



# **Framework and approach paper**

## **TransGrid**

**Transitional regulatory control period  
1 July 2014 to 30 June 2015**

**Subsequent regulatory control period  
commencing 1 July 2015**

January 2014



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## Shortened forms

Shortened Form	Extended Form
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
CESS	capital expenditure sharing scheme
capex	capital expenditure
current regulatory control period	1 July 2009 to 30 June 2014
EBSS	efficiency benefit sharing scheme
F&A	Framework and approach
MAR	maximum allowable revenue
MIC	market impact component
NCC	network capability component
NECF	National Energy Customer Framework
NEM	National Electricity Market
NER or the rules	National Electricity Rules
NCIPAP	network capability incentive parameter action plan
opex	operating expenditure
NSW	New South Wales
RAB	regulatory asset base
subsequent regulatory control period	1 July 2015 to 30 June 2019
TNSP	transmission network service provider
transitional regulatory control period	1 July 2014 to 30 June 2015

## About the framework and approach paper

The Australian Energy Regulator (AER) is the economic regulator for transmission and distribution services in Australia's national electricity market (NEM). We are an independent statutory authority, funded by the Australian Government. Our powers and functions are set out in the National Electricity Law (NEL) and National Electricity Rules (the rules or NER).

The framework and approach (F&A) paper is the first step in a process to determine efficient prices for electricity transmission services. The F&A determines the broad nature of any regulatory arrangements that will apply in this process. It also facilitates early public consultation and assists network service providers to prepare revenue proposals.

TransGrid is a licensed, regulated operator of the monopoly high voltage electricity transmission network in NSW. The network comprises the poles, wires and transformers used for transporting high voltage electricity from remote generators to population centres. TransGrid designs, constructs, operates and maintains the transmission network for NSW electricity consumers. The current five year NSW transmission regulatory control period concludes on 30 June 2014.

On 29 November 2013, the Australian Energy Market Commission (AEMC) published changes to the rules governing network regulation. The new rules require us to set out our approach to network regulation under the new framework in a series of guidelines. We commenced the Better Regulation program on 18 December 2012 to consult on our approach and published our final guidelines in November and December 2013. We will apply these guidelines in the upcoming revenue determination process.

The AEMC developed transitional rules to allow time for us to consult on the guidelines and to clarify how our new approach will apply to TransGrid. The transitional rules separate the 2014–19 period into two periods: a one year transitional regulatory control period commencing 1 July 2014 and ending 30 June 2015 (the transitional period) and a subsequent regulatory control period covering the remaining years which commences 1 July 2015 and ends 30 June 2019 (the subsequent period).

The transitional rules require us to publish an F&A paper for TransGrid by 31 January 2014. As required under the rules, this F&A paper sets out our proposed approach for the subsequent regulatory control period on the application of the following:

- service target performance incentive scheme
- operating expenditure efficiency benefit sharing scheme
- capital expenditure sharing scheme
- expenditure forecast assessment guidelines, and
- whether depreciation will be based on forecast or actual capital expenditure in updating the regulatory asset base.

It also allows for modifications to be made to incentive schemes and other matters applicable to the transitional regulatory control period.<sup>1</sup>

We have consulted where possible on the above matters including with TransGrid and other Transmission Network Service Providers (TNSPs) and more broadly with stakeholders when

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<sup>1</sup> The transitional regulatory control period is from 1 July 2014 to 30 June 2015

considering the application of the service target performance incentive scheme in the transitional regulatory control period. Following release of the F&A paper, TransGrid will submit its transitional revenue proposal in early 2014 and its subsequent proposal in May 2014, as set out below. Table 1 summarises transmission determination process as it relates to TransGrid.

**Table 1 TransGrid transmission determination process**

Step	Date
AER to publish F&A paper for TransGrid	Before 31 January 2014
TransGrid to submit transitional revenue proposal to AER	31 January 2014
AER to publish transmission determination for transitional regulatory control period	31 March 2014
TransGrid to submit (subsequent) revenue proposal to AER	31 May 2014
Submissions on (subsequent) revenue proposal close	August 2014 **
AER to publish draft transmission determination	November 2014 *
AER to hold public forum on draft transmission determination	December 2014 **
TransGrid to submit revised (subsequent) revenue proposal to AER	January 2015
Submissions on revised (subsequent) revenue proposal and draft determination close	February 2015
AER to publish transmission determination for subsequent regulatory control period	April 2015

Source: NER, chapter 6A, Part E

Notes: \* The NER does not provide specific timeframes in relation to publishing draft decisions. Accordingly, this date is indicative only.

