



FINAL DECISION
Jemena Gas Networks (NSW)
Ltd
Access Arrangement 2015-20

Attachment 9 – Efficiency
carryover mechanism

June 2015

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Note

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

The final 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

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Shortened forms

Shortened form	Extended form
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 (ACN 003 004 322)
MRP	market risk premium
NGL	national gas law
NGO	national gas objective
NGR	national gas rules
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
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 operating expenditure (opex).

It is often used as part of incentive regulation. Given that 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 during the access arrangement period it is allowed to keep any difference between its approved forecast and its actual opex during an access arrangement period. This is supplemented by the efficiency carryover mechanism which allows the service provider to retain efficiency savings and efficiency losses for a longer period of time. In total these rewards and penalties work together to provide a continuous incentive for a service provider to pursue efficiency gains over the access arrangement period. The 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

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

9.1 Final decision

Our final 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.

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.

¹ The efficiency carryover mechanism we apply to gas service providers is identical to 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.

Table 9-1 Final 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	137.1	137.9	138.8	143.5	142.7

Source AER analysis: Includes approved forecast opex less approved forecast for unaccounted for gas (UAG), licence fees, carbon costs and debt raising costs.

9.2 Draft decision

Our draft decision was to approve the application of an efficiency carryover mechanism to JGN in the 2015–20 access arrangement period.²

In applying the efficiency carryover mechanism to JGN in the 2015–20 access arrangement period we proposed 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, we also proposed 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 2020.³
- adjust JGN's opex forecast to account for determined pass through amounts
- adjust JGN's opex forecast to account for any capitalisation policy changes.

We did not agree with JGN's proposal to adjust its forecast opex amount by updating it to take into account changes in demand. The risk that JGN's opex forecast is too high or too low is symmetrical. We consider it should be shared between JGN and its customers through the operation of the efficiency carryover mechanism in the same way other forecasting risks are shared.

The operation of the efficiency carryover mechanism was subject to a fixed principle. This makes it explicit that JGN's revenue in future access arrangement periods will be adjusted for efficiency carryover amounts it accrues in the 2015–20 access arrangement period.

9.3 JGN's revised proposal

In its revised proposal, JGN welcomed our decision to apply an efficiency carryover mechanism to it in the 2015–20 access arrangement period.

² AER, *Draft decision for Jemena Gas Networks (NSW) Ltd Access Arrangement 2015–20 -Attachment 9 Efficiency Carryover Mechanism*, November 2014.

³ AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013, p. 7.

JGN disagreed with our draft decision not to make an adjustment to the forecast opex amount we use to calculate the efficiency carryover amounts where its actual demand growth is different to forecast demand growth. It considered such an adjustment would be relatively simple.⁴

It also proposed some revised drafting for the clause of its access arrangement that would allow us to exclude cost categories that are not forecast using a single year revealed cost approach in the access arrangement period commencing in 2020.⁵

9.4 AER's assessment approach

An efficiency carryover mechanism is a form of incentive mechanism. A full access arrangement may include (and we may require it to include) one or more incentive mechanisms to encourage efficiency in the provision of services by the service provider.⁶ An incentive mechanism must be consistent with the revenue and pricing principles.⁷

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.⁸

9.5 Interrelationships

The efficiency carryover mechanism we apply to opex is intrinsically linked to a revealed cost forecasting approach for opex. Under this forecasting approach, the efficiency carryover mechanism has two specific functions:

- To mitigate the incentive for a service provider to increase opex in the expected 'base year' to increase its forecast opex allowance for the following access arrangement period.

⁴ Jemena Gas Networks, *Response to the AER's draft decision and revised proposal*, 27 February 2015, p. 105.

⁵ Jemena Gas Networks, *Response to the AER's draft decision and revised proposal*, 27 February 2015, p. 105.

⁶ NGR, r. 98(1).

⁷ NGR, r. 98(3).

⁸ NGL, s. 24(3).

- To provide a continuous incentive for a service provider to make efficiency gains; service providers receive the same reward for an underspend and the same penalty for an overspend in each year of the access arrangement period.

9.6 Reasons for final decision

9.6.1 Adjustment for demand growth

We maintain our draft decision not to apply an adjustment for changes in demand growth in calculating the efficiency carryover amounts.

