Economic Regulation Authority

Response to the Consumer Reference Group's Information Request – Part 2

2022 gas rate of return instrument review

Contents

1. Introduction

This document sets out the ERA's response to the first questions of the CRG's information request dated February 2022.

2. The regulatory arrangements

2.1 CRG questions

1. The regulated gas pipelines can choose to have their prices regulated by a revenue cap or a price cap. At the moment they all choose a price cap.
   - Is this correct?
2. Irrespective of whether a revenue cap or price cap applies the rate of return is assumed to be the same.
   - Why is this assumption made?
3. With a revenue cap the total revenue cap is calibrated to recover estimated costs over the regulatory period based on forecast demand but there are annual adjustments to prices to allow for inflation, certain costs such as debt risk premium updates and other cost pass through items. When these adjustments are made the total revenue cap and prices are recalibrated but based on forecast demand and not actual demand.
   - Please itemize the cost pass through items and explain why they are considered to be items that are treated as not diversifiable from the perspective of investors.
   - What have been the actual NPV outcomes based on actual demand in the most recent regulatory periods?
   - What have been the actual demand outcomes relative to forecast demand in the most recent regulatory periods.
   - What have been the actual price profiles over time in the most recent regulatory periods.
4. The historical asset base rolls forward from one regulatory control period to the next and from year to year within each regulatory control period with indexation for actual inflation over the past year and guarantees the recovery of allowed historical asset costs through deprecation, a real return on the asset and recovery of the depreciation component of ongoing efficient capital expenditure;
   - Is this correct?
   - What happens to the cost savings or cost overruns (who receives or pays for them) if actual capital expenditure during the regulatory period is less than or more than forecast capital expenditure?
   - What have been the actual capital expenditure outcomes relative to forecast expenditure in the most recent regulatory periods.
5. Are there provisions for re-opening a determination for capital expenditure relating to an event that is beyond the reasonable control of the service provider, and unforeseen at the time of making the determination?
6. Could you please explain how depreciation is determined and the extent and circumstances under which accelerated depreciation is allowed?
7. It is understood that there is an operating cost efficiency scheme in place.

- Could you please explain the scheme and the extent to which cost savings are shared with consumers?

8. Is the provision for tax in determining total revenue based on notional or actual tax figures?

9. Could you please explain the tariff structures for the regulated firms and in particular the existence of fixed and variable components?

2.2 ERA responses

2.2.1 Question 1

Rule 97(2) of the National Gas Rules (NGR) allows the service provider to propose a formula for variation of a reference tariff which can vary reference tariffs based on a revenue or price cap formula. Refer to rule 97(2) of the NGR for the options for tariff variation formulas. The ERA must consider the service provider's proposed approach and have regard to factors set out in rule 97(3) of the NGR and ensure that the ERA has adequate oversight or powers of approval over the variation of the reference tariffs (rule 97(4) of the NGR).

In the most recent access arrangement proposals, all three service providers proposed a price cap type of formula which was approved by the ERA. All of the approved access arrangements include a cost pass-through mechanism for defined cost pass-through events. The current access arrangement for the Dampier to Bunbury Natural Gas Pipeline (DBNGP) also includes a mechanism to adjust tariffs for revenue generated from the sale of rebateable services.[1]

2.2.2 Question 2

The ERA has not set an allowed rate of return for a gas service provider while also approving a revenue cap type of reference tariff variation formula. Therefore in practice, the ERA has not applied the assumption referred to in the question.

Rule 97(3) of the NGR sets out the factors the ERA must consider in deciding whether a particular reference tariff variation mechanism is appropriate to a particular access arrangement:

97 Mechanics of reference tariff variation

…

(3) In deciding whether a particular *reference tariff variation mechanism* is appropriate to a particular access arrangement, the [ERA] 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 [ERA], the service provider, and users or potential users; and

[1] See clauses 18.19 and 18.20 of DBP Transmission's current access arrangement.

(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

(d1) the risk sharing arrangements implicit in the access arrangement; and

(e) any other relevant factor.

In the event a revenue cap reference tariff variation mechanism is proposed by a service provider, the ERA would be required to consider any interrelation (if any) between the level of risk assumed for a rate of return and the revenue risk implicit in the tariff variation formula.