\*\* The dates provided for submissions and the public forum are based on the AER receiving compliant proposals. These dates may alter if the AER receives non-compliant proposals.

## Part A: Overview

This F&A covers how we propose to apply a range of incentive schemes and other guidelines to TransGrid, as well as our approach to calculating depreciation.<sup>2</sup> It also specifies the modifications to be made to the incentive schemes and other matters applicable to the 1 July 2014 to 30 June 2015 transitional regulatory control period.<sup>3</sup>

The positions we set out in this F&A paper in relation to the subsequent regulatory control period are not binding on the AER or TransGrid.<sup>4</sup> This means it is open to the AER to change its position on matters set out in this F&A for the subsequent regulatory control period where there is reason to change, for example, because of changed circumstances. In relation to the transitional regulatory control period, the AEMC, in its final rule determination, stated that by the AER including in this F&A paper the schemes to apply in the transitional year, the TNSPs would be able to respond to the incentives created by the schemes in the transitional year.<sup>5</sup> The AEMC further stated:

The AER will not be able to go back and revisit the targets and values that it sets for the transitional year through the framework and approach paper.<sup>6</sup>

Incentive schemes encourage TNSPs to manage their businesses in a safe, reliable manner that benefits the long term interests of consumers. The schemes also provide TNSPs with incentives to spend efficiently and to meet or exceed service quality/reliability targets. In some instances, TNSPs may incur a financial penalty if they fail to meet set targets. The overall objectives of the schemes are to:

- encourage appropriate levels of service quality
- maintain network reliability as appropriate
- incentivise TNSPs to spend efficiently on capital expenditure (capex) and operating expenditure (opex)
- share efficiency gains and losses between TNSPs and consumers
- incentivise TNSPs to consider economically efficient alternatives to augmenting their networks.

We summarise the specific schemes below and provide an overview of our expenditure forecast assessment guideline and approach to calculating depreciation.

### Service target performance incentive scheme

Our national service target performance incentive scheme (STPIS) provides a financial incentive to TNSPs to maintain and improve service performance. The STPIS aims to safeguard service quality for customers that may otherwise be affected as TNSPs seek out cost efficiencies.

For the subsequent regulatory control period we propose to apply version 4 of the STPIS.

For the transitional regulatory control period we will:

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<sup>2</sup> NER, S6A.10.1A

<sup>3</sup> NER, clause 11.58.3(g)(1) and (2).

<sup>4</sup> NER, clause 6A.10.1A(f).

<sup>5</sup> AEMC, *Final Rule Determination, National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012*, 29 November 2012, p.246

<sup>6</sup> AEMC, *Final Rule Determination, National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012*, 29 November 2012, p.246



- continue to apply the service component of version 2 of the STPIS to TransGrid such that the existing values and parameters will apply in the transitional regulatory year.
- modify the STPIS to apply the Market Impact Component (MIC) and Network Capability Component (NCC) of version 4 of the STPIS to TransGrid.

### **Efficiency benefit sharing scheme**

The operating expenditure efficiency benefit sharing scheme (EBSS) aims to provide a continuous incentive for TNSPs to pursue efficiency improvements in opex, and provide for a fair sharing of these between TNSPs and network users. Consumers benefit from improved efficiencies through lower regulated prices in the future.

As part of our Better Regulation program we consulted on and published version 2 of the EBSS. We propose to apply this new EBSS to TransGrid in both the transitional period and subsequent period.

### **Capital expenditure sharing scheme**

The capital expenditure sharing scheme (CESS) provides financial rewards for TNSPs whose capex becomes more efficient and financial penalties for those that become less efficient. Consumers benefit from improved efficiency through lower regulated prices in the future.

As part of our Better Regulation program we consulted on and published version 1 of the capital expenditure incentive guideline for electricity network service providers (capex incentive guideline) which sets out the CESS. The transitional rules specify that no CESS applies to the TNSPs for the transitional period. We propose to apply the CESS to TransGrid in the subsequent regulatory period.

### **Expenditure forecast assessment guidelines**

As part of our Better Regulation program we consulted on and published our expenditure forecast assessment guideline for electricity transmission (expenditure assessment guideline). The expenditure assessment guideline is based on a nationally consistent reporting framework allowing us to compare the relative efficiencies of TNSPs and decide on efficient expenditure allowances. Our proposed approach is to apply the expenditure assessment guideline, including the information requirements to the TNSPs in the subsequent regulatory control period.

