DRAFT DECISION
AusNet Services
Gas access arrangement
2018 to 2022

Attachment 9 – Efficiency carryover mechanism

July 2017

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: 1300 585 165
Email: AERInquiry@aer.gov.au

Note

This attachment forms part of the AER's draft decision on the access arrangement for AusNet 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

Attachment 9 - Efficiency carryover mechanism

Attachment 10 - Reference tariff setting

Attachment 11 - Reference tariff variation mechanism

Attachment 12 - Non-tariff components

Attachment 13 - Demand

Attachment 14 - Other incentive schemes

Contents

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 or is penalised for 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 AusNet during the 2013–17 access arrangement period. AusNet 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 carryover of $8.6 million ($2017) from the application of the efficiency carryover mechanism in the 2013–17 access arrangement period. This is $2.7 million ($2017) more than AusNet's proposal. The principal reason for the difference is that AusNet used different base years to calculate its opex forecast (2015) and its benefits under the efficiency carryover mechanism (2016). Our draft decision uses 2015 as the base year for both calculations.

Other reasons for the difference in our calculations are:

- we corrected the way AusNet removed movements in provisions
- we excluded licence fees and unaccounted for gas from reported opex and applied a scale adjustment to the approved opex forecast, as required by AusNet's access arrangement
- we updated estimated opex in 2016 with actual opex.

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

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

	2018	2019	2020	2021	2022	Total
AusNet's proposed carryover	3.9	-0.3	1.2	1.0	–	5.9
Draft decision	3.3	1.6	3.0	–	0.6	8.6
Difference	**–0.6**	**1.9**	**1.8**	**–1.0**	**0.6**	**2.7**

Note: Numbers may not add up due to rounding.

We have amended AusNet'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 AusNet 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)

	2015	2016	2017	2018	2019	2020	2021	2022
Approved opex forecast	49.2	50.3	51.5	51.0	51.9	52.9	53.9	54.8

Note: Excludes debt raising costs.

9.2 AusNet's proposal

9.2.1 Carryover amounts from the 2013–17 access arrangement period

AusNet proposed a $5.9 million ($2017) carryover be added to its revenue in the 2018–22 access arrangement period.[3]

---

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.

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

3 AusNet Services, *Access arrangement information 2018–22,* 16 December 2016, p. 267.

AusNet used the equations set out in clause 6.4.2 of its 2013–17 access arrangement to calculate its annual efficiency gains (or losses) in each year.

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

- debt raising costs
- movements in provisions allocated to opex.[4]

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

AusNet proposed an efficiency carryover scheme would apply to it in the 2018–22 access arrangement period subject to specific exclusions. It proposed we exclude the following cost categories from the scheme: [5]

- 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
- allowable network innovation scheme (NIS) expenditure amounts
- any other activity that we and AusNet 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.[6]

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

---

[4] AusNet Services, *Access arrangement information 2018–22*, 16 December 2016, p. 266.

[5] AusNet Services, *Access arrangement proposal Part B Reference tariffs and reference tariff policy*, 16 December 2016, p. 24, clause 6.4.2(h).

[6] AusNet Services, *Access arrangement proposal Part B Reference tariffs and reference tariff policy*, 16 December 2016, 16 December 2016, p. 25, clause 6.4.2(j).

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 AusNet'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
>
> (b) the efficient provision of pipeline services
>
> (c) the efficient use of the pipeline.[9]

Under the NGR we have full discretion in our decision as to whether to apply an incentive scheme.[10]

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 forecast 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 AusNet should receive a carryover amount of $8.6 million ($2017) from the application of the efficiency carryover mechanism during the 2013–17 access arrangement period.

The carryover we calculated is higher than the carryover AusNet proposed ($5.9 million), mainly because we used a different estimate of 2017 opex, which changed the incremental gain for 2017. We used a different estimate of 2017 opex to reflect the use of 2015 as the base year to forecast opex.