Irrespective of the reference tariff variation method approved, under the National Gas Law the ERA must have regard to the national gas objective and revenue and pricing principles in setting the rate of return. The national gas objective and the revenue and pricing principles as they pertain to the rate of return are discussed in further depth in Chapter 2 of the 2022 gas rate of return instrument review Discussion Paper.

2.2.3 Question 3

While no gas reference tariffs are currently set by a revenue cap in access arrangements in Western Australia, cost pass-through and other types of adjustments can be made to the forecast revenue to be recovered through a revenue cap formula. Typically, outside of cost pass-through arrangements, costs are not adjusted for actual demand under a revenue cap formula. The formula would typically allow the service provider to recover the forecast revenue irrespective of the actual demand by including any under or over recovery of actual revenue in future tariffs.

The cost pass-through items included in the current access arrangements for each of the three gas network service providers regulated by the ERA are different for each service provider and have been based on consideration of each service provider's access arrangement revision proposals. There is however a cost pass-through item common to all three service providers' access arrangements – a cost pass-through for change in law or tax event.[2] These events have been accepted because these costs are outside of the reasonable forecasts of service providers and cannot be managed/mitigated by a service provider.

The ERA does not have the actual demand information for the service providers, although this is expected to change in the future with the issuance of Regulatory Information Notices to collect this information.

The ERA does not collect actual pricing information for the contracts between service providers and their customers. The reference tariffs are published on the ERA's website each year and vary according to the tariff variation formulas. Actual pricing for reference services may vary from the reference tariffs as a result of commercial negotiations between service providers and their customers.

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[2] See:

- Clause 4.5.2 of the current access arrangement for the Goldfields Gas Pipeline (GGP);
- Clause 11.4 of the current access arrangement for the Mid-West and South-West Gas Distribution Systems (SWIS); and
- Clause 11 of the current access arrangement for the Dampier to Bunbury Natural Gas Pipeline.

2.2.4 Question 4

The CRG's statement is nearly correct, except that the historical asset base is not updated each year within the regulatory control period and that the ERA does not 'guarantee' a recovery of cost but a reasonable opportunity for the service provider to recover efficient costs (see revenue and pricing principles – section 2 of the National Gas Law (WA)). The asset base is rolled forward at the time of each regulatory reset, at which time the ERA conducts an ex-post assessment of the capital expenditure that has not yet been rolled into the regulatory asset base and the assets are indexed for actual inflation.

At each access arrangement review the ERA makes an ex-post assessment of all capital expenditure incurred during the previous period according to the criteria for conforming capital expenditure set out in rule 79 of the NGR. A given service provider's capital expenditure is only rolled into its regulatory asset base and rolled forward to the next access arrangement period if this expenditure satisfies those criteria.

Capital expenditure savings during the previous period are kept by the service provider for the remainder of the period until the regulatory asset base is rolled forward. In effect, the service providers keep the return on that expenditure and other assets have theoretically been over-depreciated as depreciation is not adjusted at the next reset. The savings from having a lower than expected asset base are passed on to consumers during the next reset. The opposite occurs if the service provider spends more than the forecast capital expenditure during the previous period. In this case the service provider does not earn a return on that overspend for that period until the asset base is rolled forward. The service provider would also be incurring a theoretical amount of under-depreciation stemming from the overspend not being included in the asset base. However, once the asset base is corrected for approved actual capital expenditure, the service provider will still get an opportunity to earn a return on and of that asset for the full value of the asset for the asset life of that asset.

Table 1 shows the differences between the approved forecast capital expenditure and actual capital expenditure and conforming capital expenditure for each service provider in their respective previous access arrangement periods.

