B3 volume tariff increases are also lower than the increases proposed by ATCO of 71.7 per cent and 194.8 per cent. Table 98 shows the tariff increases in percentage terms over AA5 calculated by the ERA.

[265] Consumption less than 1.825 GJ is not charged.

Table 98: Draft Decision Price Path – Real Annual Percentage Change in Tariffs[266]

Reference Tariff	2020	2021	2022	2023	2024
A1	7.56%	2.30%	2.30%	2.30%	2.30%
A2	7.56%	2.30%	2.30%	2.30%	2.30%
B1	7.56%	2.30%	2.30%	2.30%	2.30%
B2	7.56%	2.30%	2.30%	2.30%	2.30%
B3					
Standing charge	0.00%	0.00%	0.00%	0.00%	0.00%
First 1.825 GJ	-	-	-	-	-
Volume > 1.825 GJ, < 9.855 GJ	22.19%	2.30%	2.30%	2.30%	2.30%
Volume > 9.855 GJ	142.49%	2.30%	2.30%	2.30%	2.30%

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019.

851. While the B3 volume price increases are large, the fixed charge will remain constant. The fixed charge is 64 per cent of an average residential bill. An average[267] B3 customer's network bill will increase by 12.0 per cent in real terms in 2020. The ERA acknowledges the comments from interested parties on the size of ATCO's proposed price increases for residential customers. The *National Gas Access (WA) (Local Provisions) Regulations 2009* require consideration to be given to the effects on small use customers and retailers who supply small use customers. The ERA has given consideration to the effects on small use customers and retailers that supply small use customers. The local regulations do not void the requirements in the NGR, particularly the requirement that ATCO must be allowed to recover the forecast revenue during the access arrangement period.

852. Given that the volume tariffs for B3 customers in 2019 are around half of what the tariffs would be if they were recovering the total revenue for 2019, the main reason that tariffs need to increase is to allow ATCO to recover total revenue during the AA5 period.

853. While the average B3 customer's annual network bill will increase in 2020, the bill of $184 will be below the annual equivalent bill for the same customer at the start of AA4 of $251 in December 2019 dollars. Even the estimated annual network bill in 2024 ($190) for the same customer would be well below the bill at the start of AA4.

854. ATCO had proposed a price increase of 22.4 per cent to A1, A2, B1 and B2 customers in 2020. Synergy expressed concern that commercial customers were not in favour of this increase in the first year of the access arrangement period. Synergy also noted that there was not a maximum retail price for commercial customers set by Government and ATCO's increases would be fully reflected in their bills. The ERA's recalculated price, based on this draft decision, reduces this increase to 7.56 per cent which it considers mitigates this concern. As noted above for B3 customers, some

[266] Overall Change is the change in tariffs from 1 January 2019 (the current tariffs) to 1 January 2024 (the last year of AA5).

[267] A B3 customer consuming 13.5 GJ of gas per year.

level of increase from the 2019 tariffs is required to move prices to recover the total revenue required during AA5.

855. The ERA's calculated tariffs for AA5 would also result in the forecast revenue to be recovered in the last year of AA5 also within a +/- 3 per cent of total revenue for that year. This should reduce the likelihood of large price increases between access arrangement periods due to the price path chosen for AA5. The actual tariff increases in AA6 would depend on many other factors but a reasonable expectation based on current information is that these would be close to the cost of service (total revenue) for 2024 (the last year of AA5).

856. As shown in Table 99, the ERA's calculated tariffs are between the avoidable cost and standalone costs calculated by ATCO in its proposal and meet rule 94 of the NGR. Rule 94 of the NGR requires that the reference tariff revenue for each tariff class is between the avoidable and standalone cost for that service.

Table 99: Draft decision haulage reference service compliance with rule 94(3) ($m real as at 31 December 2019)

Tariff Class	Avoidable Costs	Expected Revenue	Standalone Costs
A1	7.1	34.6	183.5
A2	2.8	21.2	277.3
B1	9.5	51.4	433.9
B2	8.1	48.3	442.0
B3	120.8	661.8	781.9

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019.

857. Table 100 shows the nominal haulage reference tariffs calculated by the ERA for AA5. These tariffs are based on the ERA's calculation of total revenue and the allocation of that revenue to haulage reference services (refer to Allocation of Total Revenue section). The tariffs will vary based on the tariff variation mechanism described in the next section of this draft decision.

Table 100: Draft decision nominal haulage reference tariffs (AA5)

Charging parameter	Units	1 Jan 20	1 Jan 21	1 Jan 22	1 Jan 23	1 Jan 24
Reference tariff A1						
Standing charge	$/year	35,501.98	36,939.57	38,435.38	39,991.75	41,611.15
Demand charges						
First 10 km	$/GJ km	149.66	155.72	162.03	168.59	175.42
Distance > 10 km	$/GJ km	78.78	81.97	85.29	88.74	92.34
Usage Charges						
First 10 km	$/GJ km	0.03166	0.03294	0.03428	0.03567	0.03711
Distance > 10 km	$/GJ km	0.01595	0.01660	0.01727	0.01797	0.01870
Reference tariff A2						
Standing charge	$/year	19,647.50	20,443.09	21,270.90	22,132.23	23,028.44
First 10 TJ	$GJ	1.90	1.98	2.06	2.14	2.23
Volume > 10 TJ	$GJ	1.02	1.06	1.10	1.15	1.19
Reference tariff B1						
Standing charge	$/year	995.98	1,036.32	1,078.28	1,121.94	1,167.37
First 5 TJ	$GJ	3.77	3.93	4.09	4.25	4.42
Volume > 5 TJ	$GJ	3.25	3.38	3.52	3.66	3.81
Reference tariff B2						
Standing charge	$/year	248.16	258.21	268.66	279.54	290.86
First 100 GJ	$GJ	6.31	6.57	6.83	7.11	7.40
Volume > 100 GJ	$GJ	3.76	3.92	4.07	4.24	4.41
Reference tariff B3						
Standing charge	$/year	118.97	121.01	123.08	125.18	127.32
First 1.825 GJ	$GJ	0.0	0.0	0.0	0.0	0.0
Volume > 1.825 GJ, < 9.855 GJ	$GJ	6.07	6.32	6.57	6.84	7.11
Volume > 9.855 GJ	$GJ	5.19	5.40	5.62	5.85	6.09

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019.

858. Table 101 shows the haulage reference tariffs in real 31 December 2019 dollars calculated by the ERA for AA5.

Table 101: Draft decision real haulage reference tariffs (AA5) ($ real as at 31 December 2019)

Charging parameter	Units	1 Jan 20	1 Jan 21	1 Jan 22	1 Jan 23	1 Jan 24
Reference tariff A1						
Standing charge	$/year	34,905.10	35,707.92	36,529.20	37,369.37	38,228.87
Demand charges						
First 10 km	$/GJ km	147.15	150.53	153.99	157.54	161.16
Distance > 10 km	$/GJ km	77.46	79.24	81.06	82.93	84.83
Usage Charges						
First 10 km	$/GJ km	0.03113	0.03184	0.03258	0.03333	0.03409
Distance > 10 km	$/GJ km	0.01568	0.01604	0.01641	0.01679	0.01718
Reference tariff A2						
Standing charge	$/year	19,317.18	19,761.47	20,215.98	20,680.95	21,156.61
First 10 TJ	$GJ	1.87	1.91	1.96	2.00	2.05
Volume > 10 TJ	$GJ	1.00	1.02	1.05	1.07	1.10
Reference tariff B1						
Standing charge	$/year	979.24	1,001.76	1,024.80	1,048.37	1,072.49
First 5 TJ	$GJ	3.71	3.80	3.88	3.97	4.06
Volume > 5 TJ	$GJ	3.19	3.27	3.34	3.42	3.50
Reference tariff B2						
Standing charge	$/year	243.99	249.60	255.34	261.21	267.22
First 100 GJ	$GJ	6.21	6.35	6.50	6.64	6.80
Volume > 100 GJ	$GJ	3.70	3.79	3.87	3.96	4.05
Reference tariff B3						
Standing charge	$/year	116.97	116.97	116.97	116.97	116.97
First 1.825 GJ	$GJ	0.0	0.0.	0.0	0.0	0.0
Volume > 1.825 GJ, < 9.855 GJ	$GJ	5.97	6.10	6.24	6.39	6.54
Volume > 9.855 GJ	$GJ	5.11	5.22	5.34	5.47	5.59

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019.

Required Amendment 14

ATCO must amend Annexure A of the proposed revised access arrangement to reflect the tariffs set out in Table 101 of this draft decision.

Ancillary reference service tariffs

859. The ancillary reference service tariffs are calculated to recover the cost to provide these services. The cost of these services was discussed between paragraphs 275 to 279.

860. The ERA received submissions focussed on the price of the special meter reading service. AGL considered that the price for special meter reading was reasonable while Kleenheat noted that ATCO's special meter reading charge was higher than some of its peers. The ERA considers that the charges are reflective of the best estimate of costs for these services, consistent with rule 91 of the NGR. As a result, the ERA has not amended the ancillary reference tariffs in 31 December 2019 dollars (Table 102).

Table 102: Draft decision real reference tariffs for ancillary services (AA5)

	2020	2021	2022	2023	2024
Applying a meter lock	49.14	49.14	49.14	49.14	49.14
Removing a meter lock	26.73	26.73	26.73	26.73	26.73
Deregistering a delivery point	122.54	122.54	122.54	122.54	122.54
Disconnecting a delivery point	97.92	97.92	97.92	97.92	97.92
Reconnecting a delivery point	138.62	138.62	138.62	138.62	138.62
Special meter reading	12.82	12.82	12.82	12.82	12.82

Source: ERA, Draft Decision Appendix 4, GDS Tariff Model, April 2019.

Tariff Variation Mechanism

861. Rule 92 of the NGR requires ATCO to include a mechanism (a "reference tariff variation mechanism") to vary reference tariffs over the course of the access arrangement period. The mechanism must be designed to equalise (in terms of present values):

- The forecast revenue from reference services over the access arrangement period.
- The portion of total revenue allocated to reference services for the access arrangement period.

862. Rule 97 specifies the requirements (or *mechanics*) for reference tariff variations.

- The tariff variation mechanism may vary a reference tariff in accordance with a schedule of fixed tariffs, a formula or a defined cost pass through event (or a combination of these).

- A formula used to vary a reference tariff may, for example, provide for variable caps, tariff basket price control or revenue yield control (or a combination of these).
- In deciding whether a particular reference tariff variation mechanism meets the requirements of the NGR, the ERA must have regard to relevant factors such as:
  - The need for efficient tariff structures.
  - The administrative costs of the reference tariff variation mechanism.
  - The regulatory arrangements (if any) applicable to the relevant reference services before the commencement of the proposed reference tariff variation mechanism.
  - The desirability of consistency between regulatory arrangements for similar services (both within and beyond the relevant jurisdiction).

863. The reference tariff variation mechanism must also give the ERA adequate oversight to approve any variation of the reference tariff. A reference tariff must not vary during the course of an access arrangement period, except as provided by the reference tariff variation mechanism.

ATCO's proposal

864. ATCO's proposed reference tariff variation mechanism for haulage and ancillary reference services is set out in Annexure B and C of the access arrangement.

865. For haulage reference services, ATCO has proposed to "implement a tariff variation mechanism that places a constraint on the overall average movement in haulage reference service prices from one year to the next (referred to as a *weighted average price cap*, or *tariff basket*)".[268] The mechanism allows average prices to increase by the annual change in CPI (weighted average across eight capital cities), plus or minus an X-factor that is varied for debt risk premium updates and cost pass through items. This form of tariff variation has been used for the A1, A2 and B1 tariff classes during AA4 and was used for all tariff classes in previous access arrangement periods (prior to AA4). ATCO has submitted that:[269]

> [The use of] a price cap provides an incentive for the business to increase customer connections and usage, as this generates additional revenue. In future access arrangement periods, customers benefit from costs being spread over a larger number of customers and volume.
>
> In comparison, a revenue cap does not provide any incentive to grow the network for the benefit of customers; revenue remains constant regardless of the growth of the network. Therefore, a price cap form of control is preferable to provide the incentive to grow the network in the long-term interests of consumers.

866. ATCO has proposed to retain the AA4 cost pass through items for AA5, with the exception of "capex related to 'intermediate' security of supply, which was a specific item for AA4".[270] A new cost pass through item to recover any costs that are recoverable under the proposed Network Innovation Scheme has been introduced. Hence, ATCO's proposed cost pass through items for AA5 include:

[268] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 183.

[269] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 183.

[270] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 184.

- Higher heating value (HHV) and gate point costs related to new gas inflows to the network.
- Any costs relating to a change in law or tax change.
- Any costs associated with a tax, fee, law or emissions trading scheme for greenhouse gas emissions.
- Any costs that are recoverable under the Network Innovation Scheme.

867. For ancillary reference services, ATCO has proposed to vary tariffs annually by the movement in CPI (weighted average across eight capital cities). This is the same form of tariff variation that has been used for AA4.[271]

Submissions

868. Alinta Energy has noted ATCO's change to include B2 and B3 customers into the weighted average price cap (or tariff basket), as was done in access arrangements prior to AA4. Alinta has indicated it supported for this approach and submits:[272]

> [A] price cap will provide an incentive for ATCO to increase customer connections and usage to generate additional revenue. The alternative approach of a revenue yield provides no such incentive for ATCO. The proposed price cap approach means retailers and the network operator are equally incentivised to work hard to obtain new customers and increase demand

Draft decision

869. ATCO's proposed weighted average price cap for all reference services for AA5 is the same approach currently used for AA4, but with the B2 and B3 tariff classes included in the price cap. The inclusion of B2 and B3 tariff classes is consistent with the approach used in all access arrangements prior to AA4, where one price cap was used. For AA4, the B2 and B3 tariff classes had their own separate price caps. Apart from Alinta's submission, which supported ATCO's proposal, there were no submissions from interested parties seeking any amendments to the approach. For these reasons, and in the absence of any other reason to amend the approach, the ERA considers that ATCO's proposed weighted average price cap for all reference services meets the requirements of rule 97 of the NGR. However, the formula in Annexure B of the access arrangement needs to be amended to specify that the B3 fixed charge will remain constant in real dollars over the access arrangement period. The current formula does not account for this proposal by ATCO to retain the B3 fixed charge constant in real terms over AA5.

870. The ERA has considered ATCO's proposed Network Innovation Scheme elsewhere in this decision. Consistent with the ERA's decision to not allow the scheme (see paragraph 945) the proposed cost pass through item for any costs that are recoverable under the scheme must be deleted.

[271] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 183.

[272] Alinta Energy submission, 14 November 2018, p. 5.

Required Amendment 15

ATCO must amend Annexure B, clause 1.3.1 to specify that the B3 fixed charge will remain constant in real terms.

ATCO must delete the cost pass through item detailed in Annexure B, clause 2.1(e) of the proposed revised access arrangement.

871. ATCO's proposed tariff variation mechanism for ancillary reference services for AA5 is the same mechanism currently used for AA4. There were no submissions from interested parties seeking any amendments to the mechanism. For these reasons, and in the absence of any other reason to amend the mechanism, the ERA considers that ATCO's proposed tariff variation mechanism for ancillary reference services meets the requirements of rule 97 of the NGR.

Incentive Mechanisms

872. Rule 98 of the National Gas Rules (NGR) provides that a full access arrangement may include incentive mechanisms:

> **98 Incentive mechanism**
>
> (1) A full access arrangement may include (and the [ERA] may require it to include) one or more incentive mechanisms to encourage efficiency in the provision of services by the service provider.
>
> (2) An incentive mechanism may provide for carrying over increments for efficiency gains and decrements for losses of efficiency from one access arrangement period to the next.
>
> (3) An incentive mechanism must be consistent with the revenue and pricing principles.

873. The revenue and pricing principles referred to in Rule 98(3) are set out in section 24 of the National Gas Law (NGL):

> **24 Revenue and pricing principles**
>
> (1) The revenue and pricing principles are the principles set out in subsections (2) to (7).
>
> (2) A service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in–
>
> (a) providing reference services; and
>
> (b) complying with a regulatory obligation or requirement or making a regulatory payment.
>
> (3) A service provider should be provided with effective incentives in order to promote economic efficiency with respect to reference services the service provider provides. The economic efficiency that should be promoted includes–
>
> (a) efficient investment in, or in connection with, a pipeline with which the service provider provides reference services; and
>
> (b) the efficient provision of pipeline services;
>
> (c) the efficient use of the pipeline.
>
> (4) Regard should be had to the capital base with respect to a pipeline adopted–
>
> (a) in any previous–
>
> (i) full access arrangement decision; or
>
> (ii) decision of a relevant Regulator under section 2 of the Gas Code;
>
> (b) in the Rules.
>
> (5) A reference tariff should allow for a return commensurate with the regulatory and commercial risks involved in providing the reference service to which that tariff relates.
>
> (6) Regard should be had to the economic costs and risks of the potential for under and over investment by a service provider in a pipeline with which the service provider provides pipeline services.
>
> (7) Regard should be had to the economic costs and risks of the potential for under and over utilisation of a pipeline with which a service provider provides pipeline services.

ATCO's Proposal

874. ATCO has proposed to introduce an incentive mechanism – the Network Innovation Scheme – in the access arrangement for the fifth access arrangement period (AA5). The objective of the proposed scheme is as follows.[273]

> The objective of the [network innovation scheme] is to provide ATCO Gas Australia with funding for projects using innovative and new technologies with the potential to deliver medium to long-term improvements in Pipeline Services that are in the long-term interests of consumers of natural gas in Western Australia.

875. Under the scheme, ATCO will be able to recover up to $1 million of expenditure that is incurred on eligible innovation-focused projects for each year of the next access arrangement period.[274] The eligible expenditure will be recovered through the annual tariff variation mechanism.

876. ATCO submitted that innovation was important because it enabled distributors to deliver services that were in the long-term interest of gas customers. The innovation expenditures to be funded by the proposed scheme would also enable it to achieve greater operational efficiency. ATCO considered current energy market dynamics necessitated innovation by gas networks, citing as examples innovations focused on:[275]

- handling different blends of gas (including hydrogen and biogas, as opposed to just natural gas) as part of the decarbonisation of the energy supply; and
- providing enhanced services, such as energy storage, to meet the evolving needs and expectations of current prospective customers.

877. ATCO has identified four innovation goals that could be targeted through eligible projects, including:[276]

- Long term efficiency improvements: focussed on exploiting opportunities to improve the efficiency of network services over the long-term.
- Zero-emission gas readiness: Focussed on ensuring that the gas distribution system is ready to receive, transport, deliver, monitor, and meter alternative gases like hydrogen for the long-term benefit of gas consumers.
- Making gas a stronger complement to electricity network services: Focussed on positioning the GDS [gas distribution system] to be a compelling complement to electricity services.
- Tracking and understanding transformative [information and communications technologies] opportunities: Focussed on identifying and understanding transformative information and communications technology opportunities that will help the business to maximise efficiency through timely and well-informed adoption.

[273] ATCO, *2020-24 Plan (Access Arrangement Information), Attachment 17.2 Network Innovation Scheme Explanatory Memorandum*, 31 August 2018, p. 2.

[274] The amount will be CPI-indexed each year to maintain its value in real terms.

[275] ATCO, *2020-24 Plan (Access Arrangement Information),* 31 August 2018, p. 150.

[276] ATCO, *2020-24 Plan (Access Arrangement Information),* 31 August 2018, p. 153.

