Draft decision

TransGrid transmission determination

2015–16 to 2017–18

Attachment 10: Capital expenditure sharing scheme

November 2014

AUSTRALIAN ENERGY REGULATOR

Inquiries about this document should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001
Tel: (03) 9290 1444
Fax: (03) 9290 1457
Email: AERInquiry@aer.gov.au

AER reference: 53444

Note

This attachment forms part of the AER's draft decision on TransGrid's revenue proposal 2015–18. It should be read with other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – maximum allowed revenue

Attachment 2 – regulatory asset 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 benefit sharing scheme

Attachment 10 – capital expenditure sharing scheme

Attachment 11 – service target performance incentive scheme

Attachment 12 – pricing methodology

Attachment 13 – pass through events

Attachment 14 – negotiated services

Contents

Shortened forms

Shortened form	Extended form
AARR	aggregate annual revenue requirement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ASRR	aggregate service revenue requirement
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
MAR	maximum allowed revenue
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider
NTSC	negotiated transmission service criteria

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
repex	replacement expenditure
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue pricing principles
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
TNSP	transmission network service provider
TUoS	transmission use of system
WACC	weighted average cost of capital

10 Capital expenditure sharing scheme

The capital expenditure sharing scheme (CESS) provides financial rewards for network service providers whose capex becomes more efficient and financial penalties for those that become less efficient. Consumers benefit from improved efficiency through lower regulated prices. This attachment sets out how we will apply the CESS to TransGrid in the 2015–18 regulatory control period.

As part of the Better Regulation program we consulted on and published version 1 of the capital expenditure incentive guideline (capex incentive guideline), which sets out the CESS.[1] The CESS approximates efficiency gains and efficiency losses by calculating the difference between forecast and actual capex. It shares these gains or losses between service providers and consumers.

The CESS works as follows:

- We calculate the cumulative underspend or overspend for the current regulatory control period in net present value terms.
- We apply the sharing ratio of 30 per cent to the cumulative underspend or overspend to work out what the service provider's share of the underspend or overspend should be.
- We calculate the CESS payments taking into account the financing benefit or cost to the service provider of the underspends or overspends.[2] We can also make further adjustments to account for deferral of capex and ex post exclusions of capex from the RAB.[3]
- The CESS payments will be added or subtracted to the service provider's regulated revenue as a separate building block in the next regulatory control period.

Under the CESS a service provider retains 30 per cent of an underspend or overspend, while consumers retain 70 per cent of the underspend on overspend. This means that for a one dollar saving in capex the service provider keeps 30 cents of the benefit while consumers keep 70 cents of the benefit.

10.1 Draft decision

We will apply the CESS as set out in version 1 of the capital expenditure incentives guideline to TransGrid in the 2015–18 regulatory control period.[4] The guideline provides for the exclusion from the CESS of capex the service provider incurs in delivering a priority project approved under the network capability component of the Service Target Performance Incentive Scheme (STPIS) for transmission network service providers.[5] This is consistent with the proposed approach we set out in our framework and approach paper.[6]

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1 AER, *Capital Expenditure Incentive Guideline for Electricity Network Service Providers*, November 2013, pp. 5–9. (AER, *Capex incentive guideline*, November 2013).

2 We calculate benefits as the benefits to the service provider of financing the underspend since the amount of the underspend can be put to some other income generating use during the period. Losses are similarly calculated as the financing cost to the service provider of the overspend.

3 The capex incentive guideline outlines how we may exclude capex from the RAB. AER, *Capex incentive guideline*, November 2013, pp. 13–20.

4 AER, *Capex incentive guideline*, November 2013, pp. 5–9.

5 AER, *Capex incentive guideline*, November 2013, p. 6.

6 AER, *Framework and approach paper, TransGrid*, January 2014, p. 24.

10.2 TransGrid's proposal

TransGrid proposed that we apply the CESS as set out in the capex incentives guideline, but that we exclude the following categories of expenditure from the CESS: [7]

- employee entitlements and specific allowances
- equity raising costs
- demand management innovation allowance, where expenditure under the allowance is classified as capital expenditure
- capital expenditure under the network capability incentive.

10.3 AER's assessment approach

In deciding whether to apply a CESS to a network service provider, and the nature and details of any CESS to apply to a service provider, we must:[8]

- make that decision in a manner that contributes to the capex incentive objective[9]
- take into account the CESS principles,[10] the capex objectives,[11] other incentive schemes, and, where relevant the opex objectives, as they apply to the particular service provider, and the circumstances of the service provider.