In its revised proposal, JGN disagreed that an adjustment for ex post changes in demand growth would be unnecessarily complex. It considered that such an adjustment was relatively simple and that the benefits of correcting for changes of such an adjustment would outweigh the costs.⁹

The efficiency carryover mechanism for opex will reward or penalise service providers for some changes in circumstances that are not efficiency gains. For instance, JGN could be rewarded or penalised for cost increases or decreases which are largely beyond JGN's control. These outcomes are unavoidable given:

- we approve a forecast opex amount for a five year access arrangement period,
- many outcomes are uncertain at the time we set our forecast, and
- the efficiency carryover mechanism rewards or penalises a service provider where its actual opex is different to its approved forecast.

Relatively uncontrollable cost changes that happen during an access arrangement period, such as changes in demand, present both upside and downside risk to JGN. JGN has not presented any compelling evidence to explain why it considers changes in demand that arise during the access arrangement period that affect its opex should be treated differently to most other cost changes it faces. For instance, if assumptions underlying a forecast step change in opex do not materialise, or the cost of an input is different to what we forecast at the start of the period, we do not back-cast JGN's approved forecast so it does not accrue gains and losses due to these cost changes. Unless there is convincing evidence otherwise, we consider we should adopt a consistent approach in implementing the efficiency carryover mechanism to all costs JGN faces.

Our proposed approach to this issue is similar to many aspects of our approach to regulation which depend on forecast building block amounts that are set ex ante based on expectations of what will occur during the forthcoming period. For instance, JGN's actual capex or cost of capital will be different to what we forecast prior to the start of an access arrangement. This could be due to changes beyond JGN's control. In most

⁹ Jemena Gas Networks, *Response to the AER's draft decision and revised proposal*, 27 February 2015, p. 105.

circumstances, we do not attempt to remove gains and losses JGN has accrued due to these changes in circumstances.

While we agree an adjustment for changes in demand would not have any major detriment, we have not been presented with a strong reason why changes in demand should be treated in a different way to most other changes in costs JGN faces during an access arrangement period. For instance, JGN did not explain how its proposed approach would better contribute to achieving the revenue and pricing principles. It considers that the adjustment would better achieve productive efficiency¹⁰, but did not articulate why this was the case. We consider productive efficiency is achieved by having strong incentives in place for JGN to deliver an efficient pipeline service. Given that changes in demand are largely beyond JGN's control, we do not see how JGN's proposed adjustment makes any difference to the incentives it faces to become more efficient.

9.6.2 Exclusions of cost categories

We accept JGN's revised drafting for ex post cost exclusions from the efficiency carryover mechanism.

In our draft decision, we proposed we would maintain limited discretion to exclude some costs ex post from the efficiency carryover mechanism. We consider this discretion 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 proposed we will only make such 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

Generally 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 our draft decision we noted that 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. Overall, consumers could be worse off. For this reason, we consider we should maintain discretion to exclude some costs when calculating the carryover amounts.

In its revised proposal, JGN did not disagree with this approach, but suggested revised drafting so that

- (a) our decision to exclude these costs would be subject to consultation with JGN, and

¹⁰ Jemena Gas Networks, *Response to the AER's draft decision and revised proposal*, 27 February 2015, p. 106.

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

(b) the exclusion of these costs would not be subject to a fixed principle.¹²

We accept JGN's revised drafting to include a reference to consultation, although we consider this does not make any practical difference to our decision making process. We expect the consultation we would undertake with JGN prior to excluding such costs from the efficiency carryover mechanism would not be any different to any other decision which affects JGN's next access arrangement.

We also accept JGN's proposal that the exclusion of these costs will not be subject to a fixed principle. The fixed principle that relates to the efficiency carryover mechanism makes it explicit that we will include efficiency carryover amounts JGN has accrued in the 2015–20 access arrangement period when calculating JGN's revenue in the access arrangement period beginning in 2020. By exempting this particular exclusion from the fixed principle we will have some additional flexibility when calculating JGN's efficiency carryover amounts from the 2015–20 access arrangement period. However, we emphasise that not subjecting these costs to the fixed principle does not in any way limit our ability to exclude these costs.

¹² Jemena Gas Networks, *Response to the AER's draft decision and revised proposal*, 27 February 2015, p. 106.