878. ATCO proposed to apply eligibility criteria to ensure projects undertaken through the scheme met the scheme's objective. The proposed criteria include:[277]

- It is a project or program for researching, developing, or implementing a piece of new equipment, a new arrangement or application of existing network infrastructure, a new practice directly relating to:
  - the operation or safety of the network or
  - an improvement in customer service, or
  - a new commercial arrangement, or
  - a reduction to the carbon intensity of the gas distributed by the network; or
  - makes an incremental contribution to achieving any of the above changes; and
- it is innovative, in that the project or program:
  - is based on new, novel, or original concepts;
  - involves technology or techniques that differ from those previously implemented or used in the Western Australian Energy market; or
  - facilitates the adoption of new technologies that can expand the existing range of uses for gas and/or the gas network; or
  - has the potential, if proved viable, to reduce long-term network costs and prices or improve the quality of network services; and
- the potential benefit to gas network customers is material, considering the scale of innovation funding proposed and the level of uncertainty associated with the project or program; and
- the project or program relates to the services provided by means of the regulated network assets.

879. Given the project criteria and innovation goals, ATCO suggested that the proposed scheme could fund the following types of projects, among others:[278]

- pre-feasibility studies
- desktop technology and market opportunity assessments
- feasibility assessments
- engineering studies
- service and business model development
- market research
- field trials and demonstration projects.

880. ATCO supplied examples of projects that it was currently investigating and made a preliminary assessment of whether those projects would qualify for scheme funding under the proposed eligibility criteria (Table 103).

[277] ATCO, *2020-24 Plan (Access Arrangement Information), Attachment 17.1 Network Innovation Scheme for ATCO*, 31 August 2018, p. 4.

[278] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 154.

Table 103: ATCO's preliminary assessment of projects against eligibility criteria for the Network Innovation Scheme

Innovation goal and project	Description	Preliminary high-level assessment
Zero-emission readiness: distribution equipment specification and operation	Ensure the suitability of distribution equipment for a system conveying varying proportions of hydrogen.	Accept. Project incorporates new, novel, or original concepts and involves technology or techniques that differ from those previously implemented or used in the Western Australian Energy Market.
Zero-emission readiness: measurement of energy delivery	Determine a system for accurately measuring delivered energy in a system with a disparate and dynamic hydrogen-methane blend.	Accept. Project incorporates new, novel, or original concepts and involves technology or techniques that differ from those previously implemented or used in the Western Australian Energy Market.
Zero-emission readiness: customer acceptance	Test the workability of introducing zero-emission fuels into the network by testing customers' receptiveness, including identifying technical or social pre-requisites for acceptance.	Accept. Supports the broader zero-emission readiness goal, which in turn incorporates new, novel, or original concepts and involves technology or techniques that differ from those previously implemented or used in the Western Australian Energy Market.
Long-term efficiency reforms: asset management and maintenance	Reduce costs though speculative investigations into alternative asset management and maintenance approaches.	Accept. Illustration project incorporates novel or original concepts and involves technology or techniques that differ from those previously implemented or used in the Western Australian Energy Market.
Long-term efficiency reforms: metering innovation	Reduce costs and improve services with yet-to-be demonstrated metering technologies and service models.	Do not accept. The scale of currently known opportunities is insufficient to justify funding innovation projects.
Long-term efficiency reforms: virtual gas pipeline	Reduce costs by substituting virtual gas pipelines instead of possible network extensions.	Do not accept. These services are supplied using unregulated assets and hence are beyond the scope of the NIS.
Electricity complementarity: promote gas solutions to electricity problems	Increase gas demand by promoting customer engagement, understanding and acceptance of new appliances and solutions at the interface between the gas and electricity markets.	Do not accept. Extends to potentially contestable services supplied using unregulated assets and hence beyond the scope of the NIS.

Innovation goal and project	Description	Preliminary high-level assessment
Track and understand transformative IT opportunities: Artificial Intelligence	Investigate and trial artificial intelligence applications to understand opportunities for deployment within the business to reduce costs and improve productivity.	Accept. Project incorporates new, novel, or original concepts and involves technology or techniques that differ from those previously implemented or used in the Western Australian Energy Market

Source: ATCO, 2020-24 Plan (Access Arrangement Information), Table 17.2, pp. 157-158.

881. ATCO proposed that the scheme would be administered by the ERA as follows:

- The ERA would review scheme projects and proposals on an annual basis.
- ATCO would submit annual reports on its activities, expenditure and projects undertaken under the scheme to the ERA. ATCO's annual compliance report would be required to be supported by certification that the report is accurate and complete.
- The ERA would conduct *ex-post* reviews to determine the compliance of ATCO's trials and projects with scheme eligibility criteria and therefore their eligibility to receive scheme funding.
- In addition to *ex-post* approval, for each year of the regulatory period ATCO would be able to apply to the ERA for an upfront, indicative approval for its planned expenditure under the scheme, although *ex-ante* project approval would not be a pre-condition for project eligibility (that is, scheme funding could still be granted if a project were to be deemed eligible as the outcome of *ex-post* review).
- ATCO would periodically advise the ERA on whether its projects and trials remain likely to benefit consumers in Western Australia.
- The scheme allowance would only provide funding for projects that have not been funded by another source (for example, approved regulatory expenditure, Australian Renewable Energy Agency grants).
- Eligible projects could be funded across regulatory years and periods provided the total scheme allowance is not exceeded in any access arrangement period.
- The ERA would review the size of the scheme allowance as part of each access arrangement determination.

882. ATCO's reasoning for proposing the network innovation scheme was that it would enable small-scale innovation expenditures that ATCO considered did not in general qualify as approved expenditure under the prudence and efficiency tests for capital and operating expenditure set out in the NGR (rules 79 and 91).[279] ATCO considered that the project funding provided by the scheme would enable innovation-related projects to be developed to the stage where they were more likely to qualify as approved expenditure.

[279] ATCO has expressed the same opinion in its public submission to the Australian Energy Regulator regarding Australian Gas Networks' and AusNet Services' Victorian gas networks access arrangements for 2018-2022. ATCO, *Submission to Victorian Gas Networks (Australian Gas Networks and Ausnet Services) Access Arrangement 2018-22*, 3 March 2017, p. 3.

883. ATCO's view was that the innovation expenditures it proposed to fund via the scheme would not generally qualify as approved expenditure due to the following:

- The risk associated with innovation, which requires businesses to incur up-front costs in the short to medium-term on initiatives with uncertain long-term payoffs. ATCO emphasised that, compared to conventional network investment projects, innovation projects carried a higher degree of uncertainty regarding the future benefits of the expenditures incurred.
- Regulated businesses are generally incentivised under regulatory frameworks to focus on short-term projects aimed at ensuring cost containment and building operational efficiencies within a single access arrangement period, as opposed to innovation projects that deliver benefits and foster dynamic efficiency over multiple access arrangement periods.[280]

884. Regarding the current regulatory framework, ATCO considered that:[281]

> The existing national gas regulatory framework is not designed to provide strong incentives for network innovation, particularly leading-edge technologies associated with potentially major changes in future gas network services provision, because it assumes a stable and predictable energy market and no fundamental change in network service provision.

885. Regarding the benefits of innovation-related expenditures for service providers, ATCO considered that the returns provided to service providers under the current regulatory framework do not sufficiently compensate research and development risk.[282] ATCO emphasised that the revenue and pricing principles included that a service provider should be provided with effective incentives so as to promote economic efficiency in the reference services it provided.

Submissions

886. Professor Craig Buckley supported ATCO's proposal to introduce the network innovation scheme in AA5. Professor Buckley noted that options for the gas distribution businesses to innovate were limited without funding from the Australian Renewable Energy Agency and in the absence of a network innovation scheme. He considered that the introduction of the proposed scheme would overcome disincentives for innovation created by the current regulatory framework.[283]

887. Professor Buckley contended that ATCO's plan to introduce hydrogen to its gas network would yield long-term benefits to ATCO's customers by ensuring that the gas distribution network was ready to receive, transport, deliver and meter hydrogen. The resultant benefits that Professor Buckley expected would be delivered to customers included:

- Reducing the risk of asset stranding through ATCO's early adoption of hydrogen.
- Reducing ATCO's future costs of carbon. Professor Buckley said that it was reasonable to assume the cost of carbon, and therefore the costs of deriving

[280] ATCO, *2020-24 Plan (Access Arrangement Information),* 31 August 2018, p. 149 and *Attachment 17.1 Network Innovation Scheme for ATCO*, p. 30.

[281] ATCO, *2020-24 Plan (Access Arrangement Information), Attachment 17.1 Network Innovation Scheme for ATCO*, p. 3.

[282] ATCO, *2020-24 Plan (Access Arrangement Information),* 31 August 2018, p. 148.

[283] C. Buckley submission, 12 November 2018.

energy from carbon-intensive sources, would rise in the future. Hence introducing hydrogen (a lower emissions energy source) would satisfy future customer demand.

- Positioning the gas network to be a complement to electricity services. Professor Buckley said that new fuels, such as biogas and hydrogen, could become mainstream and complementary energy solutions using existing gas network infrastructure.[284]

888. Kawasaki Heavy Industries said that the regulatory framework for gas distribution operated on the assumption that the market was in a steady state over time and that regulatory incentives were geared towards year-by-year improvements to operational efficiency, which was adverse for businesses wishing to address challenges facing the gas industry.[285]

889. Kawasaki considered that ATCO's proposal for the network innovation scheme made commercial sense as an additional incentive to balance ATCO's immediate obligation to deliver efficient service over the next five years and its responsibility to look ahead to the advances needed over the next 20 to 30 years. Kawasaki considered that under equivalent conditions to those ATCO operated in, a firm operating in a competitive market would be investing toward longer term horizons to ensure it could continue as conditions evolved. Kawasaki encouraged the ERA to consider the prudence and efficiency of the proposed scheme in the context of the benefits to consumers that would arise from a long-term outlook and investment in preparing for an uncertain future.[286]

890. Kawasaki considered that the network innovation scheme proposed by ATCO was modest in relation to the risk ATCO faced if policy and economic development rendered natural gas uneconomical.[287]

891. Kawasaki considered that the scheme contained a number of checks and balances, including project criteria, *ex-post* approval and annual review to ensure that expenditure was responsible and fully accountable.[288]

892. Kawasaki considered that the risk of asset stranding was significant for ATCO and not insubstantial for end-users of gas. Kawasaki therefore considered that it was not incompatible with the current regulatory framework to share with users some of the costs of mitigating that risk to the network.[289]

893. AGL Energy questioned whether the existing regulatory framework prevented ATCO from investing in innovation as ATCO claimed and the need for the proposed scheme.[290]

[284] C. Buckley submission, 12 November 2018.

[285] Kawasaki Heavy Industries submission, 14 November 2018.

[286] Kawasaki Heavy Industries submission, 14 November 2018.

[287] Kawasaki Heavy Industries submission, 14 November 2018.

[288] Kawasaki Heavy Industries submission, 14 November 2018.

[289] Kawasaki Heavy Industries submission, 14 November 2018.

[290] AGL Energy submission, 14 November 2018.

894. AGL also stated that it did not see how any benefits of the proposed scheme would be accrued and shared between ATCO and consumers in the future, given the costs of the scheme would be met upfront by consumers with little guarantee of benefits.[291]

895. Alinta Energy submitted that while it supported innovative and cost-effective energy solutions that benefited end-use customers, it considered that the costs of individual projects under ATCO's proposed innovation scheme should be recovered only from those users who would benefit from the projects. Alinta Energy stated that if a scheme project benefited end-use customers on a particular network tariff, then Alinta Energy would anticipate that the costs of that project would be recovered only from the consumers within that tariff class and not from ATCO's entire customer base. Further, Alinta Energy considered that projects where ATCO worked exclusively with an end-use customer or an individual retailer should not be eligible for scheme funding.[292]

896. Alinta Energy supported ATCO's proposal for the ERA to administer the scheme. Alinta Energy suggested that the ERA should carefully scrutinise the details and anticipated costs of each proposal and seek submissions from key stakeholders prior to approving any projects as eligible for scheme funding. Further, Alinta Energy considered that the ERA's costs for administering the scheme should be recovered under the scheme and not from licensed entities via licence fees or charges.[293]

897. Synergy did not support the introduction of the incentive mechanism proposed by ATCO. Synergy considered that new business development (or entrepreneurial schemes) should be delineated from innovation in relation to providing reference services. Synergy did not consider that ATCO's customers should fund entrepreneurial research and development projects such as those involving hydrogen, which Synergy said were only loosely linked to the provision of gas distribution reference services.[294]

898. Synergy recommended that the ERA review ATCO's historical and forecast expenditure on innovation to ensure that tariff revenue was based only on projects that delivered value to customers in the provision of reference services and contributed to the realisation of the national gas objective. Synergy also recommended that the ERA require ATCO and other monopoly network businesses to implement robust ring-fencing in future to ensure reference tariffs did not recover expenditure on competitive services, which in Synergy's view should be unregulated and treated as services subject to effective competition.[295]

Draft Decision

899. The ERA considered whether the NGR allows for the type of incentive mechanism ATCO has proposed.

900. The wording in rule 98 is broad and does not specify the types of mechanisms that can be proposed. Rule 98 sets the requirement that an incentive mechanism must be consistent with the revenue and pricing principles.

[291] AGL Energy submission, 14 November 2018.

[292] Alinta Energy submission, 14 November 2018, p. 6.

[293] Alinta Energy submission, 14 November 2018, p. 6

[294] Synergy submission, 14 November 2018, p. 8.

[295] Synergy submission, 14 November 2018, p. 9.

901. Rule 100 of the NGR and section 28 of the NGL set the general requirement, applicable to incentive mechanisms, for the ERA to exercise its regulatory functions in a manner that will, or is likely to, contribute to the achievement of the national gas objective.

902. The national gas objective 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 price, quality, safety, reliability and security of supply of natural gas".

903. All public submissions the ERA received regarding ATCO's proposed incentive mechanism said that the benefits of the proposed incentive mechanism to consumers were a relevant consideration whether or not to accept a proposed incentive mechanism. This view is also expressed by the AER, as outlined in paragraph 907.

904. ATCO proposed that it would recover the approved scheme expenditures through the annual reference tariff variation mechanism. The ERA must therefore consider rule 97 of the NGR, which is the rule applicable to the mechanics of reference tariff variation.

905. In view of these requirements and the comments raised through public submissions, the ERA gave consideration to the following points to form its draft decision on the incentive mechanism:

- Whether the proposed scheme is an acceptable incentive mechanism under rule 98 of the NGR.
- Whether the proposed scheme would contribute to the achievement of the national gas objective and satisfy the revenue and pricing principles. The ERA has considered the likely distribution of the costs and benefits of the proposed scheme.
- Incentives for innovation spending under the current regulatory framework and the adequacy of existing incentives.
- Interaction of the proposed incentive mechanism with the reference tariff variation mechanism.

906. The ERA's evaluation of these points is outlined in paragraphs 911 to 944 below.

907. In its submission, ATCO addressed an AER decision that did not approve a similar network innovation scheme proposed by Australian Gas Networks (AGN).[296] The AER rejected AGN's proposed scheme on the basis that:

- The existing regulatory framework already provided sufficient opportunity for the service provider to invest in innovation while allowing the business to retain efficiency benefits.
- It was unclear that the proposed incentive mechanism would serve the long term interests of consumers.

[296] Australian Energy Regulator, *Draft Decision: Australian Gas Networks Victoria and Albury gas access arrangement 2018 to 2022, Attachment 14 – Other incentive schemes*, June 2017, pp. 14-16. AGN accepted the AER's draft decision, wherein AGN's proposed incentive mechanism was not approved, and thus the AER's view on AGN's proposed scheme is not further elaborated in the subsequent final decision. Australian Gas Networks, *Revised Final Plan, Revised Access Arrangement Information for our Victorian and Albury natural gas distribution networks: 2018 to 2022*, August 2017, p. i, p. 2.

908. The AER also took into account the Capital Expenditure Sharing Scheme accepted by the AER as part of the same draft decision wherein AGN's proposed innovation scheme is not approved. The AER has also reiterated the view that an incentive mechanism must be considered in light of other incentives available to the service provider under the applicable access arrangement in another decision.[297]

909. The AER also noted the following disadvantages and costs with implementing AGN's proposed scheme:[298]

- Transaction and enforcement costs associated with the introduction and implementation of an innovation scheme.
- Higher prices for consumers in the short run, with no guaranteed efficiency gains in the long term.

910. The ERA is also of the view that relevant considerations for approving incentive mechanisms include the long-term interests of consumers and the incentives available to the service provider. This view aligns with the national gas objective and the revenue and pricing principles, which both specify that what an access arrangement must incentivise is economic efficiency in the use and operation of pipelines with which service providers provide reference services and economic efficiency in investment in the same.

Whether the proposed scheme is an acceptable incentive mechanism under rule 98 of the NGR

911. As previously stated, rule 98 of the NGR provides that a full access arrangement may include incentive mechanisms. The wording in rule 98 is broad and does not specify the types of mechanisms that can be proposed.

912. Rule 98 specifies that an incentive mechanism may provide for carrying over increments for efficiency gains and decrements for losses of efficiency from one access arrangement period to the next. The network innovation scheme proposed by ATCO does not include a provision for carrying over increments for efficiency gains and decrements for losses of efficiency from one access arrangement period to the next.

913. Rule 98 requires an incentive mechanism to be consistent with the revenue and pricing principles. The ERA has considered whether ATCO's proposed incentive mechanism is consistent with the revenue and pricing principles.

914. In section 24(2)(a) of the NGL, the revenue and pricing principles state that a service provider should be provided with a reasonable opportunity to recover at least the efficient costs of providing reference services. The revenue and pricing principles state that a service provider should be provided with effective incentives in order to promote economic efficiency with respect to reference services, including economic efficiency in terms of efficient investment in, or in connection with, a pipeline. The ERA has therefore considered whether scheme funding under the proposed incentive mechanism would lead to the recovery of the efficient costs of providing reference

[297] Australian Energy Regulator, *Final Decision: Australian Gas Networks access arrangement 2016 to 2021*, *Attachment 14 – Other incentive schemes*, May 2016, p. 8.

[298] Australian Energy Regulator, *Draft Decision: Australian Gas Networks Victoria and Albury gas access arrangement 2018 to 2022, Attachment 14 – Other incentive schemes*, June 2017, pp. 15-16.

services by ATCO and whether the scheme would promote economic efficiency in the provision of reference services by ATCO.

915. The ERA does not consider that Part 12 of the proposed revised access arrangement provides sufficient checks and balances to ensure that scheme expenditure would promote the provision of reference services in an economically efficient manner. Though Part 12.3h)i) of the proposed revised access arrangement states that the ERA will approve the recovery of eligible expenditures if the ERA is satisfied the expenditure was incurred efficiently, it would be difficult for the ERA to assess whether the expenditure represents efficient costs. The ERA would be required to engage extensive specialist knowledge to reliably apply the proposed eligibility criteria and assess the efficiency of proposed expenditure. Given that the stated objective of the scheme is to provide funding for projects using innovative and new technologies, judgement regarding the efficiency of the proposed expenditure would likely be subjective and difficulty to assess. Similarly, the reporting requirements of the scheme outlined at Part 12.6 outline ATCO's requirements to provide information to the ERA only in broad terms. The ERA is not satisfied that, based on these broad reporting requirements, the ERA would receive the information necessary to assess the efficient costs for proposed scheme projects.

916. Based on the reasoning outlined in paragraphs 914 and 915, the ERA has concluded that the incentive mechanism proposed by ATCO does not satisfy the revenue and pricing principles.

Whether the proposed scheme would contribute to the achievement of the national gas objective

917. The ERA has considered whether the proposed scheme is consistent with the national gas objective. NGR rule 100 sets out a general requirement that the provisions of an access arrangement must be consistent with the national gas objective.

> **100 General requirement for consistency**
>
> The provisions of an access arrangement must be consistent with:
>
> (a) the national gas objective; and
>
> (b) these rules and the Procedures in force when the terms and conditions of the access arrangement are determined or revised.