Table 1: Western Australian Regulated Gas Networks' Capital Expenditure for their Most Recent Previous Regulatory Periods ($ million real as at 31 December 2019)

Network	Approved forecast capital expenditure (a)	Actual capital expenditure (b)	Difference (Actual – Approved forecast, i.e. c = b – a)	Actual conforming capital expenditure
DBNGP (fourth access arrangement period)*	$113.37	$122.96	$9.59	$122.30
GGP (third access arrangement period)**	$9.99	$9.35	-$0.64	$8.88
Mid-West and South-West Gas Distribution	$489.6	$497.1	$7.0	$448.30

Network	Approved forecast capital expenditure (a)	Actual capital expenditure (b)	Difference (Actual – Approved forecast, i.e. c = b – a)	Actual conforming capital expenditure
Systems (fourth access arrangement period)***				

*For the DBNGP, actual capital expenditure for the fourth access arrangement period was based on actual capital expenditure for 2016, 2017, 2018 and 2019 and forecast capital expenditure for 2020.

**For the GGP, actual capital expenditure for the third access arrangement period was based on actual capital expenditure for 2015, 2016 and 2017 and forecast capital expenditure for 2018 and 2019.

***For Mid-West and South-West Gas Distribution Systems, actual capital expenditure for the fourth access arrangement period was based on actual capital expenditure for July to December 2014, 2015, 2016, 2017 and forecast capital expenditure for 2018 and 2019.

2.2.5 Question 5

There are a few mechanisms which are available to the service provider to ensure it recovers any efficient capital expenditure that was not forecast at the time of the access arrangement. Rule 79 of the NGR sets out the criteria for new capital expenditure.

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; and

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

(c) the capital expenditure must be for expenditure that is properly allocated in accordance with the requirements of subrule (6).

(2) Capital expenditure is justifiable if:

(a) the overall economic value of the expenditure is positive; or

(b) the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; or

(c) the capital expenditure is necessary:

(i) to maintain and improve the safety of services; or

(ii) to maintain the integrity of services; or

(iii) to comply with a regulatory obligation or requirement; or

(iv) to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity); or

(d) the capital expenditure is an aggregate amount divisible into 2 parts, one referable to incremental services and the other referable to a purpose referred to in paragraph (c), and the former is justifiable under paragraph (b) and the latter under paragraph (c).

At each access arrangement review, the ERA is required to make an ex-post assessment of the actual capital expenditure incurred in the previous access arrangement period according to the criteria in rule 79. Capital expenditure that is assessed to be conforming capital expenditure is rolled into the service provider's regulatory asset base.

At the time of assessing forecast capital expenditure this expenditure is only notionally added to the capital base to allow the service provider to receive a return on and of this investment. As a result, if any unforeseen capital expenditure is incurred which meets the new capital expenditure criteria set out under rule 79 of the NGR, this capital expenditure will be included in the capital base.

According to rule 80 of the NGR, the ERA also has the power to make an advance determination with regard to future capital expenditure if the service provider applies for such a determination:

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

(1) The [ERA] may, on application by a service provider, make a determination to the effect that, if capital expenditure is made in accordance with proposals made by the service provider and specified in the determination, the expenditure will meet the new capital expenditure criteria.

(2) The [ERA] may (but is not required to) engage in public consultation before making a determination under subrule (1).

(3) A determination under subrule (1) is binding on the [ERA] but a decision not to make such a determination creates no presumption that future expenditure will not meet the relevant criteria.

There are also cost pass-through provisions (explained in the response to question 3) which allow an adjustment to the tariffs to incur sooner if the capital expenditure meets the cost pass-through event requirements. If not, as noted above, the service provider will receive a return on and of the investment but just later at the next access arrangement.

There are provisions in the NGR for a variation to an approved access arrangement.

2.2.6 Question 6

Depreciation is determined according to rules 88 to 90 of the NGR.

88 Depreciation schedule

(1) 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.

(2) The depreciation schedule may consist of a number of separate schedules, each relating to a particular asset or class of assets.

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.

90 Calculation of depreciation for rolling forward capital base from one access arrangement period to the next

(1) 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.

(2) The provisions must resolve whether depreciation of the capital base is to be based on forecast or actual capital expenditure.

Any proposals for accelerated depreciation would be assessed by the ERA according to these rules.

2.2.7 Question 7

The gas regulatory framework is an incentive-based scheme and does have an inherent operating cost efficiency mechanism which allows service providers to keep out-performance of the forecast operating expenditure amount until the next access arrangement is approved. It also means that any under-performance where the service provider efficiently spends more than the forecast amount is limited until the next access arrangement is approved and if this expenditure is efficient, the levels of operating expenditure will be increased.

