

Amadeus Consumer Reference Group 2021-26 access arrangement revision



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Agenda for today



| Coffee | |
|--------------------|--|
| 1 | Welcome and Acknowledgement of Country and traditional owners |
| 2 | Introductions around the table House keeping and house rules |
| 3 | Overview of the day: what we are hoping to achieve |
| 4 | First roundtable meeting: recap and what we heard |
| 5 | Our answers to your questions |
| 6 | Demand forecasts used to determine prices for reference services |
| Morning tea | |
| 7 | Asset management plan and capital expenditure forecast |
| 8 | Return on investment |
| 9 | Operating expenditure and incentive mechanism |
| 10 | Wrap up and next steps |
| Lunch | |

Acknowledgement of Traditional Owners



I'd like to acknowledge the Larrakia people whose land we are meeting on today and pay my respects to the Traditional Owners – past, present and emerging.

Introductions and housekeeping

- **Introductions**
- **Housekeeping**
 - Emergency exits and process.
 - Bathrooms.
 - Tea and coffee location.
 - Scheduled breaks.
 - GHD support in the room.

House rules



- This is intended be an open discussion between the reference group and APA.
- We welcome any issue or question about the access arrangement and its context.
- The main rule we propose is that the discussions during the roundtable are respectful.
- We are not intending to attribute any comments or questions to you or your organisation, unless requested.

What are we hoping to achieve?



Summary of consultation and indicative timing (December 2019)



| Topic | Roundtable | Timing |
|--|------------|-------------------|
| Asset management plan and capital expenditure | 2 | Mid-February 2020 |
| Return on capital | 2 | Mid-February 2020 |
| Depreciation | 3 | Mid-March 2020 |
| Forecast operating expenditure | 2 | Mid-February 2020 |
| Incentive mechanism | 2 | Mid-February 2020 |
| Estimated cost of corporate income tax | 3 | Mid-March 2020 |
| Total revenue and cost allocation | 3 | Mid-March 2020 |
| Demand forecast | 2 | Mid-February 2020 |
| Reference tariffs | 3 | Mid-March 2020 |
| Tariff variation mechanism | 3 | Mid-March 2020 |
| Access Arrangement: terms and conditions | 3 | Mid-March 2020 |
| Access Arrangement: queuing, capacity trading, extension/expansion | 3 | Mid-March 2020 |

Getting into the details

- **In this roundtable meeting, we shall present to you our initial thinking of key issues for the Amadeus Access Arrangement revision proposal:**
 - The forecast of demand for pipeline services which should underpin our total revenue calculation and the setting of reference tariffs
 - APA's asset management plan for Amadeus, and the capital expenditures it calls for
 - Our forecasting of operating expenditure
 - How we are proposing to apply the rate of return instrument.
- **We would like your questions and your feedback on all of these as we develop the Amadeus Access Arrangement revision proposal.**
- **Ideally, your questions will be raised during today's roundtable meeting (or during the two further roundtables which we have provisionally scheduled for March and April) where all can contribute to discussion. We are, however, available to discuss the issues listed above, and any other issues, outside of the meetings.**
- **During today's meeting, we shall provide opportunities for questions and discussion: we look forward to your contributions, and will summarize the key "take-outs", and feed these back to you for review before using them in the Access Arrangement revision proposal.**

There is also a broader context

- The immediate focus of today's roundtable meeting is our initial thinking on a number of key issues arising in preparation of the Amadeus Access Arrangement revision proposal.
- But we would also like to step back: we would like to hear about how Amadeus might be important to you, to your business, to your constituents, and to the Northern Territory.
- Engagement, and community involvement, provide us with outside views on the way in which we should be taking into account a range of external factors (including, for example, climate change) in our planning for, and development of, Amadeus.

Discussion:

What outcomes might you be seeking from engagement on the Amadeus Access Arrangement?

First roundtable meeting: recap and what we heard



Brief recap

- **At our first roundtable meeting, in December, we presented quite a lot of information on:**
 - The Amadeus Gas Pipeline
 - The pipeline regulatory regime of the National Gas Law (NGL) and the National Gas Rules (NGR)
 - Why we convened this reference group.

We sought your views on our engagement plan



Your views ...

Tell us what other information you would like us to provide.

Please respond either in hard copy or by the online survey.