918. The effect of NGR rule 100 is reinforced by section 28 of the NGL, which directs the ERA to exercise its regulatory functions in a manner that will, or is likely to, contribute to the achievement of the national gas objective. Section 28(1)(b)(iii)(A) specifies that if the ERA is making a designated reviewable regulatory decision, and there are two or more possible decisions that will or are likely to contribute to the achievement of the national gas objective, then the ERA must make the decision that "will or is likely to contribute to the achievement of the national gas objective to the greatest degree". The rules and law therefore require the ERA to evaluate the proposed provisions of an access arrangement, including any relating to incentive mechanisms, in terms of their potential contributions to the long term interests of natural gas consumers.

919. The national gas objective defines the interests of consumers broadly, being the "interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply". The regulatory framework does not prevent approval of high risk projects as ATCO claimed, though the ERA must nonetheless consider the extent

to which the projects contribute to the achievement of the national gas objective. Similarly, the ERA considers that the regulatory framework allows for the consideration of non-price outcomes, for example security of supply, when deciding whether or not to approve capital and operating expenditure.

920. The ERA has identified that the following aspects of ATCO's proposed innovation scheme are relevant to assessing the extent to which the scheme contributes to realisation of the national gas objective:

- The costs and risks of innovation projects funded under the scheme will be borne entirely by consumers, while the distribution of the benefits of the projects funded (including how they will be shared with consumers) is not clear.
- The scheme will require the ERA to incur recurrent costs for conducting the administration and compliance of the scheme.
- The scheme administration and eligibility criteria leave a degree of uncertainty as to how the scheme will operate.

921. ATCO proposed to recover the approved expenditure through the annual reference tariff variation mechanism. This would result in the eligible expenditure being funded entirely by gas consumers, with ATCO being effectively repaid in full for the same and therefore bearing none of these costs. The implication of this distribution of project costs is that consumers would also assume all of the risks of the funded projects.

922. Another implication of the distribution of project costs is that existing users would effectively fund projects with uncertain benefits which, if realised, would benefit future users. Alinta submitted that the costs of individual projects under ATCO's proposed innovation scheme should be recovered only from those users who will benefit from the projects.

923. As outlined above (paragraphs 917 and 918), the NGR (rule 100) and the NGL (section 28) require the ERA to evaluate whether the scheme will, or is likely to, further the long term interests of consumers of natural gas with respect to either price, quality, safety, reliability and security of supply. How and what share of the benefits arising from scheme expenditures will flow to gas consumers, and the distribution of these benefits among consumers, is not clear.

924. AGL's submission questioned how any benefits of the scheme would be accrued and shared between ATCO and consumers in the future. AGL considers it is not clear how or if consumers would share in any benefits which arise from eligible expenditures. This includes the benefits of projects that ATCO has stated, by their nature, may take a long time before any benefits are realised.

925. The scheme would also require the ERA to expend resources to administer the scheme, including recurrent costs to assess ATCO's proposals for eligible projects and costs to conduct ongoing reviews for scheme compliance. From Part 12.2 of the proposed revised access arrangement that in order to apply the project eligibility criteria proposed, the ERA would be required to engage extensive specialist knowledge to delineate whether proposed projects differ sufficiently from currently existing technologies applied in Western Australia. This would be a significant recurring expense associated with administering the scheme relative to the amount of project funding available under the scheme. As the ERA's assessment is that it is not clear that consumers would share in the likely benefits of eligible projects, these costs cannot be justified.

926. The ERA does not consider that Part 12 of the proposed revised access arrangement provides sufficient checks and balances to ensure that scheme expenditure aligns with the stated scheme objective. The ERA would be required to engage extensive specialist knowledge to reliably apply the proposed eligibility criteria, and judgement of projects against the eligibility criteria would nonetheless involve subjectivity. Similarly the reporting requirements of the scheme at Part 12.6 outline the requirements on ATCO to provide information to the ERA only in broad terms. The ERA is not satisfied that, based on these broad reporting requirements, the ERA would be provided with the information necessary to assess qualifying expenditure, expenditure recovery and indicative approval as the ERA would be required under Parts 12.2 to 12.4.

Incentives for innovation spending under the current regulatory framework and the adequacy of existing incentives

927. As stated at paragraph 882, ATCO's view was that the current framework prevents innovation expenditure which would contribute to the realisation of the national gas objective. AGL, on the other hand, questioned whether that was the case.[299]

928. As stated at paragraphs 913, 917 and 918, the ERA must consider whether the proposed scheme is consistent with the revenue and pricing principles, and whether it contributes to the achievement of the national gas objective, when deciding whether or not to approve the proposed scheme. The ERA's view is that a common objective of the revenue and pricing principles and the national gas objective is efficiency in investment in, and operation and use of, natural gas services. The national gas objective requires that the efficient investment in, and operation and use of, natural gas services serves "the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas".

929. The current framework does not prevent efficient investment for the long-term interest of customers.

930. The issue is not whether the framework prevents innovation. Rather, innovation spending and innovation projects are relevant to the extent they promote efficiency in investment and operation of natural gas services as required by the national gas objective. Many types of expenditure including, but not limited to, innovation spending, can be considered to promote efficiency in investment in and operation and use of natural gas services.

931. NGR rules 79 and 91 govern the approval of capital and operating expenditure respectively as part of an access arrangement revision.

932. Rule 79 of the NGR is as follows:

> **79 New 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;

[299] AGL Energy submission, 14 November 2018, p. 4.

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

(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:

933. (i) to maintain and improve the safety of services; or

934. (ii) to maintain the integrity of services; or

935. (iii) to comply with a regulatory obligation or requirement; or

936. (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) The AER's discretion under this rule is limited.

937. Rule 91 of the NGR is as follows:

91 Criteria governing operating expenditure

(1) Operating 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 delivering pipeline services.

(2) The AER's discretion under this rule is limited.

938. It is evident from rules 79 and 91 that the regulatory criteria for approving capital and operating expenditure do not preclude innovation spending. ATCO submitted that innovation was characterised by uncertain long-term payoffs. For both capital and

operating expenditure, there is the requirement that these expenditures 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 delivering pipeline services.

939. The ERA has the power to evaluate and approve expenditure under rule 79 (for capital expenditure) or rule 91 (for operating expenditure), subject to case-by-case consideration and determination that the proposed expenditure satisfies the criteria specified under those rules. Again, the decisive factor according to rules 79, 91 and the national gas objective is whether or not the expenditure is efficient.

940. NGR rule 84 also provides an opportunity for service providers to have expenditure which does not qualify under rule 79 to be approved as part of an access arrangement as speculative capital expenditure:

> **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 national fund (the **speculative capital expenditure account**).

941. The ERA considers that rule 84 provides an additional avenue for service providers to be compensated for expenditure which is in the nature of speculative investment.

942. The ERA's view is that the approval of all capital and operating expenditures as part of an access arrangement revision should be subject to the approval criteria set out in the NGR rules 79, 91 and 84 and subject to the general requirements set out under NGR rule 100 and section 28(1)(b)(iii)(A) of the NGL.

Interaction of the proposed incentive mechanism with the reference tariff variation mechanism

943. Rule 97 of the NGR is as follows:

> **97 Mechanics of reference tariff variation**
>
> (1) A *reference tariff variation mechanism* may provide for variation of a reference tariff:
>
> (a) in accordance with a schedule of fixed tariffs: or
>
> (b) in accordance with a formula set out in the access arrangement; or
>
> (c) as a result of a cost pass through for a defined event (such as a cost pass through for a particular tax); or
>
> (d) by the combined operation of 2 or more of the above.
>
> (2) A formula for variation of a reference tariff may (for example) provide for:
>
> (a) variable caps on the revenue to be derived from a particular combination of reference services; or
>
> (b) tariff basket price control; or
>
> (c) revenue yield control; or
>
> (d) a combination of all or any of the above.
>
> (3) In deciding whether a particular *reference tariff variation mechanism* is appropriate to a particular access arrangement, the AER must have regard to:

(a) the need for efficient tariff structures; and

(b) the possible effects of the *reference tariff variation mechanism* on administrative costs of the AER, the service providers, and users or potential users; and

(c) the regulatory arrangements (if any) applicable to the relevant reference services before the commencement of the proposed *reference tariff variation mechanism*; and

(d) the desirability of consistency between regulatory arrangements for similar services (both within and beyond the relevant jurisdiction; and

(e) any other relevant factor.

(4) A *reference tariff variation mechanism* must give the AER adequate oversight or powers of approval over variation of the reference tariff.

(5) Except as provided by a *reference tariff variation mechanism*, a reference tariff is not to vary during the course of an *access arrangement period*.

944. The ERA considers that ATCO's proposed incentive scheme is not consistent with rule 97(3)(b). As stated in paragraph 925, administration of the scheme would require the ERA to expend resources including recurrent costs to assess ATCO's proposals for eligible projects and costs to conduct ongoing reviews for scheme compliance. The ERA would be required to engage specialist knowledge in order to assess projects against the scheme eligibility criteria. The ERA estimates that the administration costs of the scheme would be a significant recurring expense relative to the amount of project funding available under the scheme. The ERA therefore does not consider that the administrative costs of assessing and approving recovery of scheme expenditures through the reference tariff variation mechanism have been justified.

Conclusion

945. The ERA has considered the proposed network innovation scheme and concludes that:

- The proposed scheme is not consistent with the revenue and pricing principles.
- The proposed scheme would not contribute to the realisation of the national gas objective to a greater extent than other incentives available to service providers under the current regulatory framework.
- The administrative costs of assessing and approving recovery of scheme expenditures through the reference tariff variation mechanism have not been justified.
- The ERA therefore does not approve the proposed network innovation scheme and requires ATCO to implement the following required amendment.

Required Amendment 16

ATCO must delete the proposed Network Innovation Scheme (Part 12, Incentive Mechanisms) and associated cost pass through item (Annexure B, clause 2.1(e)) from the proposed revised access arrangement.

Fixed Principles

947. The National Gas Rules (NGR) allow for an access arrangement to include fixed principles (rule 99). Fixed principles may be fixed for a stated period that extends over two or more access arrangement periods.

948. A fixed principle that is approved by the ERA under the NGR is binding on the ERA and ATCO for the period for which the principle is fixed. However:

- The ERA may vary or revoke a fixed principle at any time with ATCO's consent.
- If a rule is inconsistent with a fixed principle, the rule operates to the exclusion of the fixed principle.

ATCO's Proposal

949. Part 11 of the access arrangement lists the fixed principles that apply. ATCO has proposed to extend two of the principles that will otherwise expire during the fifth access arrangement period (AA5) and to introduce a new principle to support the operation of the proposed development rebate scheme (see paragraph 1123):

- Fixed principle (Part) 11.1 is due to expire on 25 August 2025. ATCO has not made any changes to this fixed principle.
  - This is a fixed principle for the straight-line method of depreciation (under Part 9 of the access arrangement); and the inclusion of *higher heating value (HHV) costs* that are conforming capital expenditure in the opening capital base at the revision commencement date and conforming operating expenditure in total revenue for the next access arrangement period.
- Fixed principle (Part) 11.2 is due to expire 1 January 2021. ATCO has extended this principle to apply for the next access arrangement period.
  - This is a fixed principle allowing the inclusion of *physical gate point costs* that constitute conforming capital expenditure in the opening capital base, and conforming operating expenditure in total revenue for the next access arrangement period.
- Fixed principle (Part) 11.3 is due to expire 31 December 2024. ATCO has extended this principle to apply for the next access arrangement period.
  - This is a fixed principle allowing the inclusion of additional conforming expenditure associated with a cost pass-through event that meets the requirements to do so, and requiring the provision of an associated report to the ERA.
- ATCO has added new fixed principle (Part) 11.4 to provide the ability to recover rebate amounts and associated costs from the development rebate scheme through reference tariffs in future access arrangement periods. The proposed fixed principle is as follows:

  11.4 The following principle applies for the period described

  The inclusion of Development Rebate Scheme Costs related to Rebate Amounts under paragraph 7.5(e) in Total Revenue in respect of the AGA GDS for the period or periods ending when those Rebate Amounts are fully depreciated.

Submissions

950. No submissions addressed the matter of fixed principles.

Draft Decision

951. ATCO has proposed to extend fixed principles 11.2 and 11.3 to apply for the next access arrangement period. If not extended, both of these fixed principles would otherwise expire during AA5. The fixed principles themselves remain substantially unchanged from the existing principles and are as follows.

> 11.2 The following principles were approved by the ERA as fixed principles for 10 Years commencing on 1 January 2011 and have been extended to apply as required to ensure the expenditure they refer to is included in the expenditure for the Next Access Arrangement Period:
>
> a) the inclusion of:
>
> i) Physical Gate Point Costs that constitute Conforming Capital Expenditure in the Opening Capital Base for the AGA GDS for the Next Access Arrangement Period; and
>
> ii) Physical Gate Point Costs that constitute Conforming Operating Expenditure in Total Revenue for the Next Access Arrangement Period in respect of the AGA GDS,
>
> in respect of which Reference Tariffs have been varied as a Cost Pass Through Event.
>
> 11.3 The following principle expires at the end of the ~~next access arrangement~~ Next Access Arrangement Period:
>
> a) the inclusion of:
>
> i) additional conforming expenditure associated with a Cost Pass-Through Event for the period 1 ~~November 2018~~September 2023 to 31 December ~~2019~~2024. The expenditure must meet the requirements of clause 2 of Annexure B of this ~~current access arrangement~~Current Access Arrangement;
>
> b) In compliance with clause 11.3(a)(i), AGA must provide a report to the ERA on the cost pass-through, and that report shall contain the following information:
>
> i) a statement of reasons for the variation of the Reference Tariff as a result of the Cost Pass Through Event;
>
> ii) supporting calculations demonstrating consistency with the requirements of clause 2 of Annexure B;
>
> iii) supporting information substantiating the amount and nature of the costs proposed to be passed through by the varied Reference Tariff; and
>
> iv) the date or dates on which it is proposed by ATCO Gas Australia that the varied Reference Tariff shall come into effect.
>
> The ERA will consider ATCO Gas Australia's application for Cost Pass-Through Events during this period in its review of the next ~~access arrangement~~Access Arrangement. The ERA may require ATCO Gas Australia to provide further substantiation of the amounts and the nature of the costs that ATCO Gas Australia proposes to be passed through by the varied Reference Tariffs and requiring ATCO Gas Australia to provide that further substantiation by a date specified in the ERA's request. The ERA will advise if it approves or does not approve the cost pass-throughs detailed in ATCO Gas

> Australia's report and provide reasons for its decision. ATCO Gas Australia may account for the timing difference between incurring Conforming Operating Expenditure and the start date for the ~~tariff~~Tariff variation, through a time value of money adjustment.

952. To extend the above fixed principles, ATCO amended the drafting to use the words "extended to apply as required" and the term "next access arrangement period", which is defined in the access arrangement to mean "the access arrangement period immediately after the current access arrangement period". There is no reference to any specific dates. Absent such dates there may be uncertainty as to what period the fixed principles actually apply.

953. To remove any ambiguity over the period to which the fixed principles apply, the access arrangement should be clear as to when the principles will expire, for example, fixed principle 11.1. This principle states that it was approved on 25 August 2005 for a period of 10 years and has been declared as a fixed principle for a further period of 10 years commencing 25 August 2015 (therefore expiring on 25 August 2025).

Required Amendment 17

ATCO must amend fixed principles 11.2 and 11.3 to include specific dates to remove any ambiguity over the period to which the fixed principle applies.

954. Consistent with the ERA's decision to require ATCO to remove the proposed development rebate scheme from its extension and expansion policy (see paragraph 1151), ATCO's proposed fixed principle 11.4, to recover rebate amounts and associated costs from the scheme in future access arrangement periods, must be deleted.

Required Amendment 18

ATCO must delete fixed principle 11.4 from the proposed revised access arrangement.

Terms and Conditions

955. The National Gas Rules (NGR) require an access arrangement to detail, in addition to the reference tariff, the terms and conditions for each reference service. [300]

956. Consistent with rule 100 of the NGR, the ERA must be satisfied that any proposed amendment to the terms and conditions are consistent with:

- 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 price, quality, safety, reliability and security of supply of natural gas".[301]
- The NGR and the procedures in force at the time of this access arrangement review.

ATCO's Proposal

957. ATCO proposed to amend its template service agreement. The template service agreement specifies the terms and conditions for providing reference services. The purpose of the template service agreement is that it could be adopted by retailers seeking access to reference services. The agreement is included as Annexure F to the access arrangement.

958. ATCO's proposed changes are shown in a marked-up copy of the agreement and detailed in ATCO's access arrangement information. The reasons for the changes fall into one (or more) of the following categories:

- Minor formatting and structural amendments: to correct and update the document for the fifth access arrangement period (AA5).
- New and modified legislation: to reflect changes to relevant applicable laws.
- Institutional changes: to reflect the new role of the Australian Energy Market Operator in the Western Australian retail gas market.
- New entrants to the market: to reflect ATCO's practical experience negotiating terms of the agreement with retail market participants and stakeholders.
- New reference service: to reflect ATCO's proposed change to reclassify a special meter reading from a non-reference service in the fourth access arrangement period (AA4) to a reference service in AA5.

Submissions

959. Submissions from AGL Energy and Alinta Energy addressed the terms and conditions in the template service agreement. Details of the matters raised in these submissions are included in the draft decision considerations below.

[300] NGR, rule 48(1)(d)(ii).

[301] NGL, section 23.

Draft Decision

960. The ERA has considered ATCO's proposed changes to the template service agreement and the submissions received from AGL and Alinta.

961. In summary, ATCO's proposed changes comprise:

- Minor formatting and typographical corrections throughout the agreement.
- The deletion of all footnotes from the agreement.
- Amendments to the drafting of specific clauses of the agreement.
- Amendments to some defined terms used in the agreement.

962. ATCO's proposed changes that comprise minor formatting and typographical corrections, unless otherwise stated, are considered to be administrative in nature and do not materially alter the agreement.

963. ATCO's proposed deletion of all footnotes from the agreement, unless otherwise stated, is also accepted. The current AA4 agreement contains 59 footnotes, which generally comprise references to and/or explanatory text for relevant legislation or other regulatory instruments (such as the National Gas Law, NGR and Retail Market Procedures). Such footnotes are unnecessary and deletion does not materially alter the agreement.

964. ATCO's proposed changes to amend the drafting of particular clauses and defined terms of the agreement are considered in turn below (see paragraphs 965 to 1021). The ERA has also considered submissions from interested parties that have proposed further amendments to the agreement (see paragraphs 1025 to 1091).

Invoicing and payment (clause 10)

965. Clause 10 of the template service agreement details provisions for invoicing and payment. These provisions cover the structure of payment claims (for invoicing) and terms for payment, payment disputes and errors, and the calculation of interest on unpaid amounts. ATCO proposed amendments to the drafting of clauses 10.1 and 10.3.

Clause 10.1 Invoicing

966. Clause 10.1 details provisions for invoicing. ATCO's proposed amendments are as follows. ATCO claimed the amendments reflected actual arrangements with retailers in Western Australia and the content of payment claims.

> **10.1 Invoicing**
>
> (a) <Service Provider> may claim payment, twice a month in arrears, of Charges and other amounts payable by <User> under this Service Agreement, by issuing to <User> a written payment claim prepared in accordance with clause 10.1(a) (Payment Claim).
>
> (b) <Service Provider> will provide notice of the Payment Method or Methods by which payment may be made, and any information required to make payment using the specified Payment Method or Methods.
>
> (c) A Payment Claim comprises:

(i) a data file setting out the Meter data used to calculate or estimate the relevant Charges included in the Payment Claim, together with the details relevant to the composition of the Payment Claim;

~~(i)~~(ii) a tax invoice in respect of:

A. all Charges and other amounts payable under this Service Agreement in respect of each Delivery Point, for the period covered by the Payment Claim;

B. any other amounts payable under this Service Agreement for the period covered by the Payment Claim;

~~B.~~C. any outstanding amounts previously invoiced that remain unpaid, and any interest payable on those amounts calculated under clause 10.5; and

~~C.~~D. any deduction from or addition to the tax invoice required under clause 10.4 to correct an error in a previous Payment Claim; and

~~(ii) a summary of the Meter data used to calculate or estimate the relevant Charges included in the Payment Claim;~~

~~(iii) the Payment Method or Methods by which payment may be made, and any information required to make payment using the specified Payment Method or Methods; and~~

~~(iv)~~(iii) such other information as the parties may agree in writing.