---

7 NGR, r. 98(1).
8 NGR, r. 98(3).
9 NGL, s. 24(3).
10 NGR, r. 40(3).

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

- AusNet did not correctly remove movements in provisions from reported opex.
- AusNet did not correctly report license fees, which should have been excluded
- AusNet did not correctly report UAFG incentive payments, which should have been excluded
- AusNet did not adjust its approved opex forecast to reflect the actual change in the scale of its activities
- we updated AusNet's estimate of opex for 2016 with actual opex for 2016.

We discuss each of these issues below.

Estimate of 2017 'actual' opex

When we calculate the carryover amount we typically do not know actual audited opex for the final year of the current access arrangement period, in this case 2017. Consequently we need an estimate of 2017 opex to calculate gains or losses for 2017.

Our estimate is derived so any reward or penalty under the scheme is warranted by a corresponding benefit to consumers likely to result from the scheme. To do this, we maintain consistency between how we calculate the carryover amount and how we forecast opex. We typically assume that the service provider makes no efficiency gains after the base year in both the opex model and in the efficiency carryover mechanism.

The efficiency carryover mechanism that applied to AusNet in 2013–17 specified that 2017 opex be estimated using the following equation:[11]

$$A^*_{2017} = A_{2016} + F_{2017} - F_{2016}$$

where A_{2016} is actual opex for 2016 and F_{2017} and F_{2016} are the approved forecast opex figures for 2017 and 2016 respectively.

This formula assumes that the incremental efficiency gain for 2017 is zero.

However, the efficiency carryover mechanism that applied to AusNet also specified:

> to ensure efficiency gains or losses made in 2017 are retained for five years, opex for the 2018–22 access arrangement period should be forecast in a manner consistent with the estimate for opex in 2017, A^*_{2017}, above. This provides the Service Provider the same reward had the expenditure level in 2017 been known.[12]

---

[11] AER, *SP AusNet access arrangement - Part B Reference tariffs and reference tariff policy*, 29 April 2013, p. 25, clause 6.4(b)(3).

[12] AER, *SP AusNet access arrangement - Part B Reference tariffs and reference tariff policy*, 29 April 2013, p. 25, clause 6.4(b)(6).

However, AusNet did not forecast opex for the 2018–22 access arrangement period using the same estimate of 2017 opex it used to calculate its reward under the efficiency carryover mechanism. We can address this inconsistency one of two ways. We can either:

1. change the opex forecast to reflect the estimate of 2017 opex we use to calculate carryovers under the efficiency carryover mechanism
2. change the estimate of 2017 opex we use to calculate carryovers under the efficiency carryover mechanism to reflect the estimate of 2017 opex we use to forecast opex for the 2018–22 access arrangement period.

The above equation, which defines how we will estimate 2017 opex for the efficiency carryover mechanism, implicitly assumes 2016 will be used to forecast opex for the 2018–22 access arrangement period.

Consequently, AusNet's proposal penalises it twice for the incremental efficiency loss it has made in 2016—once through the efficiency carryover mechanism and a second time through its opex forecast, which does not reflect the efficiency loss because it is based on opex in 2015.

To ensure that we forecast opex for the 2018–22 access arrangement period in a manner consistent with the estimate for 2017 opex we use to calculate efficiency carryovers, we have estimated 2017 opex as:

$$A^*_{2017} = A_{2016} + F_{2017} - F_{2015}$$

This is how we estimate final year opex in the efficiency benefit sharing scheme for electricity service providers and reflects the use of 2015 opex to forecast opex for the 2018–22 access arrangement period.

AusNet agreed that this formula should be used to estimate 2017 opex for both calculating efficiency carryovers and for forecasting opex for the 2018–22 access arrangement period.[13]

Correcting this error increases the efficiency carryover by $3.2 million ($2017). Alternatively we could use 2016 as the base year to forecast opex for the 2018–22 access arrangement period.

Movements in provisions

AusNet's current access arrangement requires that movements in provisions be excluded from the operation of the efficiency carryover mechanism.[14]

We were unable to reconcile the movements in provisions that AusNet had removed from total opex to calculate efficiency carryovers with the movements in provisions that

---

13 AusNet Services, *IR#14 - Base opex and ECM - Response to Q2 and Q3*, 11 April 2017, p. 3.

14 AER, *SP AusNet access arrangement - Part B Reference tariffs and reference tariff policy*, 29 April 2013, p. 25, clause 6.4(b)(8)(f).