Please provide feedback on the following questions:

1. Is there other information you want us to provide about Amadeus Gas Pipeline?
2. Do you have any questions about the current arrangements for the AGP?
3. Are you happy with the way we propose to engage with the Amadeus consumer reference group?
4. Can you suggest other ways we may better engage with you?
5. Do you have any comments on the topics we are proposing to engage on?
6. Are there any other topics or information you wish we include in the engagement plan for Amadeus?
7. Do you consider that the timeframes for the key engagement activities are reasonable?

What we heard from you

- Tell us about the relationship between APA and PWC in so far as it affects the rights of other firm and as available Shippers on the AGP.
- The response to questions that "we are working on that with PWC" will not be an acceptable answer to questions for long.
- What role can Amadeus can play in growing the Territory: what is the longer term view . . . in 20-30 years?
- Businesses are facing tough conditions in the NT: the cost of energy is a major issue; NT businesses want to see energy delivered more cheaply.
- We did not give enough notice of meetings, and did not provide information sufficiently early.

Discussion

Have we heard you correctly?

How much notice of meeting is required?

Our answers to your questions



Relationship between APA and PWC

- **APA has a gas transportation agreement with PWC.**
- **Like other commercially negotiated agreements, this agreement is confidential.**
- **However, under the NGL, the AER has access to the agreement with PWC, and to all of APA's agreements for gas transportation on Amadeus.**
- **The current Amadeus Access Arrangement (approved by the AER) recognises the existence of pre-existing transportation agreements:**
 - Explicitly, in the note to section 2.1
 - In the gas scheduling and curtailment priorities of the terms and conditions applying to firm service (Schedule 3)
 - In the queuing requirements (section 6.4 of the Access Arrangement)

Pre-existing transportation agreements

- The note to section 2.1 of the Access Arrangement advises that there is currently no capacity available for provision of the firm service reference service: all capacity is utilised under pre-existing transportation agreements for services in the nature of firm service.
- The physical operation of the pipeline has changed since this note was included in the Access Arrangement in 2016, but all capacity continues to be utilised under pre-existing transportation agreements for services in the nature of firm service.
- If other user require the firm service reference service, the capacity of the pipeline will have to be expanded.
- The queuing requirements of the Access Arrangement, in section 6.4, recognizes pre-existing contractual rights to increase capacity, and for notification of that increase to be treated as a request for capacity and accorded first priority, including priority as against any request from another prospective user.

“We are working on that with PWC”

- **At the first roundtable meeting, we advised that the rights to capacity in a pre-existing agreement could have priority ahead of the rights of another user who was prepared to contract for firm service provided by expanding Amadeus capacity.**
- **In this context, PWC said that they were prepared to address the way in which their pre-existing agreement operated, to allow other users to trigger expansion and to have secure rights to firm service provision using the expanded capacity.**
- **We advised that “we are working on that with PWC”.**
- **Amendments, allowing third parties to have secure rights to firm service from expanded capacity, have been now negotiated and are being incorporated in PWC pre-existing agreement.**

What role can Amadeus play?

- We know why Amadeus is important to APA.
- We see Amadeus providing gas transport.
- We would like to hear why it is important to you, and to others in the NT, now and in the longer term.

Discussion

What should be guiding our thinking as we develop the Amadeus Access Arrangement revision proposal which must be submitted to the Australian Energy Regulator (AER) in July?

What's on your mind about gas transportation and Amadeus?

Balancing safety, reliability and affordability

- Businesses are facing tough conditions, not only in the Northern Territory.
- The cost of energy is a major national issue.
- We are working to keep Amadeus gas transportation safe, reliable and affordable
- There is a balance to be achieved here: maintaining a safe environment is one of our core values, as is a commitment to high quality service delivery.