~~(b)~~(d) <Service Provider> will …

967. ATCO's proposed changes comprise two new subclauses that substantially reproduce current provisions with some changes to drafting to clarify what invoicing arrangements are in place. The effect of the proposed changes is to:

- Impose an obligation on the service provider to provide notice of the payment method(s) by which payment may be made.
- Describe a payment claim as comprising a data file that sets out the meter data used to calculate, or estimate, the charges in the claim in addition to a tax invoice and any other agreed information.

968. The new drafting does not materially alter the provisions of the current clause and clarifies operational aspects of the invoicing process. No public submissions raised any issues with these changes. For these reasons ATCO's proposed changes are accepted as being consistent with the NGR and national gas objective.

969. In its submission, AGL noted that clause 10.1(a), which remained unchanged, allowed ATCO to make twice monthly claims for payments. However, the retailer is generally only able to bill the customer monthly.[302] AGL submitted that:

> Unless special circumstances prevail, the network [operator] should issue their invoice 10 business days after months end, as the retailer is required to pay 10 business days after the invoice is delivered (cl.10.2).
>
> A fixed payment cycle will allow all users to manage their cash flow position most efficiently and ensure that invoicing dates and payments dates can be scheduled well into the future.

[302] AGL Energy submission, 14 November 2018, pp. 8-9.

970. AGL stated that retailers were generally only able to bill customers monthly because they were required to comply with the *Compendium of Gas Customer Licence Obligations* as a condition of their retail licence.[303] Clause 4.1 of the Compendium requires retailers to bill customers, subject to several exceptions, no more than once a month and at least every 105 days. Therefore, the retailer-customer billing arrangements cannot be changed to meet changes to the frequency of the service provider's billing requirements.

971. However, apart from AGL, no other retailers raised concerns with clause 10.1(a) of the agreement or ATCO's billing frequencies. AGL itself did not explicitly claim that the billing frequency in clause 10.1(a) was causing, or had caused, issues for the billing of its end-user customers. Further, clause 10.1(a) of the agreement is discretionary – the clause does not require ATCO to claim payment twice a month and even if it did, neither AGL nor any other retailers put forward evidence as to ATCO's actual billing frequency for each customer and whether a customer had been billed twice within one month.

972. Considering the evidence currently available, the provisions of clause 10.1(a) are not inconsistent with the NGR. However, the clause reference to clause "10.1(a)" is incorrect and requires an administrative amendment. The reference should be a reference to clause "10.1(c)".

Required Amendment 19

ATCO must amend clause 10.1(a) of the template service agreement to correct the reference to clause "10.1(a)". The reference should be a reference to clause "10.1(c)".

Clause 10.3 Disputing payment claims prior to payment

973. Clause 10.3 details provisions for disputing payment claims (invoices) prior to payment. ATCO proposed to amend the timeframe the user has to provide a "payment dispute notice" to the service provider from ten business days after receiving the payment claim to three business days.[304] ATCO claimed the amendments reflected actual arrangements with retailers in Western Australia.

974. AGL submitted that the proposed three days to identify a payment issue and raise a dispute with ATCO was not reasonable for a retailer with a substantial number of customers.[305] AGL claimed that its payment schedule suggested for clause 10.1(a) (see paragraph 969) would allow a retailer reasonable time to identify payment issues and provide a payment dispute notice to ATCO.

975. ATCO's proposal to shorten the timeframe a user has to raise a payment dispute from 10 business days to three business days is significant (a difference of more than one standard working week). The ERA accepts this shortened timeframe may be unreasonable for retailers with substantial customer numbers.

976. Under the current AA4 provisions of the agreement, users have 10 business days after receiving a payment claim to raise a payment dispute notice with ATCO, which must be in writing and comprise the full details of the dispute and the amount the user considers should be payable (the 'alternative payment amount') instead of the

[303] Information on the compendium is available online (accessed December 2018).

[304] The amendment is made to clause 10.3(a)(i) of the template service agreement.

[305] AGL Energy submission, 14 November 2018, p. 9.

amount set out in the claim. After receiving the dispute notice, ACTO has five business days to provide a written response notice to the user, stating whether it agrees or does not agree to the alternative payment amount.

977. In circumstances where a user does not raise a payment dispute notice within the 10 business day timeframe, it must essentially pay the payment claim in accordance with the payment terms and raise any disputes about the payment in accordance with clause 10.4, which provides for the correction of payment errors after payment.

978. The payment terms under the agreement (clause 10.2) are for payment claims to be paid within 10 business days after the claim is received. The timeframe to dispute a payment claim prior to payment should therefore be less than or equal to 10 business days. That is, the payment claim is either paid or disputed within the 10 business day payment period.

979. ATCO submitted that its proposal to shorten the timeframe to raise a payment dispute reflected existing arrangements with retailers in Western Australia. However, this is unsubstantiated. Given the concerns raised by AGL, ATCO's proposed amendment cannot be accepted as being consistent with the NGR or national gas objective without further evidence that all users (retailers) are able to operationally meet such timeframes. Unless all users are able to reasonably meet a three business day timeframe, a longer timeframe that corresponds with the payment terms of the agreement should remain. Therefore, the timeframe for a user to raise a payment dispute prior to payment should remain unchanged, or be changed to specify that a payment dispute must be raised prior to the due date of the payment claim. Such provisions would be consistent with the NGR and national gas objective.

Required Amendment 20

ATCO must amend clause 10.3(a) of the template service agreement to retain the 10 business day timeframe for a user to raise a payment dispute, or to provide that a payment dispute must be raised prior to the due date of the payment claim.

Default and termination (clause 15)

980. Clause 15 of the template service agreement details provisions for default and termination. These provisions include the circumstances where a party and user are in default under the agreement. ATCO proposed amendments to clauses 15.1 and 15.2 to change these circumstances.

Clause 15.1 Default by a party

981. Clause 15.1 specifies the circumstances where a party is in default under the agreement. ATCO proposed to amend subclause (c) as follows to reflect the mutual obligations and rights of both parties.

> **15.1 Default by a party**
>
> A party is in default under this Service Agreement in any one or more of the following circumstances:
>
> …
>
> (c) if the party otherwise fails to perform or observe any one or more of its obligations under this Service Agreement, including any obligation implied by

the operation of Law, where such failure ~~would~~ causes material detriment to ~~<Service Provider>~~the other party;

982. No submissions to the ERA addressed ATCO's proposed changes to clause 15.1(c).

983. Clause 15.1(c) details the circumstances where a party is in default. The obligations and rights under this clause apply to *all* parties to the agreement and not just the service provider (as is currently drafted). For this reason, ATCO's proposed amendment is accepted as being consistent with the NGR and national gas objective.

Clause 15.2 Default by <User>

984. Clause 15.2 specifies the circumstances where a user is in default under the agreement and are in addition to the circumstances specified in clause 15.1. ATCO proposed to amend subclause (a) as follows to reflect changes to termination rights in cases of insolvency following amendments introduced from 1 July 2018 pursuant to the *Treasury Laws Amendment (2017 Enterprise Incentives No.2) Act 2017 (Cth)*.

> **15.2 Default by <User>**
>
> In addition to the circumstances specified in clause 15.1, <User> is in default under this Service Agreement in any one or more of the following circumstances:
>
> (a) if <Service Provider> determines, acting reasonably, there is any ~~y~~ actual or potential material adverse change which may adversely impact ~~in~~ the business or financial condition of <User> or ~~an event occurs~~ which could~~, in <Service Provider>'s reasonable opinion,~~ materially affect <User>'s ability to meet its obligations to <Service Provider> under this Service Agreement; or

985. ATCO submitted that the proposed amendments to clause 15.2(a) are to ensure the *ipso facto* clause remains enforceable.[306]

986. The ERA considers that ATCO's proposed amendments to clause 15.2(a) of the template broaden the scope of the clause. Under the proposed clause, an actual or potential material adverse change which may adversely affect the user's business or financial condition, or which could materially affect the user's ability to meet its obligations to the service provider, will be a default. In comparison, the current AA4 clause provides that if there is any adverse change in the user's business or financial condition, or an event occurs which could materially affect the user's ability to meet its obligations to ATCO, the user will be in default. ATCO has not explained why the clause has been broadened in this way. For this reason, ATCO's proposed amendments to clause 15.2(a) are not accepted as being consistent with the NGR and national gas objective.

987. The *Treasury Laws Amendment Act* (Cth) has introduced a regime whereby the enforcement of certain contractual clauses (known as *ipso facto* clauses) is restricted in the context of specified insolvency procedures (the *ipso facto* regime).[307]

> An *ipso facto* clause is a provision that allows one party to terminate or modify the operation of a contract upon the occurrence of some specific event, regardless of otherwise continued performance of the counterparty…
>
> The amendments of this [Treasury Laws Amendment Bill] will make certain types of these contractual rights unenforceable while a company is restructuring under administration, a compromise or arrangement aimed at avoiding being wound up in

306 ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 189.

307 Commonwealth Parliament of Australia House of Representatives, *Treasury Laws Amendment (2017 Enterprise Incentives No.2) Bill 2017: Explanatory Memorandum*, p. 3 (online) (accessed February 2019).

insolvency or when a managing controller has been appointed over all or substantially all of the property of the company.

988. Clauses 15.1(d) and 15.2(a) of the agreement are captured by the *ipso facto* regime established by the *Treasury Laws Amendment Act* (Cth). To support the national gas objective, the ERA considers the *ipso facto* provisions in these clauses should be amended to make them expressly subject to the *ipso facto* regime to give parties express notice of the operation of the regime and its effect. A definition of "*ipso facto* regime" should also be included in the agreement.

Required Amendment 21

ATCO must amend clause 15.2(a) of the template service agreement to retain the current (AA4) drafting.

ATCO must also amend clauses 15.1(d) and 15.2(a) to make the clauses expressly subject to the *ipso facto* regime by adding the words (at the beginning of each clause) "subject to the Ipso Facto Regime,".

ATCO must insert a definition of "Ipso Facto Regime" in clause 23.1 as follows:

Ipso Facto Regime means the amendments made to the Corporations Act 2001 (Cth) by Part 2 of the Treasury Laws Amendment (2017 Enterprise Incentives No. 2) Act 2017 (Cth).

Security and insurance (clause 16)

989. Clause 16 of the template service agreement details provisions for security and insurance. These provisions detail the situations where a user is required to provide security and the amount of security required, and the insurances to be held and required insurance information. ATCO proposed amendments to the drafting of clauses 16.2 and 16.3.

Clause 16.2 Security for performance

990. ATCO amended the drafting of clause 16.2 to clarify that the types and amounts of security for performance were not limited to a bank guarantee. The terms "bank guarantee" or "guarantee" have been replaced with the terms "approved security" or "required security amount". The term approved security is defined at clause 23.1 (dictionary) of the agreement as:

> **Approved Security** means at User's election:
>
> (a) a bank guarantee in the form set out in Annexure B (or such other form as is acceptable to <Service Provider>);
>
> (b) funds deposited by way of a security bond;
>
> (c) an insurance bond which is unconditional and payable on demand without reference to the User and notwithstanding any notice given by the User not to pay same, being otherwise in a form acceptable to <Service Provider>: or
>
> (d) such other form of security as may be agreed between the parties from time to time.

991. ATCO submitted that the amendments to clause 16.2 were in response to requests from prospective users for various forms of security to meet the requirements of the clause.

992. No submissions to the ERA addressed ATCO's proposed amendments to clause 16.2.

993. Allowing various forms of security (other than a bank guarantee) is beneficial to users because it provides the user with options to meet the security requirements of the agreement. Options for security allow the user to best meet their operational circumstances and is consistent with the NGR and national gas objective. Subject to the required amendment to proposed clause 16.2(k) (discussed below), ATCO's proposed amendments to clause 16.2 are accepted.

994. Proposed (new) clause 16.2(k) of the agreement reads:

> If the Approved Security is to be provided by way of a bank guarantee, the bank guarantee must be in or substantially in the form set out in Annexure B.

995. The proposed clause is inconsistent with part (a) of the new defined term "approved security". Whereas part (a) of the defined term requires a bank guarantee to be in the form set out in Annexure B or such other form as is acceptable to the service provider, proposed clause 16.2(k) requires the bank guarantee to be in the form set out in Annexure B or in substantially that form. The words "such other form as is acceptable to the service provider" is broader than "substantially in the form set out in Annexure B". ATCO should therefore amend clause 16.2(k) to make it consistent with part (a) of the defined term by deleting the words "or substantially in" and replacing them with "(or such other form as is acceptable to the <Service Provider>)" after the words "Annexure B".

Required Amendment 22

ATCO must amend clause 16.2(k) of the template service agreement to read:

If the Approved Security is to be provided by way of bank guarantee, the bank guarantee must be in the form set out in Annexure B (or such other form as is acceptable to <Service Provider>).

Clause 16.3 Insurances

996. Clause 16.3 details the insurances that each party must hold under the agreement and the insurance information that is, or may be, required.

- Subclause (c) allows the service provider to request the user to provide evidence about matters relating to its insurance. Where requested, the user is required to provide this evidence within 14 business days.
- Subclause (d) requires the user to inform the service provider, within seven business days, of any notification from an insurer of its intention to cancel the user's insurances, or the user's intention to change its insurer.

997. ATCO proposed to amend the time periods as follows to standardise the periods across the agreement.

- Clause 16.3(c) has been amended from 14 to 15 business days.

- Clause 16.3(d) has been amended from 7 to 10 business days.[308]

998. No submissions to the ERA addressed ATCO's proposed amendments to clause 16.3.

999. ATCO's proposed changes to the time periods in clause 16.3 are minimal and correspond with standard working weeks (that is, three and two weeks in clauses 16.3(c) and 16.3(d) respectively). The amendments are also beneficial to users because they provide additional business days to comply and are consistent with the NGR and national gas objective.

1000. Consistent with ACTO's reasons to standardise the time periods across the agreement, the time period stated in clause 19.3(d) should be amended from 14 to 15 business days. ATCO has confirmed that this change should have been proposed in its access arrangement proposal.[309]

Required Amendment 23

ATCO must amend the time period in clause 19.3(d) of the template service agreement from 14 to 15 business days.

Liability of parties (clause 17)

Clause 17.1(b)

1001. Clause 17.1 of the template service agreement sets out provisions for liability, including liability for negligence and default limited to direct damage. ATCO proposed to insert a new subclause to clarify that the enforcement of indemnification provisions was between the parties and their indemnified persons. The proposed (new) clause 17.1(b) reads:

> Each party holds the benefit of the indemnity on its own behalf and also holds it on trust for their respective directors, servants, consultants, independent contractors and agents (each an "Indemnified Person") with respect to each of them to the extent the Indemnified Person cannot directly enforce that indemnity for its own benefit. Despite this trust, the parties may agree to amend this Service Agreement without requiring the consent of persons for whom the indemnity is held on trust.

1002. The proposed clause provides that:

- The benefit of the indemnity is held for the indemnified party and held on trust by the indemnified party for each of the indemnified persons.
- The indemnified party may enforce the indemnity on behalf of the indemnified persons.
- While an indemnity is in effect, the parties can amend the agreement without having to seek the consent of each indemnified person.

[308] ATCO has described the proposed change to clause 16.3(d) in the access arrangement information (page 190) as "amending 14 to 15 Business Days". The ERA has confirmed with ATCO that this description is an error. The correct description should read "amending 7 to 10 Business Days". (Email from ATCO to ERA, *ERA 04*, 17 October 2018.)

[309] Email from ATCO to ERA, *ERA 04*, 17 October 2018.

1003. Aside from Alinta's submission on clause 17 generally (see paragraph 1006), no other submissions addressed ATCO's proposal to insert clause 17.1(b).

1004. Under section 11 of the *Property Law Act 1969 (WA)* third-party beneficiaries under a contract are entitled to enforce in their own name any benefit under a contract to which they are not a party. ATCO's proposed clause 17.1(b) is considered acceptable on the basis that it operates to the extent the indemnified person is unable to directly enforce the indemnity. That is, in circumstances where section 11 of the Act does not apply. However, for drafting clarity, the ERA considers the words "persons for whom the indemnity is held on trust" as they appear at the end of proposed clause 17.1(b) should be amended to read "each Indemnified Person".

1005. With the addition of (new) clause 17.1(b), the reference to clause "17.1(b)" in clause 17.1(a) is now a reference to clause "17.1(c)". Accordingly, clause 17.1(a) should be amended to correct this reference.

Required Amendment 24

ATCO must amend clause 17.1(b) of the template service agreement to replace the words "persons for whom the indemnity is held on trust" (as they appear at the end of the clause) with the words "each Indemnified Person".

ATCO must also amend clause 17.1(a) of the template service agreement to replace the reference to clause "17.1(b)" with a reference to clause "17.1(c)".

Clause 17 generally

1006. Alinta submitted that clause 17 of the agreement was "too broad and does not allocate liability where the risk is best controlled".[310] Alinta said the agreement placed all liability on the user, whereas it was the service provider who was the party best able to control the risk.

1007. Alinta's comments on clause 17 of the agreement were general in nature and similar to the comments it previously provided during the AA4 review. As part of the AA4 review, the ERA considered the case for allowing the agreement to impose liabilities on the user for indirect loss or damage under certain circumstances.[311] The ERA's decision required ATCO to remove references to indirect damage under certain clauses of the agreement. No specific amendments were required to clause 17, which left unchanged two important general principles:

- Parties will be liable to one another for direct damage arising from their own negligence or default (clause 17.1).
- Parties will not be liable to one another for any indirect damage, unless specifically provided for (for example, indirect damage in relation to a party who is fraudulent – clause 17.3).

1008. With the exception of proposed (new) clause 17.1(b), clause 17 remains substantially unchanged from AA4 and preserves the two general principles, which apply equally to users and ATCO.

310 Alinta Energy submission, 14 November 2018, p. 8.

311 ERA, *Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution Systems*, 30 June 2015 (as amended on 10 September 2015), pp. 563-566, paragraphs 2631 to 2654.

1009. Alinta did not provide any examples of how, or any other reasoning for why, it considered the operation of clause 17 to be too broad. No other interested parties made submissions or raised concerns about clause 17. In these circumstances, the ERA is not convinced that clause 17 does not represent a fair allocation of risk under the agreement.

Notices and addresses for notices (clause 20)

1010. Clause 20 of the template service agreement details provisions for notices and other communications. ATCO proposed to amend subclause (c) to reflect the mutual obligations and rights of both parties (that is, the sender and recipient). The proposed changes are as follows.

> Where notices or other communications from ~~<User>~~ sender are not provided in accordance with clause 20(a) or 20(b) (as applicable), ~~<Service Provider>~~ recipient may recover ~~from <User>~~ sender the reasonable additional costs involved in dealing with that notice or other communication.

1011. No submissions to the ERA addressed ATCO's proposed amendments to clause 20.

1012. The provisions for notices and other communications detailed in clause 20 apply equally to all parties to the agreement. ATCO's proposal to replace references to the "user" and "service provider" with references to the "sender" and "recipient" reflects the mutual obligations and rights of these parties. For this reason, ATCO's proposed changes are accepted as being consistent with the NGR and national gas objective. However, to improve readability, the following minor grammatical corrections should made.

