DRAFT DECISION
Multinet Gas
Access arrangement
2018 to 2022

Attachment 9 – Efficiency carryover mechanism

July 2017

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's draft decision on the access arrangement for Multinet Gas for 2018-22. It should be read with all 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

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Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
ATO	Australian Tax Office
capex	capital expenditure
CAPM	capital asset pricing model
CESS	Capital Expenditure Sharing Scheme
CPI	consumer price index
DRP	debt risk premium
ECM	(Opex) Efficiency Carryover Mechanism
ERP	equity risk premium
Expenditure Guideline	Expenditure Forecast Assessment Guideline
gamma	Value of Imputation Credits
MRP	market risk premium
NGL	National Gas Law
NGO	national gas objective
NGR	National Gas Rules
NPV	net present value
opex	operating expenditure
PTRM	post-tax revenue model
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
STTM	Short Term Trading Market
TAB	Tax asset base
UAFG	Unaccounted for gas
WACC	weighted average cost of capital
WPI	Wage Price Index

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 in incentive regulation.

To encourage a service provider to become more efficient, it is allowed to keep any difference between its approved opex forecast and its actual opex in an access arrangement period. This is supplemented by the efficiency carryover mechanism, which provides that the service provider benefits from efficiency gains and is penalised by efficiency losses over a longer period. 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 inflating its opex in the expected base year for the following access arrangement period because this could lead to higher forecast opex for that period.

Consumers benefit from any efficiency gains made by the service provider as we base our opex forecast for the next access arrangement period on the service provider's lower revealed opex. This is how efficiency improvements are shared between consumers and the business.

An efficiency carryover mechanism applied to Multinet during the 2013–17 access arrangement period. Multinet proposed an efficiency carryover mechanism apply to it in the 2018–22 access arrangement period.

9.1 Draft decision

Our draft decision is to approve a negative carryover of –$5.1 million ($2017) from the application of the efficiency carryover mechanism in the 2013–17 access arrangement period. This is $8.8 million ($2017) less than Multinet's proposed carryover of positive $3.7 million. The principal reason for the difference is that we updated estimated opex in 2016 with actual opex. We also:

- corrected the way Multinet removed movements in provisions
- corrected the licence fee amounts removed
- we applied a scale adjustment to the approved opex forecast, as required by Multinet's access arrangement.

Our draft decision on the carryover amounts from the 2013–17 access arrangement period is set out in Table 9.1.[1]

[1] If the base year used to forecast opex changes in the revised proposal or final decision, it is likely our calculation of the carryover amount will change.

Table 9.1 Our draft decision on Multinet's carryover amounts ($ million, 2017)

	2018	2019	2020	2021	2022	Total
Multinet's proposed carryover	0.9	6.4	–0.4	–3.2	–	3.7
Draft decision	–2.1	4.6	–2.2	–5.4	–	–5.1
Difference	**–3.0**	**–1.8**	**–1.8**	**–2.2**	**–**	**–8.8**

Note: Numbers may not add up due to rounding.

We have amended Multinet's proposed efficiency carryover mechanism to reflect improvements included in the efficiency benefit sharing scheme (EBSS) we released in November 2013 for electricity service providers.[2] Importantly, the amendments will give Multinet flexibility in the choice of base year it uses to forecast opex in the following period. We have also reduced the number of cost categories we will exclude from the mechanism.

Table 9.2 sets out our draft decision on the approved opex forecast we will use to calculate efficiency gains and losses in the 2018–22 access arrangement period. We will update these amounts in our final decision to reflect our final decision on forecast opex. These amounts are also subject to adjustments permitted by the efficiency carryover mechanism

Table 9.2 Approved forecast opex for the efficiency carryover mechanism ($ million, 2017)

	2016	2017	2018	2019	2020	2021	2022
Approved opex forecast	72.6	73.5	74.4	75.3	76.3	77.4	78.6

Note: Excludes debt raising costs.

9.2 Multinet's proposal

9.2.1 Carryover amounts from the 2013–17 access arrangement period

Multinet proposed a $3.7 million ($2017) carryover be added to its revenue in the 2018–22 access arrangement period.[3]

Multinet used the equations set out in clause 6.4 of its 2013–17 access arrangement to calculate its annual efficiency gains (or losses) in each year.