The guideline outlines a suite of assessment/analytical tools and techniques to assist our review of TransGrid's revenue proposal. We intend to apply the assessment techniques set out in the guideline relating to TNSPs.

### **Depreciation**

As part of the roll forward methodology, when a TNSPs regulatory asset base (RAB) is updated from forecast capex to actual capex at the end of a regulatory period, it is also adjusted for depreciation. The depreciation we use to roll forward the RAB can be based on either actual capex incurred during the regulatory control period, or the capex allowance forecast at the start of the regulatory control period. The choice of depreciation approach is one part of the overall capex incentive framework. The incentive based regulatory framework provides benefits to consumers from improved efficiencies through lower regulated prices.

We propose to use forecast depreciation to establish the RAB at the commencement of the 2019–24 regulatory control period for TransGrid.

### Small-scale incentive scheme

The rules provide that we may develop small-scale incentive schemes.<sup>7</sup> At this stage, we have not developed any such schemes to encourage more efficient investment or operation of networks, as may be envisaged under this provision of the NER. For this reason, we do not propose to apply a small-scale incentive scheme to TransGrid in the subsequent regulatory control period. Further, the transitional rules preclude the AER from applying any such schemes in the transitional regulatory control period.<sup>8</sup>

We note, however, changes to the STPIS (version 4) introduce new incentives for TNSPs to improve the capability of existing assets to provide greater value to generators and consumers and avoid the need for asset augmentation.

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<sup>7</sup> NER, clause 6A.7.5.

<sup>8</sup> NER, clause 11.58.3(a)(2).

## Part B: Attachments

# 1 Service target performance incentive scheme

This attachment sets out our proposed approach and reasons on how we intend to apply the STPIS to TransGrid in the transitional and subsequent regulatory control periods.

The AER creates, administers and maintains the STPIS in accordance with the requirements of the National Electricity Rules (NER). The purpose of the STPIS is to provide incentives to TNSPs to provide greater transmission network reliability when network users place greatest value on reliability, and improve and maintain the reliability of the elements of the transmission network most important to determining spot prices.<sup>9</sup> The STPIS can result in a maximum revenue increment or decrement of up to five per cent of the TNSP's MAR in a regulatory year.<sup>10</sup>

The STPIS works as part of the building block determination.<sup>11</sup> As part of the revenue determination, we make a decision on the application of the STPIS to a TNSP for the regulatory control period and the values associated with the applicable STPIS parameters.<sup>12</sup> In each regulatory year the TNSP's MAR is adjusted based on its performance against the STPIS parameters in the previous calendar year.

The STPIS is part of incentive based regulation we use across all energy networks we regulate. The CESS and EBSS provide incentives to incur efficient capex and opex. The incentives provided by the CESS and EBSS for cost efficiencies are balanced with the incentive to improve service standards provided by the STPIS.

The STPIS must:

- provide incentives for each TNSP to:<sup>13</sup>
  - provide greater reliability of the transmission system that is owned, controlled or operated by it at all times when transmission network users place greatest value on the reliability of the transmission system
  - improve and maintain the reliability of those elements of the transmission system that are most important to determining spot prices
- result in a potential adjustment to the revenue TNSP may earn, from the provision of prescribed transmission services, in each regulatory year in respect of which the STPIS applies
- ensure that the maximum revenue increment or decrement as a result of the operation of the STPIS will fall within a range that is between 1 per cent and 5 per cent of the MAR for the relevant regulatory year
- take into account the regulatory obligations or requirements with which TNSPs must comply
- take into account any other incentives provided for in the rules that TNSPs have to minimise capital or operating expenditure; and

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<sup>9</sup> NER, clause 6A.7.4(b)(1).

<sup>10</sup> NER, clause 6A.7.4(b)(3).

<sup>11</sup> NER, clause 6A.5.4(a)(5) and (b)(5).

<sup>12</sup> NER, clause 6A.4.2(5); 6A.14.1(1)(iii).

<sup>13</sup> NER clause 6A.7.4(b).

- take into account the age and ratings of the assets comprising the relevant transmission system.

Version 2 of the STPIS, which currently applies to TransGrid, was superseded by version 3 which was published on 31 March 2011. Version 3 of the STPIS did not apply as TransGrid was mid-way through its 2009–2014 regulatory control period. Since that time, we have conducted a comprehensive review of the STPIS for TNSPs, publishing our final decision, version 4, on 20 December 2012.