> Where notices or other communications from the sender are not provided in accordance with clause 20(a) or 20(b) (as applicable), the recipient may recover from the sender the reasonable additional costs involved in dealing with that notice or other communication.

Interpretation (clause 23)

1013. Clause 23.1 of the template service agreement details provisions for the interpretation of the agreement, including a dictionary of defined terms. ATCO proposed amendments to the dictionary to add new terms or update current terms (see Table 104). ATCO submitted that the proposed amendments were consequential amendments resulting from other proposed amendments to the agreement.

Table 104: ATCO's proposed amendments to clause 23.1 (Dictionary) of the template service agreement

Term	Proposed Amendment
Approved Security	means at User's election: (a) a bank guarantee in the form set out in Annexure B (or such other form as is acceptable to <Service Provider>); (b) funds deposited by way of a security bond; (c) an insurance bond which is unconditional and payable on demand without reference to the User and notwithstanding any notice given by the User not to pay same, being otherwise in a form acceptable to <Service Provider>: or

Term	Proposed Amendment
	(d) such other form of security as may be agreed between the parties from time to time.
Charge	has the meaning given to it in section 2 of the National Gas Access Law.
Indemnified Person	has the meaning set out in clause 17.1(b) of this Service Agreement.
Insolvency Event	means, in relation to a person or entity (Relevant Party), any of the following occurring: (a) a receiver, receiver and manager, mortgagee in possession, administrator, bankruptcy trustee, liquidator, provisional liquidator, or similar officer is appointed to the Relevant Party or any of its assets, or an application is made to a court for an order to appoint such a person described in this paragraph and that application is not permanently stayed, withdrawn or dismissed within 30 days; (b) a resolution is passed or an application to a court is taken or an order is made for the winding up, dissolution, official management or external administration of the Relevant Party; (c) the Relevant Party ceases to (or is unable to) pay its creditors (or any class of them) in the ordinary course of business, or announces its intention not to pay its creditors; (d) the Relevant Party is (or states that it is) insolvent or is deemed to be insolvent under applicable insolvency or bankruptcy Law; (e) the Relevant Party commits an act of bankruptcy or is declared bankrupt under insolvency or bankruptcy Law; (f) any process to enforce a security interest is taken against or in relation to a substantial portion of the assets of the Relevant Party and is not satisfied or withdrawn within 30 days; (g) anything having a substantially similar effect to any of the events specified in paragraphs (a) to (f) of this definition happens under the law of any applicable jurisdiction; or (h) where the Relevant Party is the <User>, at a particular time <Service Provider> determines, acting reasonably, that anything having a substantially similar effect to any of the events specified in paragraphs (a) to (f) of this definition may or is likely to occur within a reasonable period after that time.
Payment Method	means a method of payment of invoices notified by <Service Provider> under clause 10.1 of the Template Service Agreement.
Reference Service Terms and Conditions	has the meaning set out in clause 22.3 of this Service Agreement.
Special Meter Reading	means the Reference Service described in paragraph 4.12 of the Access Arrangement.
Variation Period	refers to one of the following periods (as the case may be): (a) the period 1 ~~October~~January 20~~20~~15 ~~15~~ to 31 December 20~~20~~15 ~~15~~; (b) the period 1 January 20~~21~~16 ~~16~~ to 31 December 20~~21~~16 ~~16~~; (c) the period 1 January 20~~22~~17 ~~17~~ to 31 December 20~~22~~17 ~~17~~; (d) the period 1 January 20~~23~~18 ~~18~~ to 31 December 20~~23~~18 ~~18~~; and (e) the period 1 January 20~~24~~19 ~~19~~ to 31 December 20~~24~~19 ~~19~~.

Source: ATCO, Template Service Agreement (tracked changes), 31 August 2018.

1014. The ERA has considered each of ATCO's proposed amendments to the dictionary of defined terms. Unless otherwise stated, the proposed amendments are accepted because they are consequential to other proposed amendments that have been made to the agreement and assessed by the ERA as being consistent with the NGR and national gas objective.

Insolvency event

1015. The ERA notes ATCO's proposed definition of "insolvency event". Although the term is capitalised in the current AA4 agreement, there is no definition of that term in the agreement. While a definition of insolvency event should be included, ATCO's proposed definition, specifically paragraphs (g) and (h), is not accepted as being consistent with the NGR and national gas objective for the following reasons.

- The paragraphs are unclear. It is not understood what is meant by "anything having a substantially similar effect to any of the events specified in paragraphs (a) to (f)".
- An event of insolvency should be limited to events under insolvency or bankruptcy law. No explanation has been provided as to why these additional broad definitions are required.
- Further, the 'right' provided by paragraph (h) is not reciprocal. The right is limited to the service provider and the service provider is given the power, acting reasonably, to determine that a substantially similar circumstance "may or is likely to occur within a reasonable period".

Required Amendment 25

ATCO must amend the definition of "insolvency event" in clause 23.1 of the template service agreement to delete paragraphs (g) and (h) from the definition.

Minor amendments to other terms

1016. The ERA requires minor amendments to the proposed definitions of "payment method" and "reference service terms and conditions". The required amendments are administrative in nature and more accurately reflect the drafting within the agreement.

- The definition of payment method should be amended to replace the words "the Template Service Agreement" with the words "this Service Agreement".
- The definition of "reference service terms and conditions" should be amended to replace the reference to clause "22.3" with a reference to clause "22.3(d)".

Required Amendment 26

ATCO must amended clause 23.1 of the template service agreement to amend the definition of:

- "payment method" to replace the words "the Template Service Agreement" with the words "this Service Agreement", and
- "reference service terms and conditions" to replace the reference to clause "22.3" with a reference to clause "22.3(d)".

Specific terms and conditions (schedules 3, 4, and 5)

1017. Schedules 3, 4 and 5 of the template service agreement detail the special terms and conditions for the B1, B2 and B3 reference services respectively. ATCO proposed to insert a new clause into each of the schedules to add terms and conditions for a "special meter reading" reference service consistent with its proposal to reclassify a special meter reading from a non-reference service in AA4 to a reference service in AA5.

1018. The proposed new clause reads the same in each of the schedules as follows.

> **[x].**[312] **Special Meter Reading**
>
> (a) <User> may request <Service Provider>, in writing, to undertake an out-of-cycle meter reading of a meter that is:
>
> (i) not required to be undertaken at an appointed time;
>
> (ii) a manually read meter;
>
> at a Delivery Point under this Service Agreement by requesting <Service Provider> in writing to undertake a Special Meter Reading under the Retail Market Procedures.
>
> (b) <Service Provider> will use reasonable endeavours to undertake the Special Meter Reading within 2 Business Days of receiving <User>'s request.
>
> (c) <User> acknowledges and agrees that <Service Provider> is not liable for a failure to comply with <User>'s request.
>
> (d) If <Service Provider> undertakes the Special Meter Reading, then <User> must pay the relevant Reference Tariff specified in Annexure C of the Access Arrangement as varied by the Reference Tariff Variation Mechanism.
>
> (e) If <Service Provider> attempts to undertake the Special Meter Reading, but is unable to do so because it cannot gain access to the relevant land or premises, then <User> must pay the relevant Reference Tariff specified in Annexure C of the Access Arrangement as varied by the Reference Tariff Variation Mechanism.
>
> (f) If <User> cancels its request before <Service Provider> undertakes the Special Meter Reading, then <User> must pay the relevant Reference Tariff specified in Annexure C of the Access Arrangement as varied by the Reference Tariff Variation Mechanism.
>
> (g) The activities of <Service Provider> described in this clause [x] of this Schedule [x] are a Service derived from the Reference Service described as Special Meter Reading in the Access Arrangement.

1019. ATCO's proposal to reclassify a special meter reading from a non-reference service to a reference service is considered elsewhere in this decision (see paragraph 45). Consistent with the ERA's decision to approve this reclassification, ATCO's proposal to insert new terms and conditions into schedules 3, 4 and 5 of the agreement for a special meter reading reference service is consistent with the requirements of the NGR to include terms and conditions for each reference service, subject to the following amendments.

[312] Clause 9 in schedule 3 (Service B1), clause 12 in schedule 4 (Service B2) and clause 12 in schedule 5 (Service B3).

1020. Alinta addressed ATCO's proposal to insert new terms and conditions into schedules 3, 4 and 5 of the agreement for a special meter reading service. Alinta submitted:[313]

> Whilst the Service Provider is required to use reasonable endeavours to undertake a Special Meter Reading within 2 business days of receive a request from a User, it is not clear whether, if the Service Provider does not comply with the request, a Reference Tariff is payable. We consider that payment should not be made until the Special Meter Reading has been conducted, attempted to be conducted or cancelled by the user. That is, if the request is not complied with through the fault of the Service Provider, then payment should not be required by the User.

1021. The ERA notes Alinta's position. If the service provider does not undertake the special meter reading in accordance with the user's request, the user should not be required to pay the reference tariff as a result of an event or circumstance within the service provider's control. If, however, the service provider did not undertake the user's request because of an event or circumstance outside the service provider's control, the user should pay the reference tariff. The ERA considers this position to be consistent with the NGR and national gas objective.

1022. Considering the position above, ATCO must delete proposed clause 9(c) of schedule 3 and proposed clauses 12(c) in each of schedules 4 and 5. This requirement is consistent with the ERA's position in the last review of the access arrangement for the GDS. In its final decision for AA4, the ERA required ATCO to delete clauses which provided that the service provider is not liable to the user in respect of any claim, loss, damage, cost or expense (including indirect damage and direct damage) if it fails to permanently deregister the delivery point.[314]

1023. ATCO must also amend clause 9 of schedule 3 and clauses 12 in each of schedules 4 and 5 to provide that the user is not liable to pay the specified reference tariff if the service provider does not complete, or attempt to complete, the service in accordance with the user's request because of an event or circumstance *within* its control.

1024. Further, the deregistration of a delivery point service contains similar payment obligations to those for special meter reading services. For the reasons above, the ERA requires the relevant clauses of the template service agreement dealing with payment obligations for the deregistration of a delivery point service to be amended in the same manner.

[313] Alinta Energy submission, 14 November 2018, p. 8.

[314] ERA, *Final Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution Systems*, 30 June 2015 (as amended on 10 September 2015), pp. 557-558.

Required Amendment 27

ATCO must amend the template service agreement to delete proposed clause 9(c) of Schedule 3 and clause 12(c) in each of Schedules 4 and 5.

ATCO must also amend proposed clause 9 of Schedule 3 and proposed clause 12 in each of Schedules 4 and 5 to provide that the user is not required to pay the reference tariff if the service provider fails to undertake the meter reading as a result of an event or circumstance within its reasonable control, which the service provider could have prevented or overcome.

ATCO must further amend clause 9 in each of Schedules 1 and 2, clause 8 in Schedule 3 and clause 7 in each of Schedules 4 and 5 in the same manner as ATCO is required to amend the provisions relating to payments for special meter readings (refer to requirement immediately above).

Other proposed amendments

1025. AGL Energy's submission to the ERA addressed other terms and conditions of the template service agreement that remain unchanged from the current AA4 agreement. Table 105 summaries AGL's comments. The ERA considers each of AGL's comments in turn below.

Table 105: Summary of AGL's comments on clauses of the template service agreement that remain unchanged from AA4

Clause	AGL's comment(s)
1	Conditions precedent AGL notes some discussion on changing the *WA Swing Service* to a *Short Term Trading Market* (STTM). AGL would like to ensure there is a mechanism to support the new role required by a market change.
2	Duration AGL notes the dates and times specified in the clause, but suggests that while a user may no longer be shipping gas, the user will retain obligations to the retail market. The agreement should cover the period that the user has market obligations.
4.3	Obligations to pay AGL has concerns with the operational implementation of this clause. The clause allows ATCO to charge a service fee on the basis of an act or omission by AGL and where the service is not able to be provided.
4.4	Charges payable until deregistration AGL submits this clause provides for the retailer to pay charges for a delivery point until it is deregistered. There is no consideration of ATCO's efficiency (or lack of efficiency) in undertaking the works to deregister a delivery point.
9.3	Access to delivery point and relevant land and premises AGL submits this clause places the onus of providing and ensuring access to ATCO's equipment (e.g. customer meters) on the retailer, who has no field staff, no responsibility for the connection or regular visits to the customer site.

Clause	AGL's comment(s)
10.2	Payment method The agreement allows ATCO to specify the payment method in the payment claim. AGL believes that the payment method (as defined) should not be unduly onerous on the retailer or on ATCO.
10.4	Correction after payment AGL notes this clause may require ATCO to pay a retailer if there is an agreed dispute, but there is no requirement to allow the retailer to specify the payment method (this comment is related to the comment on clause 10.2 about payment methods).
14.5	User remains liable AGL submits the requirements for ATCO to consent to a transfer or novation should not be unreasonably withheld.
15.2	Default by user AGL submits clause 15.2(b) appears to be overly onerous and imbalanced. A "default under any other agreement" could be very minor and would not justify terminating this agreement.
15.5	Additional remedies AGL submits this clause (like many of the others) does not contain the concept of reciprocity or reasonableness.
16.1	Compliance with obligations AGL believes that ATCO should not be entitled to make requests for payments while the user meets the financial ratings specified. ATCO should also be required to provide reasonable cause to request evidence of compliance with the Approved System Pressure Protection Plan or Gas Quality Specification and Gas Standards.
23.1	Definitions AGL submits the following definitions need amending: applying a meter lock; business day; gas day; and schedules.

Source: AGL Energy submission, 14 November 2018, pp. 7-10.

Clause 1 – conditions precedent

1026. Clause 1 of the template service agreement outlines the conditions precedent that must be satisfied or waived before the agreement has force or effect.

1027. AGL noted:[315]

> There has been some initial discussion on changing the WA Swing Service to a Short-Term Trading Market (STTM). Such a change would separate out the shippers of gas on the transmission pipelines to those on the distribution network. AGL would like to ensure that there is a mechanism to see a clause inserted into the template agreement to support the new roles required by a market change.

1028. AGL appeared to propose that a change in law clause (or similar) be included in the agreement to deal with any change of the swing service that operates in the Western

[315] AGL Energy submission, 14 November 2018, p. 7.

Australian retail gas market[316] to a short term trading market. If there is a change from a swing service to a short term trading market, this may involve changes to the roles and obligations of the parties under the agreement. However, the precise changes that may be required will depend on the form of any regulatory changes. Unless there is likely to be a change to the gas retail market structure prior to the end of AA5, the ERA does not consider a change of law mechanism of the type suggested by AGL in the agreement to be necessary for compliance with the NGR.

1029. Irrespective of this, the ERA does not consider any change in law clause or mechanism would need to form part of the conditions precedent. Conditions precedent are those matters which must be satisfied before a contract comes into force.

Clause 2 – duration of this service agreement

1030. Clause 2 outlines the duration of the agreement by specifying when the agreement commences and ends.

1031. While AGL noted the times and dates specified in the clause, it suggested that while a user may no longer be shipping gas, the user would retain obligations to the retail gas market for settlement revisions. The charging components of the agreement should cover these settlement revisions, and therefore the agreement should cover the period where the user has market obligations.[317]

1032. AGL submitted that the agreement should not end until the user has fulfilled its obligations in respect of settlement revisions. Settlement revisions (reconciliations) may occur under Part 5 of the *Retail Market Procedures (WA)*. However, it is not clear that the expiry of the agreement would necessarily affect the user's obligations to the retail market for settlement revisions. Payment obligations under a contract that have accrued prior to termination will ordinarily survive termination.

1033. Additional information (from AGL or other interested parties) is required to assess whether an express provision is required in the agreement to deal with survival of payment obligations after termination. In the absence of such information, the ERA cannot assess whether such an amendment is required.

Clause 4.3 – ongoing obligation to pay

1034. Clause 4.3 of the template service agreement requires the user to pay ATCO any applicable charges or other amounts payable under the agreement even if:

- ATCO is unable to provide, undertake or complete one or more services as a result of an act or omission by the user or where the service cannot be provided.
- The user uses a service intermittently or irregularly.
- ATCO refuses to accept gas delivered at a receipt point.

316 Under Part 5.10 of the *Retail Market Procedures (WA)*, the Australian Energy Market Operator calculates the daily swing service quantities for the Western Australian gas retail market. The swing service is a contractual mechanism that retrospectively balances the mismatch between a user's contractual gas injections and customer withdrawals.

AEMO, *Technical Guide to the Western Australian Gas Retail Market*, 30 April 2018 (online) (accessed December 2018).

317 AGL Energy submission, 14 November 2018, p. 7.

- ATCO curtails the quantity or pressure of gas deliveries to a user.
- The user is unable to use one or more services, for reasons that may be within or outside of its control.
- An event of force majeure occurs.

1035. AGL submitted that it had concerns with the operational implementation of this clause, namely subclause (a), which allowed ATCO to charge a service fee on the basis of an act or omission by the user and where the service was not able to be provided. AGL stated that "it is unclear what defines an act or omission which would prevent ATCO from completing a service".[318]

1036. AGL provided two examples of service failures to highlight its concerns. In both cases, the network operator in question used a similar clause to ATCO as the basis for not undertaking the service, but still applying the service charge.

- Example 1: The inability of a retailer to provide customer details led a network operator to reject a service order, but still charge for the service. In this case, the service order was to disconnect a customer who had refused to identify themselves, or enter into a contract with the retailer, but continued to consume gas.
- Example 2: A network operator allowed customers to install covers or lock gates which provide access to the meter, but then have charged the retailer when they were unable to access their asset.

1037. AGL stated that it would like to see "reciprocal clauses in the agreement, consistent with those of the *National Energy Retail Rules* (rule 105) [for] payment obligations when the retailer is no longer able to recover revenue due to a failure by the network". Rule 105 of the national rules is reproduced below.

> **105 Liability for ongoing charges**
>
> (1) If a distributor is required to de-energise a customer's premises within the timeframes for de-energisation in accordance with a distributor service standard, and the distributor fails to do so, the distributor must (unless the failure is due to an act or omission of the customer or retailer):
>
> (a) waive any network charges applicable to the premises after the timeframes expire; and
>
> (b) pay charges for energy consumed at the premises after the timeframes expire, if the retailer has used all reasonable endeavours to recover the charges from the customer and has been unable to do so.
>
> (2) If the retailer subsequently recovers from the customer all or any part of any amount that the distributor has waived or paid, the retailer must pay that recovered amount to the distributor.

1038. As AGL stated, it was unclear what "an act or omission of" the user that prevented ATCO from providing, undertaking or completing the service includes in clause 4.3(a)(i). Nevertheless, a user should only be required to pay for a service not provided, undertaken or completed by the service provider if:

[318] AGL Energy submission, 14 November 2018, p. 7.

- The user has positively contributed to the service provider not providing, undertaking or completing the service(s).
- There is an event or circumstance which the user could have prevented or overcome, but did not do so and, as a result, the service provider could not provide, undertake or complete the service(s).

1039. AGL's proposal for reciprocal clauses in the agreement, consistent with those in rule 105 of the *National Energy Retail Rules*, is noted. If clause 4.3(a) is amended to reflect the above circumstances, a reciprocal clause is not necessary because the user will not be required to pay charges where the service was not provided, undertaken or completed for a reason outside the user's control, which is consistent with the NGR and national gas objective.

1040. The ERA also considers that clause 4.3(a)(ii) is unclear. This clause provides that the user is to pay charges even if ATCO is unable to provide, undertake or complete a service as a result of the service not being able to be provided or undertaken in respect of the relevant delivery point. It is not clear whether this means that ATCO cannot physically undertake or perform the service at the relevant delivery point, or whether it means something else (for example, that the service cannot be provided or undertaken because of an act or omission by ATCO). For this reason, clause 4.3(a)(ii) should be redrafted to clarify this.

Required Amendment 28

ATCO must amend clause 4.3 of the template service agreement to insert the words "Subject to clause 4.3A," (at the beginning of the clause).