Discussion

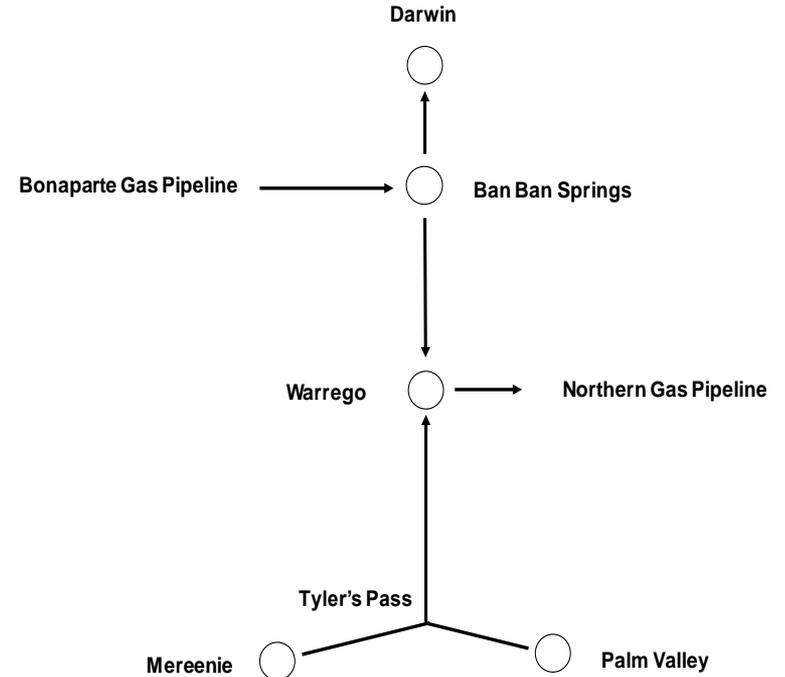
Your views on this balance are important for our development of the Amadeus Access Arrangement revision proposal.

Pipeline services and demand forecasting



A new context for Amadeus service provision

- Significant change in utilisation of Amadeus with commercial operation of the Northern Gas Pipeline (NGP) in January 2019.
- NGP interconnects with Amadeus at Warrego, about 1,000 km south of Darwin.
- Gas delivered from Amadeus into the NGP transported to Queensland, and via other pipelines, into the East Coast gas market
- Pattern of gas flows in Amadeus has changed:
 - North, from an interconnection with the Bonaparte Gas Pipeline at Ban Ban Springs, to Darwin
 - South, from Ban Ban Springs to Warrego, and into the NGP
 - North, from Palm Valley and Mereenie, to Warrego and into the NGP



AER reference service proposal decision

- Under the current Amadeus Access Arrangement, APA is to provide only one reference service: a firm transportation service
- At our first roundtable, in December, the AER advised that a reference service proposal decision was imminent: the Amadeus Access Arrangement was to include, in addition to the firm service, an interruptible service reference service.
- The AER reference service proposal decision was published on the day of the first roundtable, and requires firm service and interruptible service reference services.
- APA must now incorporate an interruptible service reference service in the Amadeus Access Arrangement.

Demand for pipeline services

- All of the capacity available for the Amadeus firm service reference service is fully contracted by users with pre-existing agreements for firm transportation services.
- None of those agreements is expected to terminate during the access arrangement period, and pipeline capacity is expected to remain fully contracted during the access arrangement period.
- At present, however, Amadeus does not have a well-defined expansion plan for the AGP which might be incorporated in the access arrangement revision proposal, and does not have associated costing for determining proposed reference tariffs.
- Although prospective users and others have expressed interest in additional transportation service in Amadeus, that interest has not yet translated into the long term commitments to capacity necessary to support pipeline expansion.

Interruptible service

- **Interruptible service can be made available using any unused part of the Amadeus capacity which has been contracted to users with pre-existing agreements.**
- **That capacity can be made available to other users subject to recognition of any rights in the pre-existing agreements for gas to be scheduled ahead of gas scheduled for others.**
- **In view of any scheduling priority which has been accorded to users with pre-existing agreements, some capacity in Amadeus is available as a form of interruptible service: It is interruptible because users with pre-existing agreements have higher priority access to pipeline service, and not because plant and equipment must be periodically withdrawn for planned maintenance, or because of unexpected failure.**

Interruptible service

- The capacity which might be used to provide an interruptible service on the AGP is the contracted but un-nominated capacity of existing users of firm service transportation services: it is capacity which, in other circumstances, could be accessed under the day-ahead auction provisions of Part 25 of the NGR.
- APA will assume, when preparing the Amadeus Access Arrangement revision, that the derogation delaying implementation of the day-ahead auction in the Northern Territory is in place at the time of the AER's Final Decision on the revisions proposal.
- At the time revisions to the Access Arrangement are expected to commence (1 July 2021), the day-ahead auction for contracted but un-nominated capacity will not operate, and interruptible service, made available as a reference service, will be a viable option for prospective users.

Discussion

What does an interruptible service look like?

Asset management plan and CAPEX forecast



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Why talk about asset management?