In developing version 4 of the STPIS we had regard to the requirements of the rules, as set out in our final decision on the STPIS published in December 2012.<sup>14</sup> Under an incentive based regulation framework, TNSPs have an incentive to reduce costs. Cost reductions are beneficial to TNSP’s and customers where service performance is maintained or improved. However, cost efficiencies achieved at the expense of service performance standards are not desirable. Version 4 of the STPIS seeks to ensure that increased financial efficiency does not result in deterioration of service performance for customers.

## 1.1 Proposed approach

We propose to apply version 4 of the STPIS to TransGrid in the subsequent regulatory control period.

As part of the transitional arrangements, the NER provides that the STPIS that applied in the current regulatory control period will continue to apply for the transitional year subject to any modifications set out in the F&A paper. These modifications can include non-application of the relevant scheme.<sup>15</sup>

Version 2 of the STPIS applies to TransGrid for its 2009–2014 regulatory control period.<sup>16</sup> Version 2 consists of the service component and the MIC. In the transitional regulatory control period, we will continue to apply TransGrid’s existing version 2 service component,<sup>17</sup> but we will modify the scheme to, in effect, apply the NCC and MIC of version 4 of the STPIS.

Table 2 sets out our proposed approach to the application of the STPIS to TransGrid.

**Table 2 Proposed application of components of STPIS to TransGrid for transitional and subsequent regulatory control periods**

Component	Transitional period	Subsequent period
Service component	current version 2	version 4
MIC	based on version 4	version 4
NCC	based on version 4	version 4

<sup>14</sup> AER, *Final decision, TNSP service target performance incentive scheme*, version 4, 19 December 2012.

<sup>15</sup> NER, clause 11.58.3(a)(3).

<sup>16</sup> AER, *STPIS*, version 2, 1 March 2008

<sup>17</sup> As it applies under version 2.

In summary:

- For the subsequent regulatory control period we will apply version 4 of the STPIS as follows.
  - The parameters for each service component for TransGrid and the maximum revenue increment or decrement that TransGrid can receive for a given level of performance will be those prescribed in version 4 of the scheme. The applicable parameter values will be set out in TransGrid's transmission determination.
  - The MIC annual performance target will be the rolling average of performance history over the three previous calendar years. Actual performance will be measured as a rolling average of the most recent two years of actual performance.<sup>18</sup>
- For the transitional regulatory control period we will continue to apply version 2 of the STPIS modified as follows:
  - We will continue to apply the values for the version 2 service component parameters in TransGrid's 2009–14 revenue determination in the transitional regulatory control period.
  - We will modify the application of version 2 of the STPIS and will in effect apply the MIC and NCC of version 4 of the STPIS.
- The maximum allowed revenue that TransGrid can earn in each regulatory year will be adjusted according to its performance against the values included in its transmission determination, as assessed by us in accordance with the scheme.

## 1.2 Reasons for proposed approach

In general we consider the amendments to the STPIS as incorporated in version 4 improve the scheme's incentives for TNSPs to:

- provide greater reliability of the transmission system that is owned, controlled or operated by it at all times when network users place greatest value on the reliability of the transmission system; and
- improve and maintain the reliability of those elements of the transmission system that are most important to determining spot prices.

For these reasons, we consider that version 4 of the STPIS should apply to TransGrid in the subsequent regulatory period and furthermore should be brought forward by the early application of version 4 of the STPIS in the transitional regulatory control period where it is practicable to do so. This will benefit both transmission network users and consumers of electricity, in line with the NEO.

This reflects the position we took in our final position paper on the early application of the STPIS.<sup>19</sup> In that paper, we considered whether the F&A should modify the application of the STPIS in the transitional year for TransGrid and Transend to incorporate the recent amendments made in

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<sup>18</sup> AER, *Electricity TNSP, STPIS*, December 2012, clause 4.2(d) and Appendix F.

<sup>19</sup> AER, *Draft decision, early application of version 4 of the STPIS*, August 2013, p. 13. AER, *Final position paper, early application of version 4 of the STPIS*, 4 December 2013, p. 10.

version 4.<sup>20</sup> In our position paper we considered it would be a significant task for TNSPs and the AER to set targets, caps and collars for the service component parameters of version 4 for the transitional regulatory control period.<sup>21</sup> We also considered the costs of transitioning to the new version of the scheme differ between the service component, the MIC and the NCC.<sup>22</sup> Consequently, in the transitional regulatory control period, we propose to continue to apply version 2 of the STPIS to TransGrid in that the service component will apply unchanged. However, we will modify the application of the STPIS so as to apply the MIC and NCC of version 4.