ATCO must insert a new clause 4.3A as follows:

For the avoidance of doubt, <User> is not required to pay any applicable Charges and other amounts payable under this Service Agreement in accordance with clause 4.1 if an event or circumstance within the control of <Service Provider> prevented <Service Provider> from providing, undertaking or completing the Service.

ATCO must also redraft clause 4.3(a)(ii) of the agreement to make clear the intended effect of the clause.

Clause 4.4 – charges payable until deregistration

1041. Clause 4.4 of the template service agreement requires the user to pay all charges and other amounts payable under the agreement for a delivery point until such time the delivery point is deregistered.

1042. AGL submitted that the clause did not consider ATCO's efficiency (or inefficiency) undertaking the works required to deregister a delivery point.[319] AGL was of the opinion that there should be a reasonable agreed notice period, after which charges would cease, regardless of whether ATCO had completed the deregistration works or not. Such a notice period would incentivise ATCO to ensure deregistration works are undertaken efficiently and that the retailer (user) is not unduly affected.

1043. The ERA notes AGL's submission that there is no consideration of ATCO's efficiency, or lack of efficiency, undertaking the works to deregister a delivery point. However,

[319] AGL Energy submission, 14 November 2018, p. 8.

for the reasons set out below, the ERA does not consider that clause 4.4 of the agreement needs to be amended in the manner suggested by AGL.

1044. Deregistering a delivery point means "that gas is permanently precluded from being supplied at the delivery point because the delivery point is permanently deregistered in accordance with Part 3.6 of the Retail Market Procedures" (see definition of "deregistered" at clause 23.1 of the agreement). Part 3.6 of the Market Procedures deals with the removal of delivery points and the deregistering of meter installation registration numbers (MIRNs). In the procedures, "deregister", in relation to a MIRN, means that the delivery point has been permanently removed. "Permanent removal" means to permanently preclude gas being delivered at the delivery point.[320]

1045. The service of deregistering a delivery point under the access arrangement is to be undertaken in accordance with Part 3.6 of the Market Procedures. Relevantly, clause 127(1) of the procedures provides that, on receipt of a valid permanent removal request from a user, a network operator must permanently remove the delivery point on the later of the date requested by the user in its permanent removal request, or five business days after receiving the user's permanent removal request.

1046. A "permanent removal request" is a notice from a user to a network operator requesting the network operator to permanently remove a delivery point specified in the notice, and that notice must specify the earliest date that the delivery point can be permanently removed.[321]

1047. An amendment in the form suggested by AGL is not necessary when ATCO, as a network operator and scheme participant (as those terms are defined in the Market Procedures), is required to comply with the timelines set out in the Market Procedures when undertaking a delivery point deregistration. This is sufficient protection for users. However, to make the time periods in the agreement clear, ATCO should amend clause 4.4(a) to make reference to the timeframe specified in clause 127 of the Retail Market Procedures. There is then a contractual obligation, as well as a statutory obligation, on ATCO to undertake the delivery point deregistration within the specified period. Such obligations are consistent with the NGR and national gas objective.

Required Amendment 29

ATCO must amend clause 4.4(a) of the template service agreement to read as follows to clarify the time period in which a delivery point deregistration must occur.

<User> must pay all Charges and other amounts payable under this Service Agreement in respect of the Delivery Point, until such time as the Delivery Point is Deregistered, which time must not exceed the timeframe specified in clause 127 of the Retail Market Procedures;

Clause 9.3 – access to the delivery point and relevant land and premises

1048. Clause 9.3 of the template service agreement covers provisions for access to delivery points and relevant land and premises. Subclauses (a), (b) and (c) provide that:

320 AEMO, *Retail Market Procedures (WA)*, 1 June 2018 (version 4.0), clause 2.

321 AEMO, *Retail Market Procedures (WA)*, 1 June 2018 (version 4.0), clause 125(4).

- The user acknowledges that ATCO's ability to provide reference services at a delivery point is subject to ATCO having unfettered access to the land and premises on, or through which, the delivery facilities are, or are to be, installed.
- The user must use reasonable endeavours to provide or procure such unfettered access to the relevant land or premises in a timely manner.
- Where ATCO does not have unfettered access to the relevant land or premises and consequently incurs costs to obtain access that it would not have otherwise incurred, ATCO may require the user to pay an amount to recover that cost.

1049. AGL said that both the user and service provider should have responsibilities to ensure access to relevant land and premises. AGL submitted the following in support of its position.[322]

> This clause places the onus of providing and ensuring access to ATCOs equipment (e.g. customer meters) on the retailer, who has no field staff, no responsibility for the connection or regular visits to the customer site.
>
> ATCO has prepared a safety case which details their processes and responsibilities. The ATCO gas safety case specifically lays out the assets which are ATCOs responsibility, including the service inlet, meter control valve, regulator and meter. These assets are included as part of ATCO's Asset Base and Asset Management Strategy.
>
> As such, AGL does not accept that ATCO can exclude itself from providing services if ATCO does not have 'unfettered access to the land and premises'. AGL strongly believes that as the asset owner, and the party with the safety responsibilities for these assets, that ATCO needs to take responsibility when access is denied by customers.
>
> Examples of this would be to ensure that requirements for gas meter connections include clear access or other methods of access – such as key safes or industry locks.
>
> AGL accepts that within the WA Market, ATCO has no direct relationship with the end customer; nevertheless, AGL does not believe that the network can absolve itself from its responsibility. AGL believes that this clause should be modified to include clearly defined responsibilities on both parties in these situations.

1050. Consistent with the NGR and national gas objective, users should not be unreasonably required to pay costs the service provider incurs in order to achieve unfettered access to the relevant land or premises. To reflect the separate relationships between the network operator and the user (retailer), and the user and end use customers, the service provider's discretion to require the user to pay an amount to cover its costs should be limited:

- by a requirement for the service provider to act reasonably
- to circumstances where the user has not used reasonable endeavours.

1051. Accordingly, clause 9.3(c) of the agreement must be amended to provide for these limiting circumstances as follows.

> (c) If <Service Provider>:
>
> (i) does not have unfettered access to the relevant land or premises as described in clause 9.3(a)~~; and~~
>
> (ii) considers, acting reasonably, that the <User> has not used reasonable endeavours in accordance with clause 9.3(b); and

[322] AGL Energy submission, 14 November 2018, p. 8.

(iii) as a consequence incurs a cost in order to obtain access to the land or premises that it would not have incurred had unfettered access been provided,

then <Service Provider> may, acting reasonably, require <User> to pay an amount determined by <Service Provider> as reasonable to recover that cost.

Required Amendment 30

ATCO must amend clause 9.3(c) of the template service agreement to limit the service provider's discretion to require the user to pay an amount to cover its costs:

- by a requirement for it to act reasonably; and
- to circumstances where the user has not used reasonable endeavours.

The required wording is set out in paragraph 1051 of this draft decision.

Clause 10.2 – payment within 10 business days

1052. Clause 10.2 of the template service agreement requires the user to pay a payment claim within 10 business days and using a payment method specified in the claim. AGL said that the payment method (as defined) should not be unduly onerous on the user or on ATCO. AGL suggested that, while a retailer may be making the bulk of the payments to ATCO, under the agreement "the payment method to each party should be specified and agreed in advance and all payment clauses would use this [method] unless otherwise agreed".[323]

1053. ATCO proposed to amend the agreement to make drafting changes to clause 10.1 which addressed the type of "payment method or methods" available to the user (see paragraph 966) and included a new definition of "payment method" (see paragraph 1013).

1054. "Payment method" is defined to mean "a method of payment of invoices notified by <service provider> under clause 10.1". Clause 10.1(b) states:

> <Service Provider> will provide notice of the Payment Method or Methods by which payment may be made, and any information required to make payment using the specified Payment Method or Methods.

1055. As AGL has suggested, the payment method to pay payment claims (invoices) should not be unduly onerous on the user or on ATCO. As currently drafted, the agreement only allows ATCO to specify the payment method(s) to be used. As such, the agreement should provide that the payment method or methods notified by ATCO (under clause 10.1(b)) must not be unduly onerous and where possible be agreed between ATCO and the user. Such a provision is consistent with the NGR and national gas objective.

[323] AGL Energy submission, 14 November 2018, p. 9.

Required Amendment 31

ATCO must amend clause 10.1(b) of the template service agreement to provide that the payment method or methods notified by the service provider must not be unduly onerous and where possible agreed with the user.

Clause 10.4 – correction of payment errors after payment

1056. Clause 10.4 of the template service agreement allows for the correction of payment errors after a payment claim has been paid. AGL noted that the clause may require ATCO to pay a user if there was an agreed dispute, yet there was no requirement for ATCO to allow the user to specify the payment method to be used. AGL cited its comments on clause 10.2 of the agreement about payment methods as being relevant to this matter.

1057. The ERA has addressed the matter of payment methods above (see paragraph 1052).

Clause 14.5 – user remains liable to service provider

1058. Clause 14.5 of the template service agreement provides that the user remains liable to ATCO notwithstanding a proposed transfer (under clause 14.3) or novation (under clause 14.4) until:

- ATCO consents by written notice to the transfer or novation.
- The user and the relevant third party comply with the conditions imposed by ATCO for the transfer or novation.

1059. AGL submitted that the requirement for ATCO to consent to a transfer or novation should not be unreasonably withheld. AGL noted the reciprocal clause in the agreement, clause 14.8, which reads:

> <Service Provider> may assign its rights or novate its obligations under this Service Agreement, with the <User>'s prior written consent, and such consent must not be unreasonably withheld.

1060. As AGL has submitted, ATCO's consent under clause 14.5(a)(i) should not be unreasonably withheld, as this would be inconsistent with the NGR and national gas objective. This corresponds with the user's obligations under clause 14.8, where the user's consent must not be unreasonably withheld when ATCO seeks to assign its rights or novate its obligations under the agreement.

Required Amendment 32

ATCO must amend clause 14.5(a)(i) of the template service agreement to include the words "and such consent must not be unreasonably withheld" at the end of the clause.

Clause 15.2(b) – default by user

1061. Clause 15.2 of the template service agreement details the circumstances, that are in addition to the circumstances detailed in clause 15.1 (default by a party), when a user is in default under the agreement. AGL submitted that clause 15.2(b) appeared to be

"overly onerous and imbalanced".[324] A "default under any other agreement" could be very minor and would not justify terminating the agreement. AGL would expect such a clause to be reciprocal and to have a measure of both parties acting reasonably.

1062. Clause 15.2 should be reciprocal and require both parties to act reasonably – there is no reason for the provision to only apply to a default by the user, which would be inconsistent with the NGR and national gas objective. Accordingly, ATCO is required to amend clause 15.2(b) so that the parties will only be in default under the agreement if the defaulting party reasonably considers that the default under the other agreement will materially affect the non-defaulting party's ability to comply with its obligations under the service agreement.

1063. As the effect of the ERA's decision to clause 15.2 is to make the clause reciprocal – that is, to apply to both parties – the text of the amended clause 15.2(b) should be inserted as a new subclause (g) under current clause 15.1 (which covers defaults by a party), making current clause 15.1(g), new clause 15.1(h) as follows.

> 15.1 Default by a party
>
> A party is in default under this Service Agreement in any one or more of the following circumstances:
>
> …
>
> (g) if a party is in default ("defaulting party") under any other agreement with the other party under which the <Service Provider> provides Reference Services to <User>, and the non-defaulting party reasonably considers that the default under the other agreement will materially impact the non-defaulting party's ability to comply with its obligations under this Service Agreement; or
>
> (h) in any other circumstance specified in this Service Agreement.

1064. The above amendment is consistent with the NGR and national gas objective. If a user is in default under any other agreement it has with the service provider in respect of reference services, but the user's default under that other agreement does not, for example, affect the service provider's ability to comply with its obligations under the template service agreement, there may be inefficient outcomes that affect the long term interests of consumers.

Required Amendment 33

ATCO must delete clause 15.2(b) from the template service agreement and insert new clause 15.1(g) that reads:

if a party is in default ("defaulting party") under any other agreement with the other party under which the <Service Provider> provides Reference Services to <User>, and the non-defaulting party reasonably considers that the default under the other agreement will materially impact the non-defaulting party's ability to comply with its obligations under this Service Agreement; or

Current (AA4) clause 15.2(g) must be renumbered as new clause 15.2(h).

[324] AGL Energy submission, 14 November 2018, p. 9.

Clause 15.5

1065. Clause 15.5 of the template service agreement outlines additional remedies ATCO may use in the event of a default by the user. If the user is in default under the agreement, ATCO may in its absolute discretion:

- Refuse to accept delivery of gas from a related shipper of the user at a receipt point. (Clause 15.5(a)).
- Wholly or partly curtail gas deliveries to the user at a delivery point. (Clause 15.5(b)).
- Reduce or suspend any service under the agreement to the user until all defaults are remedied. (Clause 15.5(c)).
- Exercise its rights (under clause 16.2(e)) to call on any approved security to remedy the default and/or compensate it for any loss or damage. (Clause 15.5(d)).

1066. AGL said that this clause, like many others, did not contain the concept of reciprocity or reasonableness. As an example, AGL submitted that:[325]

> [Clause] 15.5(c) deals with a retailer reducing or suspending services as a trigger for termination. It is more likely that ATCO would suspend or reduce services to the retailer. However, the clause does not contemplate a termination of service if ATCO 'suspends or reduces services'.

1067. It appears that AGL misunderstood the operation of clause 15.5(c). AGL stated that clause 15.5(c) dealt with a retailer reducing or suspending services and that the clause did not contemplate a termination of service if ATCO suspended or reduced services. However, clause 15.5(c) contemplates the service provider, not the retailer, reducing or suspending services. For this reason, and given that no other interested parties made submissions on clause 15.5, the ERA does not consider it necessary to amend the clause to include a concept of reciprocity or reasonableness. In any case, clause 15.5 is discretionary.

1068. Subclauses (a) and (b) do not, however, have any temporal limitations – that is, even if the user has remedied its default, the events in subclauses (a) and (b) could extend beyond that time. For this reason, a time limit should be included in subclauses (a) and (b) that is based on remedy of the default, similar to subclause (c).

Required Amendment 34

ATCO must amend clauses 15.5(a) and 15.5(b) to include a time limit that is based on the remedy of the default by adding the words "until such time as all defaults have been remedied" at the end of each clause as follows.

(a) refuse to accept delivery of Gas from a Related Shipper of <User> at a Receipt Point until such time as all defaults have been remedied;

(b) wholly or partly Curtail Gas deliveries to the <User> at a Delivery Point until such time as all defaults have been remedied;

[325] AGL Energy submission, 14 November 2018, p. 9.

Clause 16.1 – compliance with obligations

1069. Clause 16.1 of the template service agreement requires the user, on written notice from the service provider, to comply with certain obligations.

- Pay all amounts owing under the agreement to continue to receive reference services under the agreement.
- Provide written evidence that the user has the ability to comply, is complying, and will comply with its approved system pressure protection plan, including by providing evidence of the identity of the user's related shippers.
- Provide written evidence that the user is complying with gas quality specifications and gas standards regulations for the gas it injects into the GDS.

1070. AGL said that ATCO should not be entitled to make requests for payment while the user meets the financial ratings described in clause 16.2 (security for performance). In the case of requiring written evidence, ATCO should be required to provide reasonable cause to request evidence of compliance with the system pressure protection plan or gas quality specifications and gas standards regulations. AGL submitted that an equivalent claim could be a user requesting written evidence that ATCO was meeting its obligations under its safety management plan, without reasonable cause.[326]

1071. Clause 16.2 details the circumstances where ATCO can request the user to provide approved security. One such circumstance is where the user cannot demonstrate that it has an acceptable credit rating.[327]

1072. In the time after the agreement comes into effect and/or the time after the commencement of the reference services, the user's financial standing may change, such that the user might have difficulties, in the future, paying amounts due and owing to the service provider. Hence, ATCO should be able to recover, in accordance with prudent commercial principles, amounts owing under the agreement.

1073. Similarly, although the user is required, as a condition of the agreement coming into effect, to satisfy ATCO that it will comply with the approved system pressure protection plan, the user's actual compliance with the plan during the term of the agreement may change. The user's compliance with the approved system pressure protection plan, as well as compliance with the gas quality specifications and gas standards specifications, is necessary for the safe operation of the GDS. Clause 16.1 is therefore a necessary protection for the network operator. However, the discretion conferred on the service provider by clause 16.1 is not limited by any considerations of the service provider acting reasonably.

1074. In light of the matters raised by AGL, the ERA considers that ATCO should not be permitted to require the user to comply with the obligation of clause 16.1 (outlined in paragraph 1069) unless ATCO acts as a reasonable and prudent network operator in requesting payment and/or requesting written evidence of compliance. The standard of acting as a "reasonable and prudent network operator" is used throughout the current (AA4) agreement and the proposed (AA5) agreement (see for example, clauses 8.2, 8.5, 8.8 and 9.1). Such a standard is also consistent with the NGR and national gas objective.

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326 AGL Energy submission, 14 November 2018, p. 10.

327 An acceptable credit rating is an unqualified Standard & Poor's credit rating of at least BBB-, or Moody's credit rating of at least Baa3, or Fitch credit rating of at least BBB-.

Required Amendment 35

ATCO must amend clause 16.1 of the template service agreement to insert the words *"acting as a reasonable and prudent network operator"* as follows.

<Service Provider>, acting as a reasonable and prudent network operator, may by written notice, from time to time under this clause 16.1 require …

Clause 23.1 - dictionary

1075. Clause 23.1 of the template service agreement contains the dictionary of defined terms that apply in the agreement. AGL has commented on four defined terms: "applying a meter lock", "business day", "gas day" and "schedules".

Applying a meter lock

1076. In the agreement, "applying a meter lock" means "the reference service described in paragraph 4.8 of the access arrangement". Paragraph 4.8 states:

> 4.8 Applying a Meter Lock
>
> a) Applying a Meter Lock is the Pipeline Service by which a lock is applied to the valve that comprises part of the Standard Delivery Facilities to prevent Gas from being received at the relevant Delivery Point.
>
> b) The Reference Tariffs associated with Applying a Meter Lock and the circumstance in which they apply are described in Annexure C.
>
> c) The process by which User obtains access to Applying a Meter Lock is set out in Schedules 4 and 5 of the Template Service Agreement (as relevant depending on the Haulage Service received).
>
> d) The other terms and conditions on which Applying a Meter Lock will be provided are set out in the Template Service Agreement.

1077. AGL has noted that ATCO had been trialling other methods to disconnect supply, which may be considered under the umbrella of applying a meter lock. AGL submitted that the "gas service order transaction", which must be used under the agreement, has only a single service order type "apply meter lock". Being the only service order type, it is expected that the apply meter lock may get used for purposes beyond this specified service. AGL suggested that the definition be broadened.[328]

1078. While AGL noted that ATCO had been trialling other methods to disconnect supply, AGL did not indicate what those methods were. ATCO did not provide any information in its proposal to the ERA on the trialling of other methods to disconnect supply, and has not proposed to offer those methods as reference services. Given this, the current definition of apply meter lock is appropriate.

1079. In any case, if ATCO were to propose other methods of disconnecting supply and those methods were to be covered under the access arrangement, ATCO would need to submit the proposed services to the ERA for approval (in accordance with the NGR) as reference services.

[328] AGL Energy submission, 14 November 2018, p. 10.

Business day

1080. In the agreement "business day" means "a day that is not: (a) a Saturday or Sunday or (b) observed as a public holiday, a special holiday or bank holiday under the *Public and Bank Holidays Act 1972 (WA)*".

1081. AGL submitted that "due to the variability and application of business days, most markets and agreements are structured under national business days for notices and local business days (Western Australia) for the provision of services".[329] AGL noted that the Western Australian definition used within the agreement may lead to a misunderstanding between parties that are operating under national business days. AGL suggested that the provision of notices and payments be undertaken in national business days, while the provision of services be undertaken in local business days.