Only the DBNGP access arrangement has an approved operating cost efficiency scheme in place during the current access arrangement. The scheme is outlined in Chapter 15 of DBNGP's current access arrangement.

The DBNGP operating cost incentive scheme (known as the 'E-Factor') boosts the inherent efficiency mechanism in the gas regulatory framework by allowing DBNGP to keep any out-performance for five years from the out-performance. Symmetrically any under-performance where the service provider spends more than the forecast operating expenditure is penalised for the same number of years (five years). Effectively, this would mean that any cost savings from out-performance of the benchmarks defined by the incentive scheme are retained by the service provider for five years after the out-performance is achieved, after which the cost savings are passed onto consumers.

2.2.8 Question 8

The taxation calculation is based on a forecast notional calculation and not actual tax figures. In calculating the notional tax valuation, the ERA refers to the current tax law applicable at the time of approving the final decision to inform its calculation.

The estimated cost of corporate income tax is calculated in accordance with rule 87A of the NGR, including the allowed imputation credits referred to in that rule.

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 (ETCt) 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;

rt is the expected statutory income tax rate for that regulatory year as determined by the AER; and

γ is the allowed imputation credits for the regulatory year.

2.2.9 Question 9

Some of the tariff structures for the gas networks regulated by the ERA were described in the response to question 3 of the CRG's questions, sent on 9 April 2022.

Generally speaking, where a reference tariff includes a fixed component, the fixed component represents charges to recover the fixed costs of connection to the networks.

Each of the reference tariff structures for the reference tariff classes on the Mid-West and South-West Gas Distribution Systems includes a standing charge component, representing recovery of the fixed costs of connection to the networks for each of those tariff charges.

The designs of reference tariffs for the Mid-West and South-West Gas Distribution Systems, being a distribution pipeline, are determined according to rule 94 of the NGR:

94 Tariffs – distribution pipelines

(1) For the purpose of determining reference tariffs, customers for reference services provided by means of a distribution pipeline must be divided into tariff classes.

(2) A tariff class must be constituted with regard to:

(a) the need to group customers for reference services together on an economically efficient basis; and

(b) the need to avoid unnecessary transaction costs.

(3) For each tariff class, the revenue expected to be recovered should lie on or between:

(a) an upper bound representing the stand alone cost of providing the reference service to customers who belong to that class; and

(b) a lower bound representing the avoidable cost of not providing the reference service to those customers.

(4) A tariff, and if it consists of 2 or more charging parameters, each charging parameter for a tariff class:

(a) must take into account the long run marginal cost for the reference service or, in the case of a charging parameter, for the element of the service to which the charging parameter relates;

(b) must be determined having regard to:

(i) transaction costs associated with the tariff or each charging parameter; and

(ii) whether customers belonging to the relevant tariff class are able or likely to respond to price signals.

(5) If, however, as a result of the operation of subrule (4), the service provider may not recover the expected revenue, the tariffs must be adjusted to ensure recovery of expected revenue with minimum distortion to efficient patterns of consumption.

The designs of reference tariffs for the transmission pipelines are determined according to rule 95 of the NGR:

95 Tariffs – transmission pipelines

(1) A tariff for a reference service provided by means of a transmission pipeline must be designed:

(a) to generate from the provision of each reference service the portion of total revenue referable to that reference service; and

(b) as far as is practicable consistently with paragraph (a), to generate from the user, or the class of users, to which the reference service is provided, the portion of total revenue referable to providing the reference service to the particular user or class of users.

(2) The portion of total revenue referable to a particular reference service is determined as follows:

(a) costs directly attributable to each reference service are to be allocated to that service; and

(b) other costs attributable to reference services are to be allocated between them on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the AER.

(3) The portion of total revenue referable to providing a reference service to a particular user or class of users is determined as follows:

(a) costs directly attributable to supplying the user or class of users are to be allocated to the relevant user or class; and

(b) other costs are to be allocated between the user or class of users and other users or classes of users on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the AER.