### 1.2.1 Reasons for applying the STPIS in the subsequent period

In this section we discuss each component of version 4 of the STPIS, and how each component will apply to TransGrid in the subsequent regulatory control period.

#### Service component

The service component of the STPIS incentivises TNSPs to maintain and improve network availability and reliability by measuring performance against certain parameters. Under this component of the scheme, a TNSP can receive a revenue increment or decrement of up to one per cent of its MAR for the regulatory year.

A TNSP receives a financial incentive (reward) in proportion to the extent its annual performance exceeds its performance target (calculated as the s-factor). If the TNSP fails to meet its performance target, it incurs a financial penalty in proportion to the extent its annual performance does not meet the performance target.

Version 4 of the STPIS amended the service component parameters to focus more on unplanned outages, including a new parameter focusing on proper operation of equipment. Performance against these parameters can be used as a lead indicator of a deterioration of network reliability.<sup>23</sup>

The scheme contains definitions for each parameter. The definitions specify the applicable sub-parameters, unit of measure, source of performance data, the formula for measuring performance, definitions of relevant terms, inclusions (which specify particular equipment or events which are to be measured) and exclusions.

For the subsequent regulatory control period we will assess whether TransGrid's proposed performance targets, caps, collars and weightings comply with the version 4 STPIS requirements for.<sup>24</sup>

- average circuit outage rate, with six sub-parameters:
  - line outage – fault
  - transformer outage – fault
  - reactive plant – fault
  - line outage – forced outage

<sup>20</sup> On 29 May 2013, we received a formal application from ElectraNet seeking early application of the NCC component of the STPIS in its current regulatory control period. Alongside our consideration of ElectraNet's proposal, we considered it appropriate to develop a preliminary position on the application of the STPIS in TransGrid and Transend's transitional year. The resulting paper was the *Final position paper, early application of version 4 of the STPIS*, published on 4 December 2013.

<sup>21</sup> AER, *Draft decision, early application of version 4 of the STPIS*, August 2013, p. 26.

<sup>22</sup> AER, *Draft decision, early application of version 4 of the STPIS*, August 2013, p. 9.

<sup>23</sup> AER, *Final decision, TNSP service target performance incentive scheme, version 4*, 19 December 2012, p. 13.

<sup>24</sup> AER, *Electricity TNSP, STPIS, version 4*, December 2012, clause 3.1.

- transformer outage – forced outage
- reactive plant – forced outage
- loss of supply event frequency, with two loss of supply event sub-parameters:
  - frequency of events when loss of supply exceeds 0.3 system minutes
  - frequency of events when loss of supply exceeds 0.05 system minutes
- average outage duration
- proper operation of equipment, with three sub-parameters:
  - failure of protection system
  - material failure of supervisory control and data acquisition (SCADA) system
  - incorrect operational isolation of primary or secondary equipment.

We must accept TransGrid's proposed parameter values if they comply with the requirements of the STPIS.<sup>25</sup> We may reject them if they are inconsistent with the objectives of the STPIS.<sup>26</sup>

### Market impact component

The market impact component (MIC) provides financial rewards to TNSPs for improvements in their performance measured against a performance target. A TNSP may earn an additional revenue increment of up to 2 per cent of its MAR. Unlike the service and network capability components, the market impact component has no financial penalty.

The MIC provides an incentive to TNSPs to minimise the impact of transmission outages that can affect the NEM spot price. It measures performance against the market impact parameter, which is number of dispatch intervals where an outage on the TNSP's network results in a network outage constraint with a marginal value greater than \$10/MWh.<sup>27</sup>

In version 4 of the STPIS, we made significant amendments to the way the performance target and actual performance were determined. In version 4, the annual performance target is the rolling average of performance history over the three previous calendar years. Thus, unlike the MIC of version 2, the annual performance target is not fixed at the time of the revenue determination but is adjusted each year based on the most recent three years of performance. Actual performance is measured annually and is the rolling average of performance of the two most recent calendar years.

A rolling target and actual performance measure provides a tighter incentive to ensure outages on prescribed assets have limited impact on wholesale spot market outcomes. Further, a rolling target ensures the target is relevant to the TNSP's current maintenance and construction activities and limits the incentive for TNSPs to engage in strategic behaviour to influence the outcomes of the scheme.