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2 AER, *Efficiency Benefit Sharing Scheme for Electricity Network Service Providers*, November 2013, pp. 7–9.

3 Multinet, *2018 to 2022 Access arrangement information*, 16 December 2016, p. 2.

In estimating its proposed carryover amounts, Multinet excluded the following costs from its actual opex:

- licence fees
- movements in provisions allocated to opex.[4]

9.2.2 Application of the efficiency carryover mechanism in the 2018–22 access arrangement period

Multinet proposed that the same opex incentive mechanism that applied to it in the 2013–17 access arrangement period should apply in the 2018–22 access arrangement period.[5]

It proposed we exclude the following cost categories from the scheme:[6]

- costs associated with complying with any retailer of last resort requirements
- amounts for approved cost pass through events
- unaccounted for gas expenses
- licence fees
- debt raising costs
- movements in provisions
- any other activity that we and Multinet agree to exclude from the operation of the efficiency carryover mechanism.

It also proposed we adjust approved forecast opex to account for the difference between forecast and actual changes in the scale of activities and for changes in capitalisation policy.[7]

9.3 Our 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.[8] An incentive mechanism must be consistent with the revenue and pricing principles.[9]

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

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4 Multinet, *Operating expenditure and Efficiency Carryover Mechanism Model,* December 2016.
5 Multinet, *2018 to 2022 Access arrangement information*, 16 December 2016, p. 135.
6 AER, *Multinet access arrangement - Part B*, April 2013, clause 6.4(j).
7 AER, *Multinet access arrangement - Part B*, April 2013, clauses 6.4(k)(2) and 6.4(l).
8 NGR, r. 98(1).
9 NGR, r. 98(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
>
> (b) the efficient provision of pipeline services
>
> (c) the efficient use of the pipeline.[10]

Under the NGR we have full discretion in our decision as to whether to apply an incentive scheme.[11]

9.3.1 Interrelationships

The efficiency carryover mechanism is intrinsically linked to our opex revealed cost forecasting approach. Under our revealed cost forecasting approach we base our forecast on a service provider's audited actual opex in a single year. When we assess a service provider's proposed carryover, we have regard to whether it is consistent with its proposed approach to forecasting opex for the following period.

9.4 Reasons for draft decision

9.4.1 Carryover amounts from the 2013–17 access arrangement period

We consider Multinet should receive a negative carryover amount of –$5.1 million ($2017) from the application of the efficiency carryover mechanism during the 2013–17 access arrangement period.

The carryover we calculated is lower than the carryover Multinet proposed ($3.7 million $2017) mainly because we updated Multinet's estimated opex for 2016 with the opex amount it reported in its annual RIN for 2016. Multinet's actual opex was higher than its estimate.

Other drivers of the difference between our calculation of the carryover and Multinet's are:

- Multinet did not correctly remove movements in provisions from reported opex
- Multinet did not adjust its approved opex forecast to reflect the actual change in the scale of its activities
- we used different values of inflation.

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10 NGL, s. 24(3).
11 NGR, r. 40(3).

We discuss each of these issues below.

Movements in provisions

Multinet's current access arrangement requires that movements in provisions be excluded from the operation of the efficiency carryover mechanism.[12]

Instead of removing the movement in provisions from its reported opex, Multinet removed the increase/decrease in provisions charged to opex. Consequently, the opex amounts Multinet used to calculate carryovers did not include the liabilities paid from provisions charged to opex. We asked Multinet to explain why it had treated provisions in this way. Multinet confirmed it had used the incorrect movement in provisions to calculate efficiency carryovers and that we should use the movements reported on the provisions sheet of its annual RINs.[13] We have corrected this error in our calculation of efficiency carryovers.

Adjustment to the approved opex forecast to reflect actual change in scale

Multinet's current access arrangement requires that efficiency carryovers 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. Further, the opex benchmarks should be adjusted consistently with the way we determined the benchmarks.[14] This requires Multinet's approved forecast opex be recalculated to reflect actual output growth rather than the forecasts of output growth we used to determine opex for the 2013–17 access arrangement period. Multinet did not follow these requirements.

Consequently, we reforecast opex for the current access arrangement period using the actual number customer numbers. This reduced the forecast opex we used to calculate efficiency carryovers.