- The reference tariffs of an access arrangement are to recover the costs of providing the reference services.
- These costs include the service provider's investment in the pipeline system used to provide those services – this investment is the **capital base**.
- A substantial part of the capital base comprises investment which has been made in the past.
- A smaller, but nevertheless important, part of the investment comprises the planned costs of asset renewal and upgrading during the access arrangement period.
- The need for asset renewal and upgrading, and the costs expected to be incurred, are outputs from the service provider's asset management planning.

Asset management planning

- **Asset management plans are the outworking of a well-established process which APA has for each of its major pipeline assets.**
- **Development of the process has been guided by ISO 55000 (the International Standard covering management of physical assets).**
- **Focus of asset management planning: systematic and coordinated activity to optimally and sustainably manage assets over their life cycles for the purpose of achieving organisational objectives.**
- **Asset management plan for Amadeus sets out activities to optimally and sustainably manage the pipeline at the current stage of its life.**
- **APA is intending to provide the AER with asset management plan for Amadeus in July 2020.**

Amadeus asset management plan

- Amadeus will be some 35 years old at commencement of the access arrangement period.
- The pipe itself is generally in sound condition, but there has been some degradation consistent with a pipeline which is about half-way through its physical life.
- After 35 years in service, some components require replacement either because they have reached the ends of their physical lives, or because they are obsolete and can no longer be maintained.
- **Action required in three broad areas:**
 - Pipeline integrity and corrosion management
 - End of life replacement of equipment, and replacement due to obsolescence
 - Hazardous area compliance

Actual CAPEX against AER allowance 2016-17 to 2020-21

| | | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Total | Notes |
|--|------------|-------------|------------|------------|------------|------------|-------------|-------|
| CAPEX allowance (AER May 2016 Final Decision) | | | | | | | | |
| Pipeline | \$m | 1.9 | 0.3 | 0.3 | 0.3 | 0.3 | 2.9 | |
| Compression | \$m | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Meter stations | \$m | 1.2 | 1.1 | 0.7 | 0.7 | 0.6 | 4.3 | |
| SCADA and communications | \$m | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 3.4 | |
| Operations and management facilities | \$m | 0.8 | 0.5 | 0.6 | 0.7 | 0.9 | 3.6 | |
| Buildings | \$m | 3.2 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | |
| | \$m | 7.8 | 2.6 | 2.3 | 2.3 | 2.4 | 17.4 | |
| Actual CAPEX (2019-20, 2020-21 estimated) | | | | | | | | |
| Pipeline | \$m | 2.1 | 1.1 | 0.7 | 0.3 | 0.3 | 4.4 | |
| Compression | \$m | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Meter stations | \$m | 1.6 | 0.7 | 2.8 | 0.6 | 0.6 | 6.4 | |
| SCADA and communications | \$m | 0.0 | 0.1 | 0.5 | 0.7 | 0.7 | 2.0 | |
| Operations and management facilities | \$m | 1.6 | 1.2 | 1.4 | 0.9 | 0.9 | 6.0 | |
| Buildings | \$m | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | \$m | 5.4 | 3.0 | 5.4 | 2.4 | 2.4 | 18.7 | |
| Difference (Actual - Allowance) | | | | | | | | |
| Pipeline | \$m | 0.3 | 0.8 | 0.4 | 0.0 | 0.0 | 1.4 | [1] |
| Compression | \$m | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Meter stations | \$m | 0.4 | -0.4 | 2.1 | -0.1 | 0.0 | 2.0 | [2] |
| SCADA and communications | \$m | -0.7 | -0.6 | -0.1 | 0.1 | 0.0 | -1.4 | |
| Operations and management facilities | \$m | 0.8 | 0.7 | 0.8 | 0.2 | 0.0 | 2.4 | |
| Buildings | \$m | -3.2 | 0.0 | 0.0 | 0.0 | 0.0 | -3.2 | [3] |
| | \$m | -2.4 | 0.5 | 3.2 | 0.1 | 0.0 | 1.3 | |

Actual CAPEX against allowance: notes

- [1] Facilities for Channel Island Bridge in-line inspection**
- [2] New Tanami Road delivery point**
- [3] New Darwin depot and office building not yet commenced**

AER will carefully assess all actual expenditures against the capital expenditure criteria of the NGR before allowing any of the expenditures to be added to the Amadeus capital base.