Similarly, in version 4, exclusion clause 3 strengthens the incentive for TNSPs to influence the timing of third party planned outages to reduce the likelihood of wholesale market impacts.<sup>28</sup>

<sup>25</sup> AER, *Electricity TNSP, STPIS*, version 4, December 2012, clause 3.2(a).

<sup>26</sup> AER, *Electricity TNSP, STPIS*, version 4, December 2012, clause 3.2(m).

<sup>27</sup> AER, *Electricity TNSP, STPIS*, version 4, December 2012, appendix C

<sup>28</sup> AER. *Draft decision – early application of version 4 of the STPIS*, August 2013, p.22-23.



Exclusion clause 3 allows TNSP's to exclude the impact of outages from the market impact parameter if they are caused by a third party system. Third party outages are outages taken or caused by third party owners of non-prescribed assets that are connected to a TNSP's prescribed network. In version 4, planned outages caused by a third party are no longer excluded.

Non-prescribed assets owned by a third party connected to a TNSP's prescribed network are usually governed by connection agreements between the parties. When undertaking maintenance of their non-prescribed asset, third parties frequently request connected prescribed assets be taken out of service. We consider that, where third parties request a TNSP to take a planned outage of its prescribed asset associated with the party's non-prescribed asset, the TNSP has significant influence over the timing of that outage. Accordingly, the MIC operates to ensure these outages occur during periods when there is less likely to be a market impact.

### Network capability component

The network capability component (NCC) was introduced in version 4 of the STPIS. It promotes the NEO by incentivising TNSPs to identify and implement low cost incremental changes to their networks that deliver substantial benefits to consumers. It does this by requiring TNSPs to reveal their existing network capability and identify low cost projects that will:

- improve network capability when most valued by customers or
- improve wholesale market outcomes at least cost.

We recognise TNSPs are best placed to identify limitations in their networks and to implement low cost solutions to ameliorate those limitations. Prior to the introduction of the NCC, TNSPs were not incentivised to engage in this type of behaviour.

Improved wholesale market outcomes should ultimately be passed onto consumers through reduced wholesale energy costs. The NCC also promotes reliability, safety and security priorities in the NEO by incentivising increases in the capability of existing assets in the network when most needed while maintaining adequate levels of reliability.<sup>29</sup>

As part of its revenue proposal, TransGrid must submit a network capability incentive parameter action plan (NCIPAP).<sup>30</sup> The NCIPAP must identify the key network capability limitations on each transmission circuit or load injection point on the TNSPs network.<sup>31</sup> It must also include a ranked list of priority projects proposed by TransGrid to improve the network capability for some of the circuits or injection points.<sup>32</sup> These priority projects must be shown to result in material benefits for customers or on wholesale market outcomes. TransGrid must consult AEMO in developing the NCIPAP. AEMO's role includes prioritising and ranking the projects that will deliver best value for money for consumers. The total annual average expenditure of the proposed priority projects may not exceed 1 per cent of the average MAR proposed by the TNSP in its revenue proposal.

We must approve a priority project if it is consistent with the NCC requirements of the STPIS.<sup>33</sup> Once we have approved a priority project, we may only amend the priority project improvement targets proposed by TransGrid in limited circumstances.<sup>34</sup>

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<sup>29</sup> NER, clause 6A.7.4.

<sup>30</sup> AER, *Final – Service Target Performance Incentive Scheme*, December 2012, clauses 5.2(b).

<sup>31</sup> AER, *Final – Service Target Performance Incentive Scheme*, December 2012, clauses 5.2(b)(1).

<sup>32</sup> AER, *Final – Service Target Performance Incentive Scheme*, December 2012, clauses 5.2(b)(2).

<sup>33</sup> AER, *Final – Service Target Performance Incentive Scheme*, December 2012, clause 5.2(k).

In each annual STPIS compliance review, TransGrid is required to report on the steps it has taken towards reaching the priority project improvement target against each project in the NCIPAP approved by us for each year or part year of the regulatory control period. Under the NCC, TransGrid receives a financial payment equal to 1.5 per cent of its MAR as follows:

- for each regulatory year, except the final year in the subsequent regulatory control period, TransGrid will receive an incentive payment equal to 1.5 per cent of its MAR.
- In the final year, TransGrid will receive an incentive payment of 1.5 per cent of its MAR but only if it achieves its priority project improvement target for each priority project.