CPI

Multinet converted all opex amounts, both forecasts and actuals, to real 2017 dollars to calculate its proposed carryover amounts. However, we were unable to reconcile the CPI index values Multinet used with those published by the ABS. We used the CPI index values published by the ABS to calculate Multinet's carryover amounts.

Multinet also did not adopt a consistent approach to convert both its forecast and actual opex amounts to real 2017 dollar terms. We corrected this.

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12 AER, *Multinet access arrangement - Part B*, April 2013, clause 6.4(j)(6).

13 Multinet, *Response to information request IR#27, - Opex - UAFG & movements in provisions, Question 4,* 19 May 2017.

14 AER, *Multinet access arrangement - Part B*, April 2013, clause 6.4(k)(2).

9.4.2 The opex incentive mechanism to apply in the 2018–22 access arrangement period

We approve the application of an opex efficiency carryover mechanism to Multinet in the 2018–22 access arrangement.

An efficiency carryover mechanism is required to provide Multinet with a continuous incentive to pursue efficiency gains during the 2018–22 access arrangement period. It will also provide Multinet with an incentive not to increase its reported opex in the expected base year, given we typically rely on reported opex in a single year to forecast opex.

We have amended Multinet's proposed efficiency carryover mechanism to reflect improvements included in the efficiency benefit sharing scheme (EBSS) we released in November 2013 for electricity service providers.[15] The amendments will give Multinet flexibility in the choice of base year it uses to forecast opex in the following period. We have also reduced the number of cost categories we will exclude from the mechanism.

The EBSS is consistent with the revenue pricing principles and we designed it taking into account the interactions with our revealed opex forecasting approach.

Revised equations consistent with the EBSS

The efficiency mechanism Multinet proposed is similar to the EBSS for electricity service providers.[16] The key difference is that the EBSS provides greater flexibility.

The equations proposed by Multinet assumed it will use actual opex in 2021 to forecast opex for the following period.[17] We have amended the equations to provide Multinet with the flexibility to choose any base year.

These revisions reflect the equations in the EBSS for electricity service providers we released in November 2013.[18]

Exclusions from the operation of the efficiency carryover mechanism

Multinet proposed a number of adjustments and exclusions to forecast and actual opex when calculating carryover amounts.

We agree the following adjustments and exclusions will contribute to Multinet being rewarded (penalised) for genuine efficiency gains (losses):

- exclude movements in provisions from actual opex

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15 AER, *Efficiency Benefit Sharing Scheme for Electricity Network Service Providers*, November 2013.

16 Multinet, *Access arrangement proposal–Part B Reference tariff and reference tariff policy*, December 2016, pp. 16–18.

17 Multinet, *Access arrangement proposal–Part B Reference tariff and reference tariff policy*, December 2016, clause 6.4(e).

18 AER, *Efficiency Benefit Sharing Scheme for Electricity Network Service Providers*, November 2013.

- where Multinet changes its approach to classifying costs as either capex or opex during the access arrangement period, Multinet will adjust the forecast opex so that the forecast expenditures are consistent with the capitalisation policy changes
- any other activity Multinet and we agree to exclude from the operation of the efficiency carryover mechanism.

We discuss Multinet's other proposed adjustments and exclusions, or adjustments we included, below.

Costs associated with complying with RoLR requirements

Multinet proposed that the costs of complying with any retailer of last resort (RoLR) requirements be excluded from the operation of the efficiency carryover mechanism.

We consider there is no need to exclude costs of complying with RoLR requirements from the efficiency carryover mechanism because if a RoLR event occurs, Multinet will be able to apply for a cost pass through and forecast opex will be adjusted accordingly.

In this draft decision we include a Retailer Insolvency Event as a defined cost pass through event in Multinet's access arrangement (see attachment 11). This event covers costs incurred by Multinet when responding to a RoLR event. Consequently, there would be no need to exclude costs of complying with RoLR requirements from the efficiency carryover mechanism. This is because clause 6.4(j) of the revised access arrangement indicates the allowed forecast opex for each year of the applicable access arrangement period will be adjusted to include any determined pass through amounts.

Amounts for approved cost pass through events

We agree that we should adjust the efficiency carryover calculation to account for approved cost pass through events.

However, we consider that adjusting the opex forecast ex post rather than removing the costs from actual opex is the simplest way to account for approved cost pass through events. We have included this in clause 6.4(j) in our revisions.