AusNet had reported in its annual RINs. We sought an explanation from AusNet as to why it had not used the movements in provisions it had reported in its annual RINs. AusNet confirmed that 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.[15] We have corrected this error in our calculation of efficiency carryovers.

Licence fees

AusNet's current access arrangement requires that licence fees be excluded from the operation of the efficiency carryover mechanism.[16]

AusNet, however, did not remove licence fees from its total opex to calculate its proposed efficiency carryovers and had reported zero licence fees in its annual RINs. We sought confirmation from AusNet that that the licence fees it pays were not included in the total opex it reported in its annual RINs. In response, AusNet confirmed that licence fees are included in the total opex it reported in its annual RINs and it provided the amounts it had paid.[17]

AusNet also stated that it had not reported against the 'licence fees' category its annual RINs because we had not provided an explicit allowance for this category of expenditure.[18] This is not a valid reason for not reporting these costs, particularly when transparency is required to exclude these amounts from the operation of the efficiency carryover mechanism as set out in AusNet's access arrangement.

Unaccounted for gas expenses

AusNet's current access arrangement requires that unaccounted for gas expenses be excluded from the operation of the efficiency carryover mechanism.[19]

AusNet stated that unaccounted for gas expenses are not included in the total opex amounts it used to calculate efficiency carryovers.[20] We sought confirmation from AusNet that this was indeed the case. In responding to our information request, AusNet identified that unaccounted for gas expenses were in fact included in the total opex amounts it reported in its annual RINs. It therefore stated that we should remove unaccounted for gas expenses from the actual opex amounts used to calculate efficiency carryovers.[21] We have corrected this error in our calculation of efficiency carryovers.

---

15 AusNet Services, *IR#14- Base opex and ECM --Response to Q1*, 13 April 2017, pp. 2–3.

16 AER, *SP AusNet access arrangement - Part B Reference tariffs and reference tariff policy*, 29 April 2013, p. 25, clause 6.4(b)(8)(d).

17 AusNet Services, *IR #14- Base opex and ECM - Response to Q2 and Q3,* 11 April 2017, p. 2.

18 AusNet Services, *IR #14- Base opex and ECM - Response to Q2 and Q3,* 11 April 2017, p. 2.

19 AER, *SP AusNet access arrangement - Part B Reference tariffs and reference tariff policy*, 29 April 2013, p. 25, clause 6.4(b)(8)(c).

20 AusNet Services, *Access arrangement information 2018–2022*, 16 December 2016, p. 266.

21 AusNet Services, *IR#17- Opex UAFG- Response,* 10 May 2017, p. 1.

Adjustment to target opex to reflect actual change in scale

AusNet'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.[22] This requires AusNet'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. AusNet did not follow these requirements.

Consequently, we measured output growth for the current access arrangement period as a weighted average of total customer numbers growth (45 per cent) and total throughput (55 per cent). This reduced the forecast opex we used to calculate efficiency carryovers.

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

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

An efficiency carryover mechanism is required to provide AusNet with a continuous incentive to pursue efficiency gains during the 2018–22 access arrangement period. It will also provide AusNet 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 AusNet'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.[23] The EBSS is consistent with the revenue pricing principles and we designed it taking into account the interactions with our revealed opex forecasting approach. Specifically, the amendments will give AusNet 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 and removed fixed principle 7.2(c) regarding the payment of rewards.

Revised equations consistent with the EBSS

The efficiency mechanism AusNet proposed is similar to the EBSS for electricity service providers.[24] The key difference is that the EBSS provides greater flexibility.

---

22 AER, *SP AusNet access arrangement - Part B Reference tariffs and reference tariff policy*, 29 April 2013, p. 26, clause 6.4(b)(9).

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

24 AusNet Services, *Access arrangement proposal Part B Reference tariffs and reference tariff policy*, 16 December 2016, pp. 23-25.

The equations proposed by AusNet assume that it used actual opex in 2016 to forecast opex for the 2018–22 access arrangement period,[25] and that it will use actual opex in 2021 to forecast opex for the following period.[26]

As we discuss above, both we and AusNet used 2015 opex to forecast opex for the 2018–22 access arrangement period. We have amended the equations to reflect this. We have also revised the equations to provide AusNet flexibility in the choice of base year it uses to forecasts opex for the following access arrangement period.