CAPEX forecast 2021-22 to 2025-26



| | | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | Total |
|--|------------|------------|------------|------------|------------|------------|-------------|
| Pipeline integrity | | | | | | | |
| AGP laterals - DCVG survey | \$m | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AGP - Inspection - Inline inspection - MFL | \$m | 0.2 | 0.4 | 0.4 | 0.1 | 0.0 | 1.0 |
| Heatshrink sleeve upgrades | \$m | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 1.3 |
| | \$m | 0.5 | 0.6 | 0.6 | 0.4 | 0.3 | 2.3 |
| Cathodic Protection | | | | | | | |
| DCVG survey (20 sites) | \$m | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| Cathodic protection unit replacement program | \$m | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 |
| New cathodic protection sites | \$m | 0.4 | 0.4 | 0.5 | 0.4 | 0.4 | 2.2 |
| Replace CP Ground Beds | \$m | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.2 |
| | \$m | 0.5 | 0.5 | 0.7 | 0.5 | 0.6 | 2.7 |
| Equipment replacement: mechanical | | | | | | | |
| MLV actuators upgrade program | \$m | 0.2 | 0.2 | 0.1 | 0.2 | 0.0 | 0.5 |
| Wizard controller upgrade | \$m | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| | \$m | 0.2 | 0.2 | 0.1 | 0.2 | 0.0 | 0.6 |
| Equipment replacement: electrical and instrumentation | | | | | | | |
| Battery charger upgrades | \$m | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| Battery replacements | \$m | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.4 |
| RTU replacement | \$m | 0.5 | 0.3 | 0.0 | 0.1 | 0.2 | 1.0 |
| Solar panel upgrades | \$m | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 |
| | \$m | 0.7 | 0.4 | 0.2 | 0.2 | 0.3 | 1.8 |
| Equipment replacement: motor vehicles | | | | | | | |
| | \$m | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 1.5 |
| Hazardous area equipment upgrades | | | | | | | |
| | \$m | 0.0 | 0.0 | 0.2 | 0.2 | 0.0 | 0.4 |
| Other plant and equipment | | | | | | | |
| | \$m | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 1.0 |
| Total | \$m | 2.4 | 2.2 | 2.2 | 1.8 | 1.7 | 10.3 |

Amadeus CAPEX forecast

- Relatively low CAPEX: around \$2 million each year during access arrangement period.
- Consistent with a pipeline some 35 years old and generally in sound condition.
- CAPEX still to be fully assessed against the capital expenditure criteria of the NGR but necessary to maintain the safety and integrity of pipeline services.
- If Amadeus capacity were to be expanded, the CAPEX forecast would be very different.

Discussion

Is the Amadeus CAPEX forecast appropriate to current circumstances?

Operating expenditure



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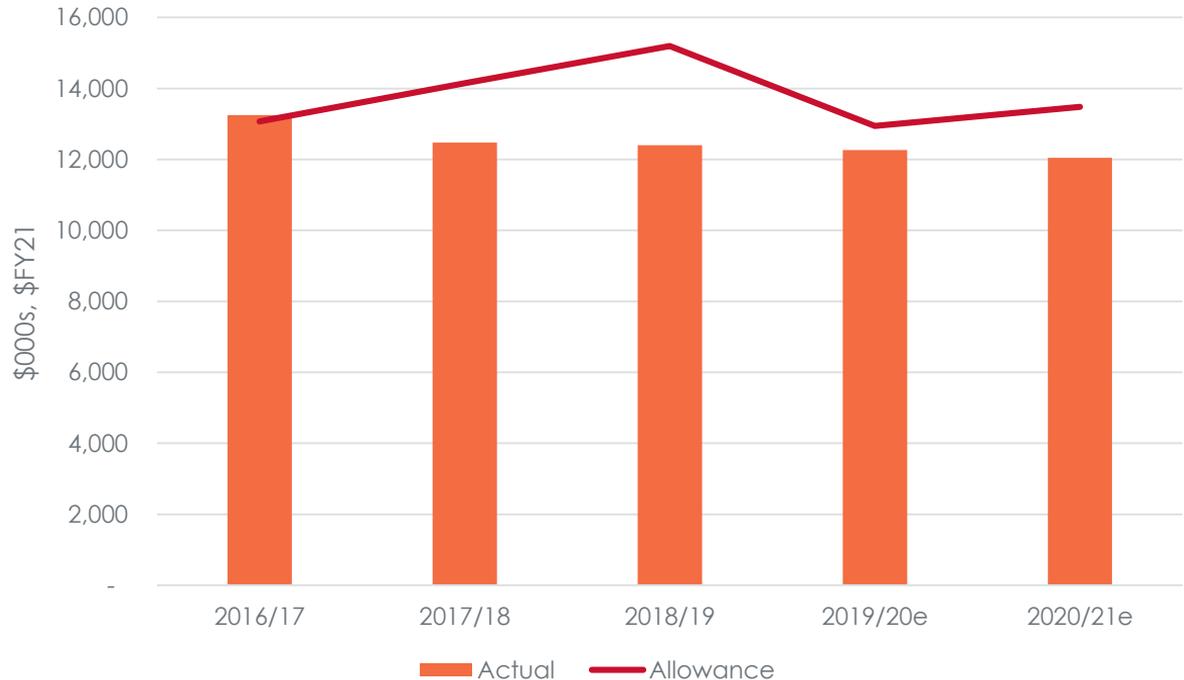
Operating expenditure 2016-17 to 2020-21: actual and allowance