Unaccounted for gas expenses

We agree that, should we continue to forecast unaccounted for gas expenses in the same way, we should continue to exclude them from the efficiency carryover mechanism. We exclude these costs because we do not forecast them based on the expenses revealed in a single year. Consequently the access arrangement does not need to explicitly exclude these costs because the access arrangement will exclude costs not forecast using a single year revealed cost approach for the next regulatory period (commencing 1 January 2023). Nonetheless, we have listed unaccounted for gas expenses in the access arrangement as an example of costs not forecast using a single year revealed cost approach. Should these costs be forecast on a different basis in the future we will reconsider whether they should be excluded, taking into account the basis on which they are forecast.

Licence fees

In the 2013–17 access arrangement period, Multinet recovered the costs of its annual licence fees payable to Essential Services Commission of Victoria through a licence fee factor in its tariff control formula.[19] For this reason we excluded these costs from the efficiency carryover mechanism in the current access arrangement period.

In its 2018–22 access arrangement proposal, Multinet again proposed a licence fee factor in the Tariff Variation Mechanism.[20] However, for the reasons we explain in attachment 7, we will exclude the licence fee factor from the tariff variation formula for the 2018–22 access arrangement period. We have also included these costs in base opex and thus we have forecast them as part of total opex using a single year revealed cost approach. Given this, we consider there is no basis for excluding these costs from the efficiency carryover mechanism in the 2018–22 access arrangement period.

Debt raising costs

We agree we should exclude debt raising costs from the efficiency carryover mechanism. However, we consider debt raising costs fall in the clause that excludes all costs not forecast using a single year revealed cost approach in the access arrangement period following the 2018–22 access arrangement period. We have listed debt raising costs as an example of costs not forecast using a single year revealed cost approach in the access arrangement.

Changes in scale of activities

We do not accept the efficiency carryover mechanism should account for changes in the scale of the activities which form the basis of our approved forecast opex.

When we forecast opex, we take account of the expected growth in the output that Multinet is expected to deliver. The risk of output growth forecasting error is symmetrical. We consider this risk should be shared between Multinet and its customers through the operation of the efficiency carryover mechanism in the same way other opex forecasting risks are shared.[21]

Opex not forecast using a single year revealed cost approach for the next regulatory period

Three factors drive the incentive to reduce opex:

1. the ex-ante approved total opex forecast
2. the opex efficiency carryover mechanism

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[19] AER, *Multinet access arrangement - Part B*, April 2013, pp. 38–39.

[20] Multinet, *Access arrangement proposal–Part B Reference tariff and reference tariff policy*, December 2016, pp. 34–35.

[21] As discussed above, even though Multinet had this provision in its previous access arrangement, it did not make the required adjustment to forecast opex to account for actual change in scale.

3. how actual opex is used to forecast opex in future access arrangement periods.

We typically forecast opex based on audited actual opex reported for a single year. The efficiency carryover mechanism is designed on the basis that opex is forecast in this way. However, service providers may not forecast opex using a single year revealed cost forecasting method. This could be at an overall level or category level. For example, a service provider may use a bottom up forecasting approach or use industry benchmarks. Service providers may have a number of reasons to propose alternative forecasting approaches. If such an alternative approach is used, efficiency gains and losses will be shared differently between the service provider and its customers. There is a risk the efficiency carryover mechanism may provide windfall gains or losses to a service provider.

To address this, we have inserted a clause allowing us to exclude any cost category that is not forecast using a single year revealed cost approach in the access arrangement period intended to commence 1 January 2023.

9.5 Revisions

We require the following revisions to make the access arrangement proposal acceptable:

Revision 9.1:

Remove clause 6.4 of the proposed access arrangement and replace it with the following text:

6.4 Operating expenditure incentive mechanism

Rule 98 of the NGR provides for an Access Arrangement to include an incentive mechanism.

(a) The incentive mechanism will apply to operating expenditure.

(b) The incentive mechanism provides Multinet a continuous incentive to find operating expenditure efficiencies through a combination of:

(1) an ex ante forecast of operating expenditure in Multinet's Total Revenue

(2) increments or decrements from the operation of this incentive mechanism that allow Multinet to retain efficiency gains or losses for five years

(3) the use of a single year revealed cost forecasting approach to forecast operating expenditure for the access arrangement period following this Access Arrangement Period (expected to commence 1 January 2023).

