Draft decision

Jemena Gas Networks (NSW) Ltd

Access arrangement 2015–20

Attachment 9 – Efficiency carryover mechanism

November 2014

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's draft decision on Jemena Gas Networks' 2015–20 access arrangement. It should be read with other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – services covered by the access arrangement

Attachment 2 – capital base

Attachment 3 – rate of return

Attachment 4 – value of imputation credits

Attachment 5 – regulatory depreciation

Attachment 6 – capital expenditure

Attachment 7 – operating expenditure

Attachment 8 – corporate income tax

Attachment 9 – efficiency carryover mechanism

Attachment 10 – reference tariff setting

Attachment 11 – reference tariff variation mechanism

Attachment 12 – non-tariff components

Attachment 13 – demand

Contents

Shortened forms

Shortened form	Extended form
2010–15 access arrangement	Access arrangement for JGN effective from 1 July 2010 to 30 June 2015 inclusive
2010–15 access arrangement period	1 July 2010 to 30 June 2015 inclusive
2015–20 access arrangement	Access arrangement for JGN effective from 1 July 2015 to 30 June 2020 inclusive
2015–20 access arrangement period	1 July 2015 to 30 June 2020 inclusive
Access arrangement information	Jemena Gas Networks (NSW) Ltd, *Access Arrangement Information 2015–20*, 30 June 2014
Access arrangement proposal	Jemena Gas Networks (NSW) Ltd, *Access arrangement, JGN's NSW gas distribution networks, 1 July 2015 – 30 June 2020*, 30 June 2014
AER	Australian Energy Regulator
capex	capital expenditure
CAPM	capital asset pricing model
CCP	Consumer Challenge Panel
Code	National Third Party Access Code for Natural Gas Pipeline Systems
CPI	consumer price index
DRP	debt risk premium
ERP	equity risk premium
JGN	Jemena Gas Networks (NSW) Ltd (CAN 003 004 322)
MRP	market risk premium
NGL	national gas law
NGO	national gas objective
NGR	national gas rules

Shortened form	Extended form
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
Reference service agreement proposal	Jemena Gas Networks (NSW) Ltd, *Reference Service Agreement, JGN's NSW gas distribution networks*, 30 June 2014
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue and pricing principles
SLCAPM	Sharpe-Lintner capital asset pricing model
WACC	weighted average cost of capital

9 Efficiency carryover mechanism

An efficiency carryover mechanism provides an additional incentive for service providers to pursue efficiency improvements in opex.

It is often used as part of incentive regulation. Because opex is largely recurrent and predictable, opex in one period is generally a good indicator of opex in the next period. Where a service provider is relatively efficient, we use the actual opex it incurred in a chosen base year of the access arrangement period to forecast its opex for the next access arrangement period.

To encourage a service provider to become more efficient, it is allowed to keep any difference between its approved forecast and its actual opex within an access arrangement period. We typically supplement this by applying an efficiency carryover mechanism which provides a service provider with an additional reward for reductions in opex it makes and additional penalties for increases in opex. In total, these rewards and penalties work together to provide a constant incentive for a service provider to pursue efficiency gains over the access arrangement period. An efficiency carryover mechanism also discourages a service provider from incurring opex in the expected base year in order to receive a higher opex allowance in the following access arrangement period.[1]

When a service provider is rewarded for making efficiency gains, consumers benefit through lower prices in the next access arrangement period. This is because forecast opex in the next access arrangement period will reflect the service provider's lower level of opex in the current access arrangement period. As a result, regulated prices will be lower.

JGN proposed we apply an efficiency carryover mechanism to it in the 2015–20 access arrangement period. An efficiency carryover mechanism did not apply to JGN during the 2010–15 access arrangement period.

9.1 Draft decision

Our draft decision is to approve the application of an efficiency carryover mechanism to JGN in the 2015–20 access arrangement. The mechanism we propose to apply is outlined in our proposed access arrangement for JGN.

In applying the efficiency carryover mechanism to JGN in the 2015–20 access arrangement period we propose to:

- exclude UAG costs, licence fee costs, carbon costs, the cost of any relevant tax change and debt raising costs. Consistent with the electricity network efficiency benefit sharing scheme,[2] we also propose to maintain discretion to exclude cost categories that are not forecast using a single year revealed cost approach in the access arrangement period commencing in 2020
- adjust JGN's opex forecast to account for determined pass through amounts
- adjust JGN's opex forecast to account for any capitalisation policy changes.

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1 The efficiency carryover mechanism we apply to gas service providers is broadly the same as the Efficiency Benefit Sharing Scheme we apply to electricity network service providers. For further information explaining the reasons why we apply such a scheme see AER, *Efficiency benefit sharing scheme - explanatory statement*, November 2013.

2 AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013, p. 7.

Table 9-1 illustrates the total opex forecasts we expect we will use to calculate efficiency gains and losses for the 2015–20 access arrangement period.