Actual operating expenditure is expected to be \$6.3 million (\$FY21) or 9% lower than the forecast allowance.

Key reasons:

- So far lower than forecast 'intelligent pigging' costs
- Position vacancies reflecting difficulty in recruiting to the Northern Territory



Forecasting operating expenditure

- **Two approaches to forecasting operating expenditure**

- Bottom up approach
- Top down approach

- **Bottom up**



- Examine all costs and forecast them out for five years
- Beneficial if starting from scratch or facing big changes in operating costs

- **Top down**



- Most common approach is the base, step and trend method
- Applied by the AER
- The base step trend model works in conjunction with the efficiency carry-over mechanism.

Base, step and trend method

Base year opex

- Use select actual expenditure in the current regulatory period as a starting point.
- Under incentive regulation, the revealed actual cost is taken to be efficient.
- Any extraordinary items are removed.

Trend

- The base year operating expenditure is adjusted by the forecast 'rate of change'.
- The rate of change accounts for changes in input prices, output and productivity

Step changes

- The trended base year is adjusted for changes not covered in the base year.
- New regulatory obligations, changes in opex / capex trade offs

Other costs

- Category specific costs that need to be forecast separately.
- For example, debt raising costs

Thinking about which method to apply

- Base, step and trend is a revealed – actual – cost approach.
- Provides an incentive to keep operating costs down.
- Also then reveals efficient operating costs.
- Means that we don't need to provide bottom-up forecast.
- Base, step and trend is well known and consistent with the AER's preferred approach.
- Consistent with incentive regulation and works well with the AER's efficiency carryover scheme.
- Reasonable given that the operating environment for Amadeus is expected to be relatively stable.
- We are thinking of using the **base, step and trend method** to forecast operating expenditure for Amadeus.

Applying base, step and trend to Amadeus



Base year opex

- We are proposing to use 2018/19. This is the latest available audited year.

Trend

- We are proposing a rate of change based on forecast change in real labour costs only.
- The most current information prepared for the AER by Deloitte Access Economics (June 2019). We are proposing to use the national forecast because we are competing in the national labour market.

Step changes

- We are anticipating a step change in labour costs due to the need for 'fly-in fly-out' operational staff.

Other costs

- We are anticipating debt and equity raising costs. Debt raising costs will be based on the AER's benchmark debt raising unit rate to the debt portion of our regulatory asset base.

Forecast operating expenditure 2021-22 to 2025-26

- **Applying the base, step and trend approach results in preliminary forecast of operating expenditure:**
 - \$12.4 million (FY\$21) per year
 - Total of \$66.2 million (FY\$21) for the five years.
- **The forecast excludes:**
 - Step changes due to FIFO costs
 - Estimates for debt and equity raising costs.

Efficiency carryover – incentive – mechanism



What is it?