(c) The incremental efficiency gain (loss) for 2018 will be calculated using:

$$I_{2018} = (F_{2018} - A_{2018}) - [(F_{2017} - A_{2017}) - (F_{2016} - A_{2016})]$$

where

I_{2018} is the incremental efficiency gain (loss) for 2018.

F_{2018} is the approved forecast opex for 2018.

A_{2018} is the actual opex for 2018.

F_{2017} is the approved forecast opex for 2017.

A_{2017} is the actual opex for 2017.

F_{2016} is the approved forecast opex for 2016.

A_{2016} is the actual opex for 2016.

(d) The incremental efficiency gain (or loss) for 2019 to 2022 (inclusive) will be calculated using:

$$I_i = (F_i - A_i) - (F_{i-1} - A_{i-1})$$

where

I_i is the incremental efficiency gain in year i of the access arrangement period.

F_i is the approved forecast opex in year i of the access arrangement period.

A_i is the actual opex in year i of the access arrangement period.

F_{i-1} is the approved forecast opex in year i –1 of the access arrangement period.

A_{i-1} is the actual opex in year I –1 of the access arrangement period.

(e) Actual opex in the final year, 2022, of the access arrangement period is to be estimated using:

$$A^*_{2022} = F_{2022} - (F_b - A_b) + \ non\text{-}recurrent\ efficiency\ gain_b$$

where

A^*_{2022} is the estimate of opex for 2022.

F_{2022} is the approved forecast opex for 2022.

$F_b$is the approved forecast opex for the base year used to forecast opex in the access arrangement period following this access arrangement.

$A_b$is the actual opex for the base year used to forecast opex in the access arrangement period following this access arrangement.

$non\text{-}recurrent\ efficiency\ gain_b$ is the adjustment made to base year opex used to forecast opex for the access arrangement period expected to commence 1 July 2021 to account for opex associated with one-off factors.

(f) To ensure efficiency gains or losses made in 2022 are retained for five years, opex for the access arrangement period following this Access Arrangement Period (intended to commence 1 January 2023) should be forecast in a manner consistent with the estimate for opex in 2022, A^*_{2022}, in (e) above. This provides the Service Provider the same reward had the expenditure level in 2022 been known.

(g) For the avoidance of doubt, the incremental efficiency gains (or losses) are carried over from year to year in real dollars to ensure that these gains (or losses) are not eroded by inflation. The price indices used in this calculation are to be consistent with those used to forecast opex for the access arrangement period following this Access Arrangement Period (intended to commence 1 January 2023).

(h) Increments or decrements from the summation of incremental efficiency gains or losses calculated in accordance with the approved incentive mechanism in the Access Arrangement Period will give rise to an additional 'building block' in the calculation of the Total Revenue amounts for each Year of the access arrangement period following this Access Arrangement Period (intended to commence 1 January 2023).

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

(1) movements in provisions

(2) any cost category that is not forecast using a single year revealed cost approach in the access arrangement period following this Access Arrangement Period (intended to commence 1 January 2023). These costs may include, debt raising costs and unaccounted for gas expenses

(3) any other activity that the Service Provider and the Regulator agree to exclude from the operation of the efficiency carryover mechanism.

(j) The forecast opex amount for each year of the Applicable Access Arrangement Period will be adjusted to include any Determined Pass Through Amounts or other AER approved expenditure arising from Cost Pass Through Events which apply in respect of that year

(k) Where Multinet changes its approach to classifying costs as either capital expenditure or opex during the access arrangement period, Multinet will adjust the approved forecast opex in the access arrangement information so that the forecast expenditures are consistent with the capitalisation policy changes.

(l) If there is a change in Multinet's approach to classifying costs as either capital expenditure or opex, Multinet must provide to the AER a detailed description of the change and a calculation of its impact on forecast and actual opex.

(m) For the avoidance of doubt, the forecast expenditure amounts that are used as the basis for measuring efficiencies are equal to the forecast operating cost for that year as shown in the table below, which exclude the costs listed in clause 6.4(i)(1)–(3).

Approved forecast opex for the efficiency carryover mechanism ($ million, 2017)

	2016	2017	2018	2019	2020	2021	2022
Approved forecast opex	**72.6**	**73.5**	**74.4**	**75.3**	**76.3**	**77.4**	**78.6**

Note: Excludes debt raising costs.