In the final year, we will assess whether TransGrid has achieved each priority project target for each priority project. If it has not then we may reduce the incentive payment in the final year. We can reduce the final payment to – 2 per cent of MAR if TransGrid does not achieve any of its priority project improvement targets.<sup>35</sup>

## 1.2.2 Reasons for applying the STPIS in the transitional period

Under the transitional rules we may:<sup>36</sup>

- apply the current STPIS in the transitional period
- apply the current STPIS with modifications
- not apply the STPIS.

In explaining the transitional rules, the AEMC stated, “[t]he proposed varied STPIS for transmission... can apply in some form for the transitional year.”<sup>37</sup> Our ‘proposed varied STPIS for transmission’ is the new version 4 of the STPIS.

In this section we discuss how in the transitional period we propose to apply the current STPIS (version 2), modified to, in effect, apply the MIC and the NCC of version 4 of the STPIS.

### Service component

We will continue to apply the current STPIS including the service component of version 2 to TransGrid in the transitional regulatory control period. We consider it is not practicable to amend the service component to apply the new service component in version 4 of the STPIS in the transitional period.

Due to the nature of the changes to the service component in version 4, TNSPs will be required to re-categorise historic data on performance across each parameter in order to set targets. TNSPs will also have to assess whether the standardisation of inclusions, exclusions and sub-parameters affects their historic performance for the other parameters. Accordingly, we consider the setting of revised targets, caps and collars would require significant consideration by TransGrid and the AER, and is best undertaken during the revenue determination process.

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<sup>34</sup> We amend the priority project improvement targets proposed by TransGrid only if either TransGrid agrees to the amendment or AEMO considers the amendment will result in a material benefit and can be achieved by TransGrid in the subsequent regulatory control period

<sup>35</sup> AER, *Final – Service Target Performance Incentive Scheme*, December 2012, clause 5.2(k)

<sup>36</sup> NER, clause 11.58.3(a)(3).

<sup>37</sup> AEMC, *Final Rule Determination, National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012*, 29 November 2012, p. 246.

The service component of the STPIS incentivises TNSPs to maintain and improve network availability and reliability by measuring performance against certain parameters. In version 2 of the STPIS, service performance is measured against the following three parameters:

- circuit availability
- loss of supply event frequency
- average outage duration.

As the service component of the current scheme will continue to apply during the transitional regulatory control period the current parameter targets, caps and collars will also continue to apply. We do not propose to reassess these values.

### **Market impact component**

In modifying the current STPIS, we will in effect apply the MIC of version 4 of the STPIS to TransGrid in the transitional period.

In version 4 of the STPIS, we amended the performance target and the measure of actual performance in the MIC as follows:

- the performance target is set as a three year rolling target of historic performance
- actual performance is measured as a two year rolling average.

We consider a transition to version 4 of the MIC is not onerous and will bring forward the benefits associated with version 4 of the STPIS. We consider the transition is not onerous because the performance targets update automatically based on past performance and we confirm the targets for a given calendar year following our annual STPIS compliance review for the previous calendar year. The application of the MIC of version 4 in the transitional year would bring forward tighter incentives for transmission businesses to ensure outages on their prescribed assets have a limited impact on the wholesale market. This benefits market participants and consumers through reduced spot price volatility. A rolling three year performance target also ensures the benchmark will be more relevant to TransGrid's current maintenance and construction activities.<sup>38</sup>

We also consider the amendment to exclusion clause 3 will not materially disadvantage TransGrid as we will revise its historical performance to incorporate previously excluded planned third party outages to set a higher target.

### **Network capability component**

In modifying the current STPIS, we will in effect apply the NCC of version 4 of the STPIS to TransGrid in the transitional year.

Our approach reflects our position paper.<sup>39</sup> We consider we should promote the early application of the NCC to TNSPs where it is practical to do so. Our decision was informed primarily by whether the early application of the NCC would contribute to the achievement of the national electricity objective (NEO).<sup>40</sup>

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<sup>38</sup> AER, *Draft decision – early application of version 4 of the STPIS*, August 2013, p.22-23.

<sup>39</sup> AER, *Final position paper, early application of version 4 of the STPIS*, 4 December 2013, p. 16.

<sup>40</sup> NEL, clause 7.

In general, the NCC promotes economic efficiency by incentivising TNSPs to improve, at least cost:

- network capability valued by customers
- wholesale market outcomes.

Improved wholesale market outcomes should ultimately be passed onto consumers. The early application of the NCC to TransGrid brings forward these benefits to customers on TransGrid's network.