Broadly, the capex incentive objective is to ensure that only capex that meets the capex criteria enters the RAB used to set prices. Therefore, consumers only fund capex that is efficient and prudent.

10.3.1 Interrelationships

The CESS relates to the incentives TransGrid faces to incur efficient opex, conduct demand management and maintain or improve service levels.[12] We aim to incentivise network service providers to make efficient decisions on when and what type of expenditure to incur and to balance expenditure efficiencies with service quality. We discuss these interrelationships where relevant as part of our reasons below and in our capex attachment.

10.4 Reasons for draft decision

We are satisfied with TransGrid's proposal to apply the CESS as set out in the capex incentives guideline. This includes the exclusion provided for under the CESS of capex the service provider incurs in delivering a priority project approved under the network capability component of the transmission STPIS.

For capex, the sharing of underspends and overspends happens at the end of each regulatory control period when we update a network service provider's RAB to include new capex. If a network service provider spends less than its approved forecast during a period, it will benefit within that period.

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7 TransGrid, *Revenue proposal 2014/15 – 2018/19*, May 2014, p. 220. (TransGrid, *Revenue proposal*, May 2014).
8 NER, cl. 6A.6.5A.
9 NER, cl. 6A.5A(a); the capex criteria are set out in cl. 6A.6.7(c)(1)-(3) of the NER.
10 NER, cl. 6A.6.5A(c).
11 NER, cl. 6A.6.7(a).
12 Related schemes are the efficiency benefit sharing scheme (EBSS) for opex, and the service target performance incentive scheme (STPIS) for service levels.

Consumers benefit at the end of that period when the RAB is updated to include less capex compared to if the service provider had spent the full amount of the capex forecast.

Without a CESS the incentive for a service provider to spend less than its forecast capex declines throughout the period. This is because as the end of the regulatory control period approaches, the time available for the service provider to retain any savings gets shorter. So the earlier a service provider incurs a capex underspend in the regulatory period, the greater its reward will be. As a result, the incentive for a service provider to spend less than its capex forecast declines throughout the period. Because of this, a service provider may choose to spend capex earlier than necessary, spend on capex when it may otherwise have spent on opex, or spend less on capex at the expense of service quality—even if it may not be efficient to do so.

In developing the CESS we took into account the capex incentive objective, capex criteria, capex objectives, and the CESS principles. With the CESS, TransGrid will face the same reward and penalty in each year of a regulatory control period for capex underspends or overspends. The CESS will provide TransGrid with an ex ante incentive to spend only efficient capex. TransGrid will be rewarded through the CESS for making capex efficiency gains. Conversely, TransGrid will be penalised through the CESS for making capex efficiency losses. In this way, TransGrid will be more likely to incur only efficient capex when subject to a CESS, so any capex included in the RAB is more likely to reflect the capex criteria. In particular, if TransGrid is subject to the CESS, its capex is more likely to be efficient and to reflect the costs of a prudent service provider.

The Energy Users Association of Australia raised the issue of windfall gains under the CESS and the importance of forecasting a prudent and efficient amount of total capex.[13] We addressed each of these issues in our explanatory statements to the capex incentive guideline.[14]

When the CESS, EBSS and STPIS apply to TransGrid then incentives for opex, capex and service are relatively balanced. This encourages TransGrid to make efficient decisions on when and what type of expenditure to incur, and to balance expenditure efficiencies with service quality.

10.4.1 Exclusions

The way exclusions work with the CESS are as follows:[15]

- We consider a network service provider's allowance is our best estimate of efficient capex. In this way, if the service provider spends less than its capex allowance, we consider this is an efficiency gain for the purpose of applying the CESS. Conversely, if a service provider spends more than its allowance, this counts as an efficiency loss when applying the CESS.
- To calculate the annual efficiency gain/loss, we subtract the service provider's actual capex from its capex allowance in each year of the regulatory control period. The capex allowance is calculated as our approved allowance (as determined prior to the start of the regulatory control period), plus any adjustments we allow from pass-throughs, reopening of capex or contingent projects.

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13 Energy Users Association of Australia, *EUAA Submission on TransGrid's Revenue Proposal 2014–19*, p. 11.

14 AER, *Explanatory Statement, Draft Capital Expenditure Incentive Guideline for Electricity Network Service Providers, August 2013*; AER, *Explanatory Statement, Capital Expenditure Incentive Guideline for Electricity Network Service Providers, November 2013*.