Table 9-1 Draft decision on JGN's forecast opex for the efficiency carryover mechanism ($ million, 2014–15)

	2015-16	2016-17	2017-18	2018-19	2019-20
Approved forecast opex for carryover mechanism	134.5	133.8	134.6	139.0	137.8

Source AER analysis

9.2 Proposal

JGN proposed we apply an efficiency carryover mechanism to it in the 2015–20 access arrangement period.[3] The structure of the scheme it proposed is broadly the same as the scheme we apply to electricity service providers. The features of the mechanism JGN proposed are:

- JGN will keep the benefit (or will incur the cost) of delivering actual opex lower (higher) than forecast opex in each year of an access arrangement period
- the mechanism carries forward JGN's incremental efficiency gains for the length of the carryover period
- the carryover period length is five years
- the carryover amounts will be an additional 'building block' when setting JGN's reference service revenue for the access arrangement period commencing 1 July 2020.[4]

JGN proposed the following costs will be excluded for the operation of the efficiency carryover mechanism:

- determined pass through amounts
- UAG costs
- licence fee costs
- debt raising costs
- carbon costs
- the cost of any relevant tax
- any other activity that JGN and the AER agree to exclude.[5]

JGN also proposed that the efficiency carryover mechanism takes into account any change in the scale of its activities and any changes to its capitalisation policy.

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3 JGN used the term Efficiency Benefit Sharing Scheme (EBSS). The term efficiency benefit sharing scheme is defined under the National Electricity Rules (NER). We prefer to use the term efficiency carryover mechanism instead.

4 JGN, *Access arrangement information*, s, 11.1, paragraph 431, p. 102.

5 JGN, *Access arrangement proposal*, clause 12.1(h)(i-vii), p. 33.

The operation of the efficiency carryover mechanism is expressed in a proposed fixed principle set out in clause 12 of the 2015–20 access arrangement proposal.[6]

9.3 Assessment approach

An efficiency carryover mechanism is a form of incentive mechanism. A full access arrangement may include (and the AER may require it to include) one or more incentive mechanisms to encourage efficiency in the provision of services by the service provider.[7] An incentive mechanism must be consistent with the revenue and pricing principles.[8]

We consider the following revenue and pricing principle is most relevant for assessing JGN's proposed efficiency carryover mechanism.

> 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; and
>
> (c) the efficient use of the pipeline.[9]

9.4 Reasons for draft decision

We approve the application of an efficiency carryover mechanism to JGN in the 2015–20 access arrangement. Without such a mechanism:

- JGN would have an incentive to increase opex in the expected 'base year' to increase its forecast opex allowance for the following access arrangement period. Because our preferred approach typically is to base forecast opex on the actual opex incurred in the base year, an increase in expenditure in the base year would result in an increased opex forecast for five years.
- JGN's incentive to reduce its opex declines as the regulatory control period progresses. JGN would have an incentive to defer efficiency gains until after the base year so it can retain the benefits of doing so for longer because they would not be reflected in the opex forecasts for the following period.

For these reasons, consistent with the revenue and pricing principles, we consider an efficiency carryover mechanism is needed to promote the efficient provision of pipeline services.

We mostly agree with JGN's proposed adjustments and exclusions. However we propose some modifications. The adjustments and exclusions we propose are outlined below.

Adjustments to forecast or actual opex when calculating carryover amounts

JGN proposed forecast or actual opex should be adjusted to account for excluded cost categories, demand growth and changes in its capitalisation policy. We agree with most but not all of the proposed excluded cost categories and adjustments.

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6 JGN, *Access arrangement proposal*, clause 12.1, pp. 32-4.
7 NGR, r. 98(1).
8 NGR, r. 98(3).
9 NGL, s. 24(3).

Debt raising costs

We agree debt raising costs should be excluded from the efficiency carryover mechanism. The efficiency carryover mechanism is designed to work in conjunction with a single year revealed expenditure forecasting approach.[10] If a service provider reduces its opex in one period, consumers pay for efficiency carryover amounts in the next period but receive the benefits through a lower opex forecast. Where we use this forecasting approach for opex, the benefits of to consumers of a lower opex forecast will always outweigh the efficiency carryover payments it will pay for.

Where a different forecasting approach is used, there is a risk that consumers will not benefit. For instance as discussed in attachment 7 we forecast debt raising costs using a benchmark. If JGN reduces its actual debt raising costs in an access arrangement period and we applied the efficiency carryover mechanism, consumers will end up paying for efficiency carryover amounts but will not receive the benefits of a lower opex forecast.

Costs subject to the tariff variation mechanism

We also agree UAG costs, licence fee costs, carbon costs and the cost of any relevant tax changes should be excluded from the operation of the efficiency carryover mechanism. Changes in these costs during the access arrangement period are subject to true-ups through the tariff variation mechanism. As the tariff variation mechanism is designed to pass through changes in these costs to consumers, these categories of costs are incompatible with an efficiency carryover mechanism.