These revisions reflect the equations in the EBSS for electricity service providers we released in November 2013. [27]

Exclusions from the operation of the efficiency carryover mechanism

AusNet proposed a number of adjustments and exclusions to forecast and actual opex when calculating carryovers.[28]

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

- exclude movements in provisions from actual opex
- exclude losses on scrapping of assets from actual opex
- adjust actual opex to add capitalised opex that has been excluded from the RAB
- exclude from actual opex categories of opex not forecast using a single year revealed cost approach for the next regulatory period (commencing 1 January 2023)
- any other activity AusNet and we agree to exclude from the operation of the efficiency carryover mechanism.

We discuss AusNet's other proposed adjustments and exclusions below.

Costs associated with complying with RoLR requirements

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

---

[25] AusNet Services, *Access arrangement proposal Part B Reference tariffs and reference tariff policy*, 16 December 2016, 16 December 2016, p. 23, clause 6.4.2(a).

[26] AusNet Services, *Access arrangement proposal Part B Reference tariffs and reference tariff policy*, 16 December 2016, 16 December 2016, p. 24, clause 6.4.2(c).

[27] AER, *Efficient Benefit Sharing Scheme for Electricity Network Service Providers*, November 2013, pp. 7-9.

[28] The exclusion and adjustments AusNet proposed were different in its access arrangement information compared to those it proposed in the access arrangement itself. We have considered all of them, regardless of the document AusNet proposed them in. AusNet Services, *Access arrangement proposal Part B Reference tariffs and reference tariff policy*, 16 December 2016, pp. 23-25.

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, AusNet 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 AusNet's access arrangement (see attachment 11). This event covers costs incurred by AusNet when it is required to respond 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 6.4.2(h) of the revised access arrangement indicates the forecast operating expenditure amount 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 6.4.2(h) 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, AusNet 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.[29] For this reason we excluded these costs from the efficiency carryover mechanism in the current access arrangement period.

[29] AER, *SP AusNet access arrangement - Part B Reference tariffs and reference tariff policy*, 29 April 2013, pp. 9-10 and 13-14.

In its 2018–22 access arrangement proposal, AusNet again proposed a licence fee factor in the Tariff Variation Mechanism.[30] 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 debt raising costs should be excluded 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.

Allowable network innovation scheme expenditure

AusNet included a network innovation scheme in its access arrangement for the 2018–22 period. As we have rejected the proposed scheme in this draft decision (discussed in attachment 14) there is no need to exclude allowable network innovation scheme expenditure from the efficiency carryover mechanism. Regardless, there would be no need to explicitly exclude allowable network innovation scheme expenditure because we would not forecast it using a single year revealed cost approach.

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 AusNet is expected to deliver. The risk of output growth forecasting error is symmetrical. We consider this risk should be shared between AusNet and its customers through the operation of the efficiency carryover mechanism in the same way other opex forecasting risks are shared.[31]

Changes in capitalisation policy

We do not accept that the efficiency carryover mechanism should be adjusted to account for any changes in AusNet's capitalisation policy, except in limited circumstances. Given the operation of the capital expenditure sharing scheme, AusNet

---

[30] AusNet Services, *IR #14- Base opex and ECM- Response to Q2 and Q3,* 11 April 2017, p. 2.

[31] As discussed above, even though AusNet Services 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.

will mostly have balanced incentives to reduce opex and capex (see attachment 14). However, given the contingent nature of the capital expenditure sharing scheme that will apply to AusNet, it may be necessary to take into account changes in AusNet's capitalisation policy in limited circumstances.

We will adjust the efficiency carryover mechanism to reflect capitalisation policy changes only when it is necessary to provide effective incentives to promote economic efficiency. This would be the case where AusNet fails to meet its network health target, and has accrued a reward under the capital expenditure sharing scheme (which it will not receive).