- The AER has previously approved an **incentive mechanism** to encourage us to seek efficiencies in the operation of the Amadeus.
- This incentive mechanism is the **efficiency carryover mechanism**.
- **Efficiency carryover mechanism:**
 - Provides an incentive to keep operating costs down
 - This reveals the efficient operating costs
 - Incentive applies for each year of the regulatory period
- **Our underspend against our allowance means that we will have an efficiency carryover of \$3.2 million.**

Forecasting operating expenditure

Getting your insights

- Do you have any views or questions about:
 - **Amadeus operating expenditure?**
 - **Methods of forecasting operating expenditure?**
 - **The efficiency carryover mechanism?**

Return on investment and inflation



Return on investment

- **Return on investment in each year of the access arrangement period is the product of:**
 - The projected capital base – the forecast total investment in the pipeline – at the beginning of the year
 - The allowed rate of return
- **Allowed rate of return determination, once contentious, is now to be in accordance with a statutory rate of return instrument made by the AER.**
- **The rate of return instrument, and an explanatory statement, are available from <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/rate-of-return-instrument-2018>**
- **APA's intention is to submit an access arrangement revision proposal for Amadeus with the allowed rate of return calculated in the way required by the current rate of return instrument.**
- **APA expects that the allowed rate of return for Amadeus will be updated by the AER during its revision proposal approval process.**

Risk free rate of return

- A risk free rate of return is required for estimating equity returns
- Returns on low-risk government bonds are used to estimate this risk free rate of return.
- The way in which the risk free rate is to be estimated, from returns on Australian Government securities with terms to maturity of 10 years, is set out in the rate of return instrument.
- APA's estimate of the risk free rate of return, made using returns on Australian Government securities over the period of 20 trading days to 31 December 2019, is 1.21%.

Return on equity

- In accordance with the instrument, the return on equity is estimated using the Capital Asset Pricing Model (CAPM):

$$k^e = k^f + \beta \cdot MRP$$

- k^f is the estimate of the risk free rate of return
- $\beta \cdot MRP$ is a premium for risk:
 - MRP is the market risk premium – the amount by which the expected market rate of return on all assets exceeds the risk free rate of return
 - β is a measure of the way in which the expected return on a pipeline equity investment co-varies with the expected market rate of return on all assets
- In the rate of return instrument:
 - MRP is set to an effective annual rate of **6.1%**
 - β is set to a value of **0.6**
- APA's estimate of the expected rate of return on equity is:

$$k^e = k^f + \beta \cdot MRP = 1.21\% + 0.6 \times 6.1\% = \mathbf{4.87\%}$$

Rate of return on debt

- **The rate of return instrument requires estimation of the rate of return on debt as an average of the rates on corporate debt with a term to maturity of 10 years published by:**
 - Reserve Bank of Australia
 - Bloomberg
 - Thompson-Reuters.
- **APA has used data from these three sources for the 20 trading days to 31 December 2019, and the formulae of the rate of return instrument, to estimate a return on debt for Amadeus.**
- **APA's estimate of the rate of return on debt, made in the way required, is 4.75%.**

Estimate of the allowed rate of return

- Using its estimates of the return on equity and the return on debt, together with the value for the gearing set in the rate of return instrument (0.6), APA has made an estimate of the allowed rate of return of:

$$(1 - 0.6) \times 4.87\% + 0.6 \times 4.75\% = 4.79\%$$

- APA expects to use this estimate – 4.79% – in its July 2020 revision proposal for the Amadeus Access Arrangement.

Discussion

Application of the rate of return instrument in calculating the allowed rate of return?

Forecasting inflation

- The allowed rate of return calculated in the way prescribed by the rate of return instrument is a nominal rate: it incorporates – implicitly – expectations of future inflation.
- Those expectations must be made explicit for some parts of total revenue and reference tariff determination.
- A guideline, published by the AER in December 2017 sets out a preferred way of forecasting inflation.
- APA has used the method of the AER's guideline to forecast inflation for the Amadeus Access Arrangement revision proposal.
- Our forecast of inflation is 2.44%.
- Before submitting the Amadeus Access Arrangement revision proposal, we expect to update this forecast using the inflation forecasts from a Statement of Monetary Policy issued, by the Reserve Bank of Australia, in May.

Discussion

Using the AER guideline to forecast inflation?

Wrapping up and next steps



Summary of consultation and indicative timing

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Wrap up

- Summary of key outcomes from today
- Invite comments from participants

Thank you for participating



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Or visit the APA website:

apa.com.au

Or Amadeus engagement webpage:

[apa.com.au/about-apa/our-projects/amadeus-gas-pipeline-access-arrangement/.](http://apa.com.au/about-apa/our-projects/amadeus-gas-pipeline-access-arrangement/)

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