Determined pass through amounts

We may adjust target opex to add or subtract determined pass through amounts. It is our preference to add (or subtract) these pass through amounts to forecast opex rather than adjust actual opex to remove the passed through amount. We consider that adjusting the opex forecast ex post rather than removing the costs from actual opex is the most straightforward way to apply the efficiency carryover mechanism when accounting for changes to a service provider's forecast opex.

Where some of the costs that are passed through are yet to be incurred, adjusting the target rather than excluding them from the efficiency carryover mechanism will also ensure that JGN still has an incentive to reduce these costs.

Other exclusions

We do not approve clause 12.1(h)(vii) that states "any other activity that JGN and the AER agree to exclude from the operation of the incentive mechanism". We do not approve this clause because JGN would have an incentive to agree to exclude from the operation of the efficiency carryover mechanism, only those activities in its favour.

However, we consider we need some discretion to exclude costs from the EBSS. We consider this is required where a category of opex is not forecast using a single year revealed cost approach in the access arrangement period commencing in 2020. We will only make such an exclusion when we are satisfied that JGN's consumers would not benefit from applying the efficiency carryover mechanism to that category of costs. This approach is consistent with the discretion we have to adjust the carryover amounts in our electricity network efficiency benefit sharing scheme.[11]

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[10] For further information about why this is the case see AER, *Efficiency Benefit Sharing Scheme - Explanatory Statement*, November 2013.

[11] AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013, p. 7.

Normally when a service provider reduces its opex in an access arrangement period, consumers receive the benefits in the next period through a lower opex forecast. However in some circumstances consumers may not benefit. For instance it may be prudent for a service provider to defer opex from one access arrangement period to the next period. If this is the case a service provider could receive an efficiency carryover benefit but it may need higher forecast opex in the next period. Where JGN reduces its opex in the 2015–20 access arrangement period and accrues an efficiency carryover benefit in the access arrangement period beginning in 2020 we want to be satisfied that JGN's consumers benefit. This is achieved by maintaining a limited discretion to exclude some costs when calculating the carryover amounts.

Adjustments for demand growth and changes in capitalisation policy

We do not approve JGN's proposal that the calculation of the carryover amounts will take into account any change in demand growth.

When we forecast opex we already apply a forecast annual rate of change (see attachment 7). The annual rate of change accounts for forecast changes in output levels. The risk that this forecast is too high or too low is symmetrical and we consider it should be shared between JGN and its customers through the operations of the efficiency carryover mechanism in the same way other forecasting risks are shared. We consider it is unnecessarily complex to adjust forecast opex ex-post where demand does not equate with expectations.

Consequently, we do not approve that part of clause 12.1(i) that states "with the following exception:" and clause 12.1(i)(i) that states "the carryover of cost-related incremental efficiency gains will be calculated in a manner that takes account of any change in the scale of the activities which form the basis of the determination of the original benchmarks. The operating expenditure benchmarks will be adjusted consistent with the way in which the benchmark was determined".[12]

We agree with JGN that the efficiency carryover mechanism should take into account any changes in its capitalisation policy.

Table 9-2 sets out our draft decision on JGN's target opex for the efficiency carryover mechanism (total opex less excluded categories), against which we will calculate efficiency gains and losses in the 2015–20 access arrangement period.

Table 9-2 Draft decision on JGN's forecast opex for the calculation of efficiency gains and losses ($ million, 2014–15)

	2015-16	2016-17	2017-18	2018-19	2019-20
Forecast opex[13]	154.4	153.8	154.6	159.0	157.8
Forecast UAG costs	15.8	15.8	15.8	15.8	15.9
Forecast licence fee costs	4.2	4.2	4.2	4.2	4.2
Forecast opex for the efficiency carryover mechanism	134.5	133.8	134.6	139.0	137.8

12 JGN, *Access arrangement proposal*, clause 12.1(i)(i), p. 34.
13 Excluding debt raising costs.

9.5 Revisions to JGN's proposed EBSS

For the reasons above, we require JGN to revise the proposed access arrangement as follows:

Revision 9.1: Amend clause 12.1(h) so that it reads:

The following costs will be excluded from the operation of the efficiency carryover mechanism:

(i) UAG costs;

(ii) licence fee costs;

(iii) debt raising costs;

(iv) carbon costs;

(v) the cost of any relevant tax; and

(vi) any cost category the AER decides to exclude from the operation of the efficiency carryover mechanism that is not forecast using a single year revealed cost approach in the access arrangement period commencing in 2020. The AER will only do this when it is satisfied that JGN's consumers would not benefit from applying the efficiency carryover mechanism to that category of costs.

Revision 9.2: Amend clause 12.1(i) as follows:

Delete the text "with the following exception:"

and replace with the text "adjusted for any approved pass through amounts."

Delete clause 12.1(i)(i) which states:

"the carryover of cost-related incremental efficiency gains will be calculated in a manner that takes account of any change in the scale of the activities which form the basis of the determination of the original benchmarks. The operating expenditure benchmarks will be adjusted consistent with the way in which the benchmark was determined:"

Revision 9.3: Delete the table in clause 12.1(i) and replace with Table 9-2.