1082. The definition of business day should not be changed. The current definition of business day is correct because the agreement applies to services provided by the GDS, which operates only in Western Australia. Matters such as the interpretation of business days should therefore be defined by reference to the local legislation – namely, the *Public and Bank Holidays Act 1972 (WA)*.

1083. Incidentally, clause 22.1(a) of the agreement states that "this service agreement is governed by the laws of Western Australia". Reference to the local legislation – the *Public and Bank Holidays Act 1972 (WA)* – is therefore consistent with clause 22.1(a).

Gas day

1084. In the agreement "gas day" means:

> a 24 hour period starting at 08:00 hours (Western Standard Time or, if applicable, Western Standard Daylight Savings Time) on a day and ending at 08:00 hours on the following day, so that:
>
> (a) a reference to a Gas Day is a reference to the Gas Day commencing at 08:00 hours on the day or date referred to, and ending at 08:00 hours on the following day; and
>
> (b) references to months, quarters and years are to be given corresponding meanings; and
>
> (c) in reckoning of months, quarters and Years, the 8 hour offset between months, quarters and Years reckoned under (b) above and calendar months, quarters and Years, is to be disregarded.

1085. AGL noted that there was a proposed change to the gas day in other jurisdictions and markets, which may at some stage be mirrored in Western Australia. AGL suggested that the term gas day in the agreement should contain some mechanism so the definition be easily changed.[330]

1086. Clause 23.3(b)(ii) of the agreement provides that "a reference to a clause of the Retail Market Procedures or a rule of the National Gas Rules or a provision of the Retail Market Scheme or the National Gas Access Law includes any amendment, substitution or replacement of the clause, rule or provision". As drafted, this would only accommodate a change to the definition of gas day if the definition includes a statement along the lines of "as defined in the Retail Market Procedures". On the current definition of gas day there is no reference to the Procedures. Accordingly, if

[329] AGL Energy submission, 14 November 2018, p. 10.

[330] AGL Energy submission, 14 November 2018, p. 10.

the definition of gas day in the Procedures change, there is nothing in the current definition of gas day in the agreement to cover that change.

1087. Clause 13.3(a) of the agreement provides that in the event of any inconsistency between a party's obligations or rights under a law, and its obligations or rights under the agreement, its obligations and rights under the law shall take precedence to the extent of any inconsistency. However, clause 13.3(a) only applies to rights and obligations under a law – the definition of gas day is not a right or obligation. Therefore, if the definition of gas day in the Retail Market Procedures were to change this would not be covered by clause 13.3(a).

1088. Nevertheless, clause 22.3(a) of the agreement allows the parties to amend the agreement in writing. Therefore, the parties can amend the definition of gas day to reflect any changes in the definition of that term in the Retail Market Procedures, when, and if, changes do occur. Until such changes occur, the current definition of gas day is consistent with the NGR and national gas objective.

Schedules

1089. The agreement includes schedules that contain specific terms and conditions for each reference service:

- Schedule 1 – Service A1
- Schedule 2 – Service A2
- Schedule 3 – Service B1
- Schedule 4 – Service B2
- Schedule 5 – Service B3

1090. AGL noted that the schedules all required service orders to be paid, regardless of cancellation.[331] AGL's comments on ATCO's proposed special metering reading reference service are relevant (see paragraph 43). While AGL submitted that it considered the proposed charge for such an ancillary service to be consistent with other gas providers, AGL suggested that no charge should be payable for the early cancellation of ancillary services. AGL also noted that ATCO required the payment of service orders where it was unable to complete the order due to access issues. AGL said that access issues were a matter for both the retailer and network operator to rectify (see paragraph 1049).

1091. The ERA has considered AGL's comments about no charge being payable for the early cancellation of ancillary services below. The matter of access to delivery point and relevant land and premises was considered above (see paragraph 1048).

1092. AGL raised issues about the payment for ancillary services not undertaken. AGL noted that tariffs for ancillary services included a direct operational cost, a direct administration cost and an allocation of corporate costs. When an ancillary service is not undertaken there are no direct costs or administration costs. In saying this, AGL recognised that there was a direct opportunity cost when staff could not be rescheduled when services were cancelled. AGL said that there should be two components to the charges for relevant ancillary services.[332]

[331] AGL Energy submission, 14 November 2018, p. 10.

[332] AGL Energy submission, 14 November 2018, pp. 4-5.

- Component 1 – no charge when the service work is cancelled before being scheduled (that is, there is no effect on resources).
- Component 2 – a cancellation charge that recognises resources were allocated and the service work cancelled, but that the resources were able to be reallocated to other work (a *'wasted truck' charge*).

1093. In support of its position, AGL submitted:

> The Special Meter Read service is a good example as when one retailer may cancel a job, it is usual that another retailer may request a job. The proposition to charge the full fee for any cancellation (i.e. no resource impact) means that these costs inevitably flow back to the consumer.
>
> Inversely, if ATCO do not provide for a 'no fee'/'wasted truck charge', then there is no incentive on retailers cancelling unnecessary service orders which do not impact customer supply. With five retailers now operating in the market, the impact on ATCO of all retailers not cancelling services could be highly inefficient.
>
> ATCO has identified Special Reads as a key service regularly cancelled. If retailers are to pay the service fee regardless, then retailers will have no incentive to cancel the Service Order and ATCO will eventually be forced to increase its workforce to meet the increasing demand for a service that is not needed.
>
> This change structure proposed by AGL provides an incentive mechanism for retailers to cancel unnecessary jobs or be charged a 'wasted' fee charge for late cancellations, which recognises allocated resources.
>
> This should lead to a more efficient workforce utilisation for ATCO.

1094. ATCO addressed the matter of charges for ancillary services in its access arrangement information, which was raised by two retailers[333] responding to ATCO's invitation to comment on its draft proposal. ATCO indicates that the retailers had suggested that services cancelled more than two days before the scheduled service date should have no charge or a reduced charge.[334]

1095. ATCO submitted that, for AA4, it charged for cancelled services at the same rate as completed services for simplicity because the number of cancelled services was not significant. However, increased competition in the retail gas market (over the course of AA4) has resulted in more completed and cancelled ancillary services. In 2017, approximately 75 per cent of revenue from cancelled services related to special meter readings and approximately 50 per cent of these cancelled readings were cancelled more than two days before the scheduled read date.[335]

1096. ATCO further indicated that it was investigating the effectiveness of changes to its billing system to monitor the timing of cancelled service orders for the following ancillary services: applying a meter lock, removing a meter lock and special meter reading.[336]

> We are currently investigating the effectiveness of implementing changes to our billing system to allow us to monitor the timing of cancelled service orders. This billing system change will allow service orders that incur no cost, to not incur a charge. Subject to the cost and practicality of billing system changes, charges for 'apply meter lock', 'remove meter lock' and 'special meter reading' may be reduced or have no charge if cancelled

[333] The identity of the retailers has not been publically disclosed by ATCO.

[334] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 180.

[335] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, pp. 180-181.

[336] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 181.

> three days or more before the scheduled date of service. Services cancelled after that time will already have been sent to the contractor for action…
>
> The estimated cost of system changes is $50,000. This additional IT capital cost to implement the charging of a reduced fee for cancelled ancillary services is not currently in the IT capex forecast and would have to be included in the forecast capex program for AA5 if this functionality is required.

1097. ATCO stated that the other ancillary services (that is, deregistration, disconnect and reconnect services) all had scheduling procedures that made it difficult to set a single cut-off date for reduced charges.[337]

> These services also incur costs from the time the request is received as the service order is passed to operation departments for scheduling and action. The preferred course of action is to work with retailers to reduce the number of cancelled service orders.

1098. In any case, ATCO indicated that it "welcome[s] the opportunity to work with retailers to understand the cause of cancelled ancillary services and reduce them to the benefit of all market participants including customers". ATCO suggested that retailers may wish to consider changes to their booking processes to minimise bookings made more than three days from the preferred date of service in order to reduce the chances of cancellations.[338]

1099. The ERA considers there is merit to AGL's submission and ATCO's investigations to address the matter of charging for cancelled ancillary services. The charging of cancellation charges or fees for cancelled services is not uncommon. Under Australian Consumer Law businesses are able to charge such fees in certain circumstances. Such fees must be fair and reasonable and generally seek to recover reasonable costs to the business for having a service scheduled and then cancelled. Depending on the cancellation policy of an individual business, consumers may or may not be charged a cancellation fee when a service is cancelled. This charging regime provides incentives to consumers to use services that are scheduled, or to cancel services as soon as possible if the schedule service cannot go ahead and allow for the reallocation of resources.

1100. The cost for IT system changes to implement the charging of cancelled ancillary services (at a reduced or zero charge) is not included in ATCO's capital expenditure forecasts for AA5. Hence, any requirement for ATCO to implement a reduced charging regime for cancelled services would require adjustments to ATCO's capital expenditure forecasts. Based on preliminary investigations, ATCO estimated the cost of system changes to be $50,000 and suggested this cost outweighed the possible savings to retailers.[339]

1101. No retailers provided any information on the possible savings they (and their customers) may experience if ATCO made changes to its charges for cancelled ancillary services.

1102. The ERA sought additional information from ATCO on the number of cancelled ancillary services and the possible costs and benefits of additional capital expenditure

[337] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 181.

[338] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 181, Figure 19.10.

[339] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018, p. 168, Table 19.1.

to address retailers' concerns about cancellation charges for such services. ATCO submitted the following information.[340]

- ATCO noted the comments from retailers on its proposal submitted to the ERA on 31 August 2018 (and in response to the ERA's request for submissions and issues paper).
- Concerning interactions with retailers about cancellation charges:
  - ATCO discussed the matter of cancellation charges with retailers during quarterly meetings that were held to discuss matters of interest.
  - ATCO advised retailers that cancellation charges could be avoided by scheduling jobs two days before the required service date. ATCO claimed this had not been put into practice by all retailers.
  - In addition to quarterly meetings, ATCO had ongoing operational discussions daily with retailers about the gas retail market rules, which included navigating the differences in the procedures applying in Western Australia to practices adopted in other states.
- Based on 2,500 special meter reads per year, cancelled less than or equal to three business days before the scheduled meter read date, and a charge of $12.82, ATCO estimated the savings to retailers to be approximately $32,000 per year (offset by the return of and on any required capital investment in IT).
- For a special meter read cancelled more than three days prior to the scheduled meter read date the reduced charge would be nil. That is, there would be no charge payable.
- For a special meter read cancelled three days or less from the scheduled meter read the standard special meter read tariff would apply.[341] ATCO stated: "costs will be incurred by the contractor and ATCO in attempting to cancel the special meter reading service as manual intervention may be required to stop the service. The contractor will also be arranging the appropriate resources depending on the level of planned activity. In some cases it may not be possible to cancel the service by the contractor."
- Similarly, for services to apply and remove meter locks, there would be no charge for services cancelled more than three days prior to the scheduled service date. For services cancelled three days or less from the scheduled service date the standard apply meter lock or remove meter lock tariff would apply.[342]

1103. Table 106 details the number of cancelled services for 2017 and 2018. The number of cancelled services has increased from 6,246 to 9,408. Approximately 94 per cent of cancellations in 2018 were attributed to cancelled special meter reads.

[340] ATCO response to Information Request ERA 11, 7 March 2019 and 8 March 2019.

[341] The proposed special meter read tariff for AA5 is $12.82.

[342] The proposed apply meter lock tariff for AA5 is $49.14. The proposed remove meter lock tariff for AA5 is $26.73.

Table 106: Number of cancelled ancillary services

Cancelled Ancillary Service	2017	2018
Special meter read		
Cancelled less than or equal to 3 business days before read date	2,483	2,643
Cancelled more than 3 business days before read date	3,209	6,163
Total cancelled special meter read services	5,692	8,806
Apply and remove meter lock		
Cancelled less than or equal to 3 business days before read date		196
Cancelled more than 3 business days before read date		110
Total cancelled apply and remove meter lock services		306
Other service		
Total cancelled other services	554*	296
TOTAL		
Total cancelled ancillary services	6,246	9,408

**Includes "meter lock services"*

Source: ATCO response to Information Request ERA 11, 7 March 2019.

1104. Given ATCO's cancelled ancillary service data for 2018 and proposed special meter reading tariff for AA5 ($12.82), ATCO would collect $112,893 from cancelled special meter reads based on its current AA4 charging policy of charging for cancelled services at the same rate as completed services. If ATCO were to introduce a reduced (nil) charge for special meter readings that were cancelled more than three business days before the scheduled meter read date this revenue would be reduced to $33,883. The reduction in revenue to ATCO would mean savings for retailers (and their customers).

1105. In calculating the potential savings to retailers, ATCO used the proposed special meter read tariff of $12.82 and an estimate of 2,500 special meter reads, cancelled less than or equal to three business days before the scheduled meter read date, per year. It is unclear why ATCO used the meter reads cancelled less than or equal to three business days in its calculation – under ATCO's amended billing system for reduced (nil) cancellation charges, ATCO would still charge the standard meter read tariff for these cancelled services.

1106. The ERA has calculated average savings to retailers of approximately $60,000 per year based on ATCO's proposed special meter read tariff and an estimate of 4,686 special meter reads, cancelled more than three business days before the scheduled meter read date (Table 107). As indicated by ATCO, an amended billing system for reduced (nil) cancellation charges would apply to the apply meter lock and remove meter lock services, as well as the special meter read service. Hence, the savings would be greater than what has been estimated.

Table 107: ERA's estimated savings from reduced (nil) cancellation charges

Special Meter Read Service	2017	2018	Average
Cancelled more than 3 business days before read date	3,209	6,163	4,686
Proposed AA5 special meter read tariff	$12.82	$12.82	$12.82
Total revenue (savings) from cancelled services	**$41,139**	**$79,009**	**$60,074**

1107. ATCO submitted that the estimated IT cost to change its billing system to accommodate reduced (nil) cancellation charges was $50,000 (which was not included in ATCO's capital expenditure forecasts for AA5). Considering the information above the possible savings to retailers and their customers appear to outweigh the initial cost of changing ATCO's billing system. In any case, the ERA considers it unreasonable and inconsistent with the national gas objective for retailers to be charged the full service charge in circumstances where the service is cancelled with reasonable notice.

1108. In addition to monetary savings, ATCO also indicated other benefits that may arise from a change in its billing system.[343]

> The proposed change to ATCO's systems will allow retailers the ease of booking the job at their convenience whilst still having the ability to cancel if required closer to the activity date without penalty (more than three days from the read date). *[sic]*

1109. Given the possible benefits, ATCO must submit a proposal for introducing reduced charges for cancelled ancillary services to apply for AA5. The introduction of such charges will involve changes to ATCO's billing system as well as the access arrangement terms and conditions for ancillary services. That is, the access arrangement and relevant terms and conditions will need to be amended to detail the circumstances where charges will (and will not) be payable and what the relevant charges will be.

Required Amendment 36

ATCO must amend the proposed revised access arrangement to introduce reduced cancellation charges for the following ancillary services that are cancelled with reasonable notice, which is taken to mean more than three business days prior to the scheduled service date.

- Special meter reading
- Applying a meter lock
- Removing a meter lock

[343] ATCO response to Information Request ERA 11, 8 March 2019.

Other Access Arrangement Provisions

Application Procedures

1111. Rule 112 of the National Gas Rules (NGR) details the requirements for requesting access to a pipeline service. In summary, a prospective user may request the service provider to provide a pipeline service.

- The request must be made in writing and must provide details of the pipeline service sought, such as, for example, the time(s) when the service is required and the capacity that is to be used.
- The service provider must respond to the request within 20 business days of receiving it.
  - Where the service provider informs the prospective users that it cannot provide the requested service, reasons must be given as to why the service cannot be provided.
  - The service provider may respond to a request by proposing further investigation, which allows the parties to modify and negotiate the prospective user's request.

1112. In line with these requirements, Part 5 of ATCO's access arrangement details the process to follow when a prospective user seeks access to a pipeline service that is offered by means of the Gas Distribution Systems (GDS).

ATCO's Proposal

1113. ATCO's application procedure and associated response times are shown in Figure 14. ATCO submitted that while its procedure "remains largely unchanged from AA4", it has standardised the processes for access to both the regulated GDS and Albany and Kalgoorlie non-scheme pipelines.[344] ATCO has:

- Provided prospective users with website links to its contact details.
- Replicated the confidentiality provisions within the application procedure.
- Specified an application form for use by prospective users, which is set out in Annexure G of the access arrangement. The application form has the same 'look and feel' as the non-scheme pipeline application form with some modifications to meet the requirements of the NGR and access arrangement.
- Included information on where the non-scheme pipeline user guide can be found, which may be useful to prospective users who are not familiar with the Western Australian gas market.

[344] ATCO, *2020-24 Plan (Access Arrangement Information)*, 31 August 2018*, p. 192.*

Figure 14 ATCO's application procedure for access requests

ATCO, 2020-24 Plan (Access Arrangement Information), p. 192, Figure 23.1.

Submissions

1114. Alinta Energy submitted that it agreed with ATCO's proposal to standardise the process for access to the regulated GDS and non-scheme pipelines in Albany and Kalgoorlie.[345]

Draft Decision

1115. ATCO's proposed amendments to the application procedures in the access arrangement do not materially alter the current procedures. The amendments provide additional information for prospective users and/or clarify the procedures for seeking access to pipeline services. The amended provisions (as summarised in Table 108) are consistent with the national gas objective and the requirements of rule 112 of the NGR.

[345] Alinta Energy submission, 14 November 2018, p. 9.

Table 108: Summary of ATCO's proposed updates to Part 5 (Application procedure) of the access arrangement

ATCO's proposed updates to Part 5 of the access arrangement
Part 5.1 Prospective Users and Pipeline Services • New wording to clarify that pipeline services are provided by ATCO by means of the GDS. • New website (URL) information to direct prospective users seeking access to relevant information on ATCO's website.
Part 5.2 Application Information • New wording added to clarify application information for: – minimum prudential and insurance requirements are set out in the application form. – a proposed system pressure protection plan is specified in Part 5.7. • New wording added to reflect ATCO's confidential treatment of application information and that ATCO will only use this information for the purpose for which it was disclosed.
Part 5.3 Application Procedure for Prospective Users • Updated wording to specify that the form to request access to pipeline services is the application form at Appendix G of the access arrangement.
Part 5.5 Pre-conditions to and restrictions on the provision of Pipeline Services • Updated wording to use the terms "prospective user" (in addition to the term *user*) and "in accordance with accepted good industry practice" (instead of *prudent pipeline practices*).
Part 5.7 System Pressure Protection Plan • New wording to clarify that the standard protection plan acceptable to ATCO is shown at Appendix E of the access arrangement.

Capacity Trading

1116. Rule 48(1)(f) of the NGR requires a full access arrangement to set out capacity trading requirements, which must provide for the transfer of capacity in accordance with rules 105(1)(a) and (b):

- If the service provider is registered as a participant in a particular gas market, in accordance with the rules or procedures governing the relevant gas market.
- If the service provider is not registered as a participant in a particular gas market, or if the relevant rules or procedures do not deal with capacity trading, in accordance with rule 105.

1117. Rules 105(2) and (3) of the NGR allow a user to transfer any of its contracted capacity with or without the service provider's consent, with different consequences:

> (2) A user may, without the service provider's consent, transfer, by way of subcontract, all or any of the user's contracted capacity to another (the third party) with the following consequences:
>
> (a) the transferor's rights against, and obligations to, the service provider are (subject to paragraph (b)) unaffected by the transfer; but
>
> (b) the transferor must immediately give notice to the service provider of:
>
> (i) the subcontract and its likely duration; and
>
> (ii) the identity of the third party; and

(iii) the amount of the contracted capacity transferred.