15 AER, *Capex incentive guideline*, November 2013, p. 6.

- Actual capex in each regulatory year is inclusive of all capex, less any capex the service provider incurs in delivering a priority project approved under the network capability component of the STPIS for transmission network service providers.

In developing the CESS in consultation with stakeholders, we considered a range of capex categories that we could exclude from the CESS. The capex incentive guideline provides for a single exclusion related to the STPIS for transmission. Our reasoning for deciding to only allow this exclusion, and not any other categories of exclusions, is set out in the explanatory statement to the capex incentive guideline.

We will apply the CESS to TransGrid as set out in the capex incentive guideline, which includes the exclusion for the network capability incentive under the STPIS, but without any further exclusions as TransGrid proposed. For the reasons we set out below, we are not satisfied TransGrid's reasons for its other proposed exclusions justify those exclusions. We note that TransGrid did not raise new issues different to those we considered during our development of the capex incentive guideline.

Employee entitlements and specific allowances

TransGrid considers we should exclude employee entitlements and specific allowances from the CESS as they are uncontrollable costs and are forecast using exogenous methods.[16] We are not satisfied that capex on employee entitlements and specific allowances warrants different treatment under the CESS to other capex TransGrid incurs.

In our explanatory statement to the capex incentive guideline we explained that we did not consider there was a convincing reason to allow exclusions for capex resulting from uncontrollable events. When included in the CESS, the cost of any capex increase or decrease from an uncontrollable event is shared between network service providers and consumers in the same way as any other capex efficiency gain or loss. That is, under the CESS a service provider retains 30 per cent of a capex underspend or overspend, while consumers retain the remaining 70 per cent.

If we excluded capex resulting from uncontrollable events from the CESS, the associated capex underspend or overspend will still be shared between the service provider and consumers. However, when excluded from the CESS the relative sharing ratio between the service provider and consumers will depend on the year in which the overspend or underspend occurs, and will vary across the regulatory control period. We considered there was no reason why capex overspends or underspends resulting from uncontrollable events should be shared differently between service providers and consumers in each regulatory year, or shared differently to all other costs facing service providers.

Additionally, we considered the contingent projects and pass-through mechanisms meant a service provider could seek approval for additional material capex not included in its total forecast capex. If the associated capex did not meet the materiality thresholds for these mechanisms, we saw no reason why relatively immaterial capex should be excluded ex ante from the CESS.[17]

We acknowledged the CESS will reward or penalise service providers for some uncontrollable events. However, on the whole, the risk of uncontrollable events presents both upside and downside risk to service providers. Further, while we accept that some events may be uncontrollable, in most cases, a service provider can strive to control the resulting costs. Allowing exclusions would increase the risk that we would dilute a service provider's incentives to improve its capex efficiency.

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16 TransGrid, *Revenue proposal*, May 2014, p. 220.

17 AER, *Explanatory Statement, Capital Expenditure Incentive Guideline for Electricity Network Service Providers, November 2013*, pp. 38–39. (AER, *Explanatory Statement, Capex incentive guideline*, November 2013).

Finally, we do not consider we should exclude a category of expenditure from the CESS on the basis it is forecast differently to the rest of capex, or is forecast using exogenous methods. Capex is generally lumpy and non-recurrent, so we may employ different forecasting methods for different capex categories. However, we assess forecast capex at an overall rather than component level. The purpose of the CESS is to provide a continuous incentive to deliver efficient overall capex and to share the benefits of capex efficiency gains (or costs of capex efficiency losses) between the service provider and consumers.

Equity raising costs

TransGrid proposed we exclude equity raising costs from the CESS.[18]

We do not consider equity raising costs should be excluded ex ante from the CESS on the basis that we may exclude debt raising costs ex post from the EBSS. The reason for excluding debt raising costs from the EBSS does not correspond to excluding equity raising costs from the CESS.

We revised exclusions under the EBSS in developing version 2 of the scheme during the Better Regulation program. Exclusion of specific expenditure categories under the revised EBSS falls under the following clause: [19]

> Exclude categories of opex not forecast using a single year revealed cost approach for the regulatory control period n + 1 where doing so better achieves the requirements of clauses 6.5.8 and 6A.6.5 of the NER.

In our explanatory statement to the EBSS we used debt raising costs as an example of an expenditure category that could fall under this exclusion.[20] This exclusion is to address issues arising from the relationship between the revealed cost forecasting approach and the EBSS.[21] These reasons do not directly apply to the CESS. This is because the CESS is not predicated on addressing incentives resulting from a revealed cost forecasting approach. Rather, as outlined earlier, the CESS is designed to address the declining incentive to incur efficient capex over the regulatory control period.