It is important to consider the incentives service providers may have to capitalise expenditure. If they are not balanced then service providers may have an incentive to substitute opex with capex even if it is not efficient. Ideally service providers should be indifferent between spending a dollar of opex and spending a dollar of capex. This is consistent with the revenue and pricing principles, which require that service providers should be provided with effective incentives to promote economic efficiency.[32]

The clause proposed by AusNet is included in its current access arrangement. However, it is important to note that while AusNet was not subject to a capital expenditure sharing scheme in the current access arrangement period, it will be subject to a capital expenditure sharing scheme in the 2018–22 access arrangement period (see attachment 14). The application of the capital expenditure sharing scheme should provide AusNet with a similar incentive to reduce capex as it does to reduce opex.

Removal of fixed principle 7.2(c)

AusNet proposed a fixed principle that would require that any positive efficiency carryover that arises from the application of the efficiency carryover mechanism in the 2018–23 access arrangement should be added to the its total revenue for the access arrangement period expected to commence 1 January 2023. AusNet stated that the fixed principle would provide regulatory certainty.[33] It would also secure its incentive properties, thereby furthering the NGO.[34] AusNet's access arrangement for 2013–17 includes a fixed principle of this kind. We accept that the existing principle is fixed for the duration of the 2018–22 period. However, on review, we do not consider that the same fixed principle is necessary for the 2023–27 access arrangement period because the scheme as set out in revision 9.2 below sufficiently sets out how both positive and negative carryovers will be carried forward.

The scheme itself recognises that carryovers can be both positive and negative. However, fixed principle 7.2(c) proposed by AusNet only refers to positive efficiency carryovers and rewards. It does not refer to negative carryovers or penalties.

---

[32] NGL, s. 24(3).

[33] AusNet Services, *Access arrangement information 2018–2022*, 16 December 2016, p. 305.

[34] AusNet Services, *Access arrangement information 2018–2022*, 16 December 2016, p. 306.

Consequently we consider that proposed fixed principle 7.2(c) does not fully reflect the symmetrical operation of the efficiency carryover mechanism and should be removed.

9.5 Revisions

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

Revision 9.1:	Remove clause 6.4.1(a)(2) of the proposed access arrangement and replace it with the following text: 6.4.1(a)(2): the carryover that would result in the Service Provider retaining the reward or penalty associated with an operating expenditure efficiency gains or losses for five years after the year in which the gain or loss was achieved;
Revision 9.2:	Remove clause 6.4.2 of the proposed access arrangement and replace it with the following text: 6.4.2 Operating Expenditure Incentive Mechanism An efficiency carryover mechanism will apply to operating expenditure. It will operate in the following way: (a) The incremental efficiency gain (loss) for 2018 will be calculated using: $I_{2018} = (F_{2018} - A_{2018}) - [(F_{2017} - A_{2017}) - (F_{2015} - A_{2015})]$ where I_{2018} is the incremental efficiency gain (loss) for 2018. F_{2018} is the forecast operating expenditure for 2018. A_{2018} is the actual operating expenditure for 2018. F_{2017} is the forecast operating expenditure for 2017. A_{2017} is the actual operating expenditure for 2017. F_{2015} is the forecast operating expenditure for 2015. A_{2015} is the actual operating expenditure for 2015. (b) 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 forecast operating expenditure in year i of the access arrangement period.

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

F_{i-1} is the forecast operating expenditure in year i-1 of the access arrangement period.

A_{i-1} is the actual operating expenditure in year i-1 of the access arrangement period.

(c) Actual operating expenditure 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 forecast opex for 2022.

$F_b$is the 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 January 2023 to account for opex associated with one-off factors.

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

(e) 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 expected to commence on 1 January 2023.

(f) 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 subsequent access arrangement period.

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

(1) movements in provisions

(2) losses on scrapping of assets

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

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

(h) The forecast operating expenditure 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

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

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

(k) 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 6.4.2(g)(1)–(4).

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

	2015	2016	2017	2018	2019	2020	2021	2022
Approved forecast opex	**49.2**	**50.3**	**51.5**	**51.0**	**51.9**	**52.9**	**53.9**	**54.8**

Note: Excludes debt raising costs

Revision 9.3: Remove clause 7.2(c) of the proposed access arrangement.