(3) A user may, with the service provider's consent, transfer all or any of the user's contracted capacity to another (the third party) with the following consequences:

(a) the transferor's rights against, and obligations to, the service provider are terminated or modified in accordance with the capacity trading requirements; and

(b) a contract arises between the service provider and the third party on terms and conditions determined by or in accordance with the capacity trading requirements.

1118. Rule 105 further states that:[346]

- The service provider must not withhold its consent unless it has reasonable grounds, based on technical or commercial considerations, for doing so.
- An adjustment of rights and liabilities does not affect the rights or liabilities that had accrued under, or in relation to, the contract before the transfer took effect.
- The capacity trading requirements may specify in advance conditions under which consent will (or will not) be given, and the conditions to be complied with if consent is given.

ATCO's Proposal

1119. ATCO did not propose any amendments to the capacity trading requirements for AA5. The capacity trading requirements remain unchanged from the current access arrangement requirements and are specified in Part 6 of the access arrangement and clause 14 of the template service agreement (Annexure F of the access arrangement).

Submissions

1120. No submissions were received addressing the capacity trading requirements set out in the access arrangement and ATCO's decision to leave these requirements unchanged.

Draft Decision

1121. The capacity trading requirements remain unchanged from the current requirements in the fourth access arrangement period (AA4). There were no submissions from interested parties seeking any amendments to the requirements. For these reasons, and in the absence of any other reason to amend the requirements, the current capacity trading requirements are considered to meet the requirements of the NGR.

Extension and Expansion Requirements

1122. Rule 48(1)(g) of the NGR requires a full access arrangement to set out extension and expansion requirements, which are detailed in rule 104.

104 Extension and expansion requirements

(1) Extension and expansion requirements may state whether the applicable access arrangement will apply to incremental services to be provided as a

[346] Subrules 105(4), (5) and (6).

result of a particular extension to, or expansion of the capacity of, the pipeline or may allow for later resolution of that question on a basis stated in the requirements.

(2) Extension and expansion requirements included in a full access arrangement must, if they provide that an applicable access arrangement is to apply to incremental services, deal with the effect of the extension or expansion on tariffs.

(3) The extension and expansion requirements cannot require the service provider to provide funds for work involved in making an extension or expansion unless the service provider agrees.

ATCO's Proposal

1123. ATCO's proposed extension and expansion requirements are set out in Part 7 of the access arrangement and include a new development rebate scheme[347] and some other minor amendments to current requirements.

1124. ATCO advised that the proposed development rebate scheme was in response to feedback from land developers that the cost to reticulate and connect commercial subdivisions to the gas distribution network prevented developers from including reticulated gas in the subdivision.

1125. Under ATCO's proposal, the scheme would allow for an agreement, setting out operational rights and obligations, to be put in place between ATCO and the developer. To minimise administration costs, the scheme would be limited to subdivisions where the capital funding provided by the developer was in excess of $50,000. Benefits of the scheme would apply to both commercial tenants and other customers.

1126. Part 7.5 of the proposed revised access arrangement outlines the following elements of the development rebate scheme:

- the eligibility criteria – Part 7.5(a)
- rebate amount – Part 7.5(b) and (c)
- effect on reference tariffs – Part 7.5(d) and (e).

1127. Where a land developer requests capital works to reticulate gas in a subdivision, ATCO considers whether the proposed investment would likely conform to rule 79 of the NGR, in particular, that the present value of the expected additional revenue to be generated as a result of the expenditure exceeds the present value of that expenditure.

1128. ATCO previously asked land developers to contribute capital toward the overall cost of the development for the portion that it considers does not satisfy rule 79. ATCO received feedback from land developers that this contribution prevented these developers from incorporating gas reticulation into commercial subdivisions.

1129. ATCO's proposed scheme would allow for land developers to receive a rebate of some, or all, of the capital they have contributed towards the overall cost of reticulating gas in commercial subdivisions. A rebate would be paid following the connection of end-users in the subdivision to the gas network.

[347] New Part 7.5 of the access arrangement.

1130. Under the proposal, ATCO would determine the rebate amount through an economic analysis, similar to the analysis under rule 79(2)(b) of the NGR, such that the rebate is no more than the net present value (NPV) of the expected incremental revenue and costs of the new end user. The rebate would also be capped at the value of the land developer's contribution.

1131. The operational details of the scheme appear to be left open and to be determined in agreement between ATCO and the land developer. ATCO's proposal does not provide details of the method, except that it follows current internal procedures. Under the proposal, the ERA would not consider any arrangements made between ATCO and the land developer.

1132. Under the proposed scheme, ATCO's recoverable costs would also include a time value of money adjustment to account for the timing difference between ATCO paying the rebate to the developer and the start of the next access arrangement period, when tariffs would adjust to include the rebate amount in the regulated asset base.

1133. ATCO's proposed scheme would introduce a fixed principle[348] which would require the ERA to include a return on and of the rebate amount in the reference tariffs until the rebate was fully depreciated based on the asset lives of the underlying capital expenditure.

1134. The fixed principle would allow for ATCO to automatically recover all rebates as capital costs under an undefined scheme. At present, the ERA assesses all capital costs for compliance against the requirements of the NGR. Acceptance of this fixed principle would obviate any requirement for the ERA to consider each case on its merits.

1135. The other minor amendments to Part 7 of the proposed access arrangement are to:

- Amend the annual reporting timeframe for extensions and expansions from 20 to 40 business days to accommodate the December/January holiday period.
- Amend the definition of the pressure threshold for high pressure pipelines from 1,920kPa to 1,900kPa to be consistent with definition of "distribution network" set out in section 3 of the *Energy Coordination Act 1994* definition.

Submissions

1136. Several submissions to the ERA briefly addressed ATCO's proposal to include a new development rebate scheme. A summary of the submissions is provided below, with detailed considerations of specific matters raised discussed at paragraph 1142 (and following).

- Alinta Energy supported the proposed rebate scheme. Alinta submitted that it supported the rebate "reflecting the amount that ATCO determines" meets the criteria under rule 79, and that the proposed scheme would "encourage the reticulation of gas in commercial subdivisions, providing end-use customers with more choice in energy options and driving the cost of gas down as uptake increases".[349]

[348] Fixed principles are discussed at paragraph 947 of this decision document.

[349] Alinta Energy submission, 14 November 2018, p. 9.

- The Urban Development Institute of Australia (WA) submission addressed only the developer rebate scheme. The Institute supported the proposed rebate scheme as "it will help overcome some of the cost barriers to providing reticulated gas, connected to the GDS in commercial subdivisions".[350]
- Synergy did not support the proposed rebate scheme being funded from tariffs or being included as a fixed principle in the access arrangement. It considered that ATCO should use existing "general marketing and business development expenditure" allocations to support developers.[351]

1137. Consideration of ATCO's proposed development rebate scheme in submissions was presented in very general terms. The submissions did not address the rule requirements for extensions and expansions, or the way in which the proposed scheme was supposed to meet the objectives of the national gas access regime.

1138. No submissions to the ERA addressed ATCO's proposal to make the other minor amendments (see paragraph 1135) to the extension and expansion requirements.

Draft Decision

1139. ATCO's proposed extension and expansion requirements provide for the following:

- ATCO must apply to the ERA for a decision on whether an extension designed to operate at above 1,900kPa or extensions that provide a new direct connection to a transmission pipeline (that provides reticulated gas to a new development or an existing development not serviced with reticulated gas) are to be covered by the access arrangement.
- All other extensions are automatically covered by the access arrangement.
- All expansions are automatically covered by the access arrangement.
- ATCO must annually report to the ERA the details of all extensions and expansions in progress or completed.

1140. ATCO's proposal to amend the definition of the pressure threshold for high pressure pipelines, from 1,920kPa to 1,900kPa, is consistent with the *Energy Coordination Act 1994* and is the same threshold used for ATCO's Distribution Licence.[352] This change would not be inconsistent with the NGR and national gas objective.

1141. ATCO's proposal to amend the annual reporting timeframe to report extensions and expansions to the ERA, from 20 to 40 business days, is not inconsistent with the national gas objective. The timeframe to report to the ERA commences each 1 January, which can be a challenging period for businesses with Christmas and New Year holiday leave and/or closures. ATCO's proposal to extend the timeframe to 40 business days will provide ATCO with more time to overcome such challenges with no adverse effects on other parties, including the ERA.

[350] Urban Development Institute of Australia (WA) submission, 14 November 2018.

[351] Synergy submission, 14 November 2018, p. 8.

[352] The *Energy Coordination Act 1994* and ATCO's Distribution Licence both refer to distribution system rather than distribution network.

Development rebate scheme

1142. ATCO's capital investment is assessed against rule 79 of the NGR[353]. Only capital investment that conforms to the provisions of this rule can be recovered through ATCO's tariffs.

1143. ATCO considered that its proposed development rebate scheme was part of the extension and expansion requirements because it addressed the effect of the extension or expansion on reference tariffs. ATCO also noted that "there are no other relevant provisions that are related to the establishment or operation of a rebate scheme under the NGR or the NGL". Rule 104(2) states:

> Extension and expansion requirements included in a full access arrangement must, if they provide that an applicable access arrangement is to apply to incremental services, deal with the effect of the extension or expansion on tariffs.

1144. However, the effect on tariffs is usually a decision on whether to amend tariffs immediately or wait until the next access arrangement period depending on the significance of the extension or expansion. In any event, it should be considered that any effect on tariffs would still need to comply with the national gas objective and the relevant rules, particularly rule 79 and the assessment of whether the extension or expansion could be added to the capital base.

1145. Rule 79 or other rules do not contemplate the addition of previous capital contributions into the regulatory asset base in the form of rebates.

1146. ATCO cited the following schemes that it claims are similar to the scheme it proposed:

- Section 10 of Western Power's capital contribution policy provides for rebates.
- Chapter 5A of the National Electricity Rules specifies the obligations of network businesses in relation to establishing and operating refund schemes for capital contributions relating to retail customers.

1147. The Western Power example cited above is not part of an approved access arrangement, but is simply a rebate scheme which may operate alongside or independently of the access arrangement. Chapter 5A of the National Electricity Rules refers to schemes for refunding customer contributions, and not developer contributions.

1148. ATCO contended that it was the extent of developers' contributions (which were currently sought by ATCO in respect of costs which do not conform to rule 79) that had prevented a large proportion of land developers from incorporating gas reticulation into their developments.

1149. Rule 79 ensures that regulated tariffs do not reflect the cost of infrastructure that does not deliver a corresponding benefit to customers. The inclusion of assets as conforming assets under rule 79 requires an assessment and approval by the ERA. ATCO's proposed development rebate scheme would take the responsibility for this assessment from the ERA and allow ATCO, using its own internal processes, to determine when this non-conforming capital expenditure becomes conforming capital expenditure. Under the associated proposed fixed principle, this would mean that all capital expenditure determined to be conforming by ATCO will be included in the capital base, without approval by the ERA.

[353] Rule 79 covers new capital expenditure criteria.

1150. The purpose of the rule on conforming capital expenditure (rule 79) is to prevent the recovery of unwarranted capital expenditure in the cost of gas, and so prevent unwarranted increases in the price of gas. The submissions in support of the development rebate scheme do not outline the ways that the existing rules are inadequate in this respect, except to say that the rules are a disincentive to reticulating gas in new subdivisions. Alinta Energy submitted the development rebate scheme would "drive down the cost of gas as uptake increases". However, Alinta did not outline the mechanism by which this might occur.

1151. For the reasons outlined above, the ERA considers that ATCO's proposed development rebate scheme is not consistent with the national gas objective or the requirements of the NGR.

Required Amendment 37

ATCO must delete section 7.5 (Development Rebate Scheme) from the proposed revised access arrangement.

1152. An alternative to ATCO's existing requirement for developers to pay a capital contribution would be for ATCO to undertake the full investment itself and then request that any portion that does not meet rule 79 is added to a speculative capital expenditure account as allowed under rule 84. Then, if the speculative investment amount subsequently meets the requirement of rule 79, it could be added to the regulatory asset base and a return on and of the amount could occur through the reference tariffs.

Receipt and Delivery Points

1153. Rule 48(1)(h) of the NGR requires a full access arrangement to state the terms and conditions for changing receipt and delivery points. These terms and conditions must be in accordance with the principles listed in rule 106(1).

- A user may, with the service provider's consent, change the user's receipt or delivery point.
- The service provider must not withhold its consent unless it has reasonable grounds, based on technical or commercial considerations, for doing so.

1154. The access arrangement may specify in advance the conditions under which consent will (or will not) be given, and conditions to be complied with if consent is given (rule 106(2)).

ATCO's Proposal

1155. ATCO did not propose any amendments to the terms and conditions for changing receipt and delivery points for AA5. The terms and conditions remain unchanged from the current AA4 terms and conditions and are specified in Part 8 of the access arrangement and clause 5 of the template service agreement (Annexure F of the access arrangement).

Submissions

1156. No submissions were received addressing the capacity trading requirements set out in the access arrangement and ATCO's decision to leave these requirements unchanged.

Draft Decision

1157. The terms and conditions for changing receipt and delivery points remain unchanged from the current AA4 terms and conditions. There were no submissions from interested parties seeking any amendments to these terms and conditions. For these reasons, and in the absence of any other reason to amend the terms and conditions, the current terms and conditions for changing receipt and delivery points are considered to meet the requirements of the NGR.

Appendix 1 List of Tables

Appendix 2 List of Figures

Appendix 3 Abbreviations

AA3	third access arrangement period
AA4	fourth access arrangement period
AA5	fifth access arrangement period
AA6	sixth access arrangement period
AER	Australian Energy Regulator
AGN	Australian Gas Networks
ATCO	ATCO Gas Australia
ATO	Australian Taxation Office
CIC meterset	customer initiated commercial meterset
CPI	consumer price index
DBNGP	Dampier to Bunbury Natural Gas Pipeline
DCVG surveys	direct control voltage gradient surveys
DRP	debit risk premium
DV method	diminishing value method (for depreciation)
EMCa	Energy Market Consulting Associates
ERA	Economic Regulation Authority
GDS	Mid-West and South-West Gas Distribution System
GIS	geographical information systems
GJ	gigajoule
KPI	key performance indicator
MRP	market risk premium
NGL	National Gas Law
NGO	national gas objective
NGR	National Gas Rules
NPV	net present value
PE	polyethylene
PVC	polyvinyl chloride
PwC	PricewaterhouseCoopers
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SCADA	supervisory control and data acquisition
SL method	straight-line method (for depreciation)
TJ	terajoule
UAFG	unaccounted for gas
WACC	weighted average cost of capital

Appendix 4 Submissions Received

Submissions received in response to the Economic Regulation Authority's initiating notice and/or Issues Paper.

- AGL Energy Ltd, *Issues paper on proposed revisions to the Mid-West and South0West Gas Distribution Systems Access Arrangement for 2020-2024*, 14 November 2018.
- Alinta Energy, *Proposed Revisions to the Mid-West and South-West Gas Distribution System Access Arrangement for the 2020 to 2024 – Issues Paper*, Alinta Energy Submission, 14 November 2018.
- Kawasaki Heavy Industries Ltd, *Submission in response to ERA's issues paper*, 14 November 2018.
- Professor Craig Buckley, *Submission to ERA in support of ATCO's Innovation Scheme and Clean Energy Innovation Hub* (received 12 November 2018).
- Synergy, *Response to issues paper on proposed revisions to the mid-west and south-west gas distribution systems access arrangement*, 14 November 2018.
- Urban Development Institute of Australia (Western Australia), *Proposed Revisions to the Mid-West and South-West Gas Distribution Systems Access Arrangement for 2020 to 2024*, 14 November 2018.
- Wesfarmers Kleenheat Gas Pty Ltd, *Kleenheat submission on the proposed revised access arrangement for Mid-West to South-West Gas Distribution Systems*, 13 November 2018.

Appendix 5 Tariff Model – Public Version

This appendix is published separately on the ERA's website.

Appendix 6 Discounted Weighted Average Tariff

Average tariffs over a number of years may be combined to a single value through the discounted weighted average tariff (DWAT) approach. The DWAT is defined as the constant price in real terms (after adjusting for inflation), which, applied to each unit sold over the evaluated life of the investment producing the product, gives the required overall rate of return on the investment.

$$DWAT = \frac{Present\ Value\ of\ Revenue\ over\ the\ evaluated\ life\ of\ the\ investment}{Present\ Value\ of\ Product\ Sold\ over\ the\ evaluated\ life\ of\ the\ investment}$$

The *Present Value of Revenue* is the sum, over all the years of the evaluated life of the investment, of:

$$\frac{Revenue_t}{\left(1+\frac{r}{100}\right)^t}$$

where:

t = the year, counting from zero in the initial year

$Revenue_t$ = revenue in year t

r = discount rate (%)

and where $Revenue_t$, and the discount rate may both be in real terms (corrected for inflation) or both be in nominal terms (not corrected for inflation).

The *Present Value of Product Sold* is the sum, over all the years of the evaluated life of the investment, of:

$$\frac{Quantity_t}{\left(1+\frac{r}{100}\right)^t}$$

where:

t = the year, counting from zero in the initial year

$Quantity_t$ = quantity sold in year t

r = real discount rate (%)

The discounting of quantity sometimes causes conceptual difficulties. Note that it is not quantity as such which is being discounted, but the value of the quantity sold – it is part of the weighting process.

Assumptions used in DWAT calculations

The ERA calculated the discounted weighted average tariff for:

- Existing customers
- Existing customers with the addition of new greenfield customers
- Existing customers with the addition of new brownfields customers

For all of the scenarios, the ERA has:

- Calculated revenue using a cost-of-service approach as the sum of operating expenditure, return on assets and depreciation. A real pre-tax WACC has been used instead of separately calculating taxation. No allowance as been assumed for working capital or equity raising costs for simplicity and these costs are not material.
- Used the real pre-tax WACC calculated based on the WACC used for this draft decision, to discount the revenue in real dollars and the volume. The real pre-tax WACC is 6.2 per cent.
- Applied the AA5 forecast real input labour escalation growth rate to operating expenditure and then forecast the escalation growth rate at 1.25 per cent after AA5, consistent with the NPV modelling.
- Used the ERA's tariff model and extended that model to calculate the DWAT over a 50 year period consistent with the NPV modelling.

The customer numbers used in the DWAT analysis incorporate the following assumptions:

- Existing customers:
  - B2 customer numbers decline by 0.6 per cent a year.
  - B3 customer numbers decline by 0.5 per cent a year.
- Greenfield and Brownfield customers:
  - B2 customer numbers decline by 0.6 per cent a year commencing 10 years following connection (consistent with ATCO's assumption in NPV modelling).
  - B3 customer numbers decline by 0.5 per cent a year commencing 10 years following connection (consistent with ATCO's assumption in NPV modelling).

The gas consumption per customer assumptions are as follows:

- Greenfield and Brownfield consumption per customer values as assumed by ATCO in its NPV modelling, except for a forecast decline by 0.5 per cent a year on mature customer demand following AA5. An 8 GJ per customer floor in consumption is maintained from ATCO's NPV model.
- Existing consumption per customer values for AA5 as forecast by the ERA in this draft decision, then the decline in consumption per customer matches greenfield and brownfield assumptions.

The capital expenditure assumptions are as follows:

- Capital expenditure for AA5 was calculated for existing customers by removing contingent expenditure on greenfield or brownfield customer growth. Greenfield and brownfield capital expenditure was calculated based on estimating the expenditure that may be required to service those new customers by ATCO.
- For years following AA5, capital expenditure is estimated to maintain the asset base over time by matching the depreciation.

The operating expenditure assumptions are as follows:

- Operating expenditure is calculated by adjusting the output growth calculation for the forecast customer numbers under each scenario and the forecast length of mains. After 2025, the forecast length of mains remains at the same value as 2024.