Demand management

TransGrid proposed we exclude from the CESS its demand management innovation allowance, where expenditure under the allowance is classified as capital expenditure.[22]

For clarification, we note that the demand management innovation expenditure allowance TransGrid refers to in its proposal is different to the similarly named distribution network service provider demand management innovation allowance (DMIA). Under the demand management and embedded generation connection incentive scheme which applies to distribution only, distribution network service providers receive a DMIA. A distribution network service provider's DMIA is incorporated into its opex allowance each year as a 'use it or lose it' allowance.[23] This is different from what TransGrid refers to

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18 TransGrid, *Revenue proposal*, May 2014, p. 220; We also note that TransGrid is not expected to incur equity raising costs, that is, equity raising costs do not form part of our total forecast capex for TransGrid.

19 AER, *Efficiency Benefit Sharing Scheme for Electricity Network Service Providers*, November 2013, p. 7.

20 AER, *Explanatory Statement, Proposed Efficiency Benefit Sharing Scheme*, August 2013, pp. 27–29.

21 AER, *Explanatory Statement, Efficiency Benefit Sharing Scheme for Electricity Network Service Providers*, November 2013, pp. 12–14.

22 TransGrid, *Revenue proposal*, May 2014, p. 220.

23 The treatment of capex under the distribution DMIA is also unique. Capex payments made under the distribution DMIA should be treated as capital contributions under clause 6.21.1 of the rules and therefore not rolled into the RAB at the start of the subsequent regulatory control period. However our decision on the treatment of capex will only be made as part of the subsequent distribution determination.

as a demand management innovation allowance, which is a term it uses to describe part of the overall expenditure it is proposing.[24]

For the purposes of applying the CESS, we are not satisfied there is a reason we should treat capex that TransGrid spends on demand management differently to the rest of its capex.

Expenditure on demand management generally takes the form of opex rather than capex. Successful demand management should result in the network service provider spending less on capex than it otherwise would have. Both the CESS and EBSS will apply to TransGrid in the subsequent regulatory control period. As a result TransGrid has an incentive to implement a demand management solution if the increase in opex is less than the corresponding decrease in capex. In this way, it will receive a net reward for implementing demand management.[25] This is because the rewards and penalties under the EBSS and CESS are balanced and symmetric. In the past where the EBSS operated without a CESS, we excluded expenditure on demand management when calculating rewards and penalties under the scheme. This was because service providers may otherwise receive a penalty for increasing opex without a corresponding reward for decreasing capex.[26]

Network capability incentive capex

TransGrid proposed we exclude from the CESS capex incurred under the network capability incentive.[27] The guideline provides for the exclusion from the CESS of capex the service provider incurs in delivering a priority project approved under the network capability component of the transmission STPIS.[28]

The network capability component, which forms part of the transmission STPIS, has only been in place a short time, and is a specific component intended to promote investments that transmission network service providers historically have not carried out. We introduced it to provide an additional incentive for transmission network service providers to improve the capability of their existing transmission assets to resolve limitations or emerging network constraints.

In the explanatory statement to the capex incentive guideline we outlined that if a review of the transmission STPIS was likely in the short term we thought it would be preferable to deal with the potential interaction between the network capability component and the CESS through a review of the STPIS rather than an explicit exclusion under the CESS. However, a review of this scheme is unlikely in the short term as we only completed our review of the previous transmission STPIS in December 2012. On balance, we considered it was preferable not to substantially alter the incentives that were in place when we completed the recent review and accordingly excluded the network capability component from the CESS.[29]

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24 TransGrid, *Revenue proposal, Appendix R: Demand Management Innovation Strategy*, May 2014.

25 When the service provider spends more on opex it receives a 30 per cent penalty under the EBSS. However, when there is a corresponding decrease in capex the service provider receives a 30 per cent reward under the CESS. So where the decrease in capex is larger than the increase in opex the service provider receives a larger reward than penalty, a net reward.

26 Without a CESS the reward for capex declines over the regulatory period. If an increase in opex corresponded with a decrease in capex, the off-setting benefit of the decrease in capex depends on the year in which it occurs.

27 TransGrid, *Revenue proposal*, May 2014, p. 220.

28 AER, *Capex incentive guideline*, November 2013, p. 6.

29 AER, *Explanatory Statement, Capex incentive guideline*, November 2013, pp. 40–41.