In making a decision to apply the STPIS in the transitional (placeholder) determination, we will consider TransGrid's proposed NCIPAP submitted as part of its revenue proposal. If approved as part of the placeholder determination, this NCIPAP will apply for the transitional year.

As set out in section 1.2.1, we propose to apply version 4 of the STPIS in the subsequent regulatory period. If the STPIS is to have effect in the subsequent regulatory control period, we must give effect to it in our full determination. Accordingly, TransGrid will need to submit a NCIPAP in the STPIS component of its revenue proposal for the subsequent regulatory control period.<sup>41</sup>

Any NCIPAP approved by us as part of the placeholder determination is likely to form the basis of TransGrid's proposed NCIPAP for the subsequent regulatory control period. However, for the purposes of our full determination, we must assess the NCIPAP proposed by TransGrid for the subsequent regulatory control period:

- in accordance with the scheme requirements; and
- to account for:
  - differences between the estimated proposed MAR submitted for the transitional year (placeholder) determination and the proposed MAR submitted for the full revenue determination, and/or
  - the circumstances where 1 per cent of the approved MAR is greater than 1.5 per cent of the proposed MAR.

In our preliminary position paper, we stated TransGrid should include additional projects in its transitional proposal that could be included in the NCIPAP should we need to do so to account for any changes in the proposed MAR. We propose to draw from these additional projects when assessing the proposed NCIPAP when we make our full determination.<sup>42</sup> For the additional projects, TransGrid must consult with AEMO in the same way it is required to consult with AEMO for priority projects under clause 5.2(h) of the STPIS.

Although not stated in our position paper, it is also open to TransGrid to include in its proposal for the subsequent regulatory control period, further additional projects which have not been included in the NCIPAP submitted for the transitional year.<sup>43</sup>

The proposed assessment and consultation timeframes are outlined below:

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<sup>41</sup> AER, STPIS, version, clause 4, 5.2(b)

<sup>42</sup> If TransGrid's proposed MAR in its subsequent revenue proposal is lower (higher) than the proposed MAR in its transitional revenue proposal then this may result in projects being removed (added) from the NCIPAP

<sup>43</sup> Additional projects are still subject to consultations with AEMO and the other scheme requirements.

- TransGrid to submit as part of its transitional (placeholder) revenue proposal, due 31 January 2014, a NCIPAP for the 2014–2019 period (which covers the 2014-15 transitional regulatory control period and the 2015-19 subsequent regulatory control period) for assessment by the AER.<sup>44</sup> As part of its NCIPAP submission, TransGrid must submit an estimated proposed MAR to be used to assess the proposed priority projects in its proposed NCIPAP.
- A consultation period of around 15 business days for submissions on TransGrid's transitional revenue proposal from interested parties will apply in accordance with the rules.
- AER decision on the NCIPAP as part of the transitional (placeholder) determination (published by 31 March 2014) for the transitional regulatory control period for TransGrid.

AER decision on the NCIPAP for the 2014–2019 revenue determination (published in April 2015). The 2014–2019 revenue proposal for TransGrid is due in May 2014 and we must complete our final determination on the revenue proposal by April 2015.

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<sup>44</sup> Transend's proposal should include a list of priority projects approved by AEMO that can be included in the NCIPAP.

## 2 Efficiency benefit sharing scheme

The efficiency benefit sharing scheme (EBSS) aims to provide a continuous incentive for TNSPs to pursue efficiency improvements in opex, and provide for a fair sharing of these between TNSPs and network users. Consumers benefit from improved efficiencies through lower regulated prices in the future.

This attachment sets out our proposed approach and reasons on how we intend to apply the EBSS to TransGrid in the transitional and subsequent regulatory control periods.

### 2.1 Proposed approach

We propose to apply to TransGrid:

- The current EBSS<sup>45</sup> in the 2014–15 transitional regulatory control period, with modifications to align it with version 2 of the EBSS<sup>46</sup> (the new EBSS). In summary, this will include:
  - the formulae for calculating efficiency gains and losses
  - our approach to adjustments to forecast or actual opex when calculating carryover amounts
  - our approach to determining the carryover period.
- The new EBSS in the 2015–19 subsequent regulatory control period.

The transitional rules set out that the EBSS that applied to TransGrid under its current transmission determination for its current regulatory control period, applies to it for the transitional period subject to any modifications set out in the F&A paper. These modifications can include non-application of the relevant scheme.<sup>47</sup>

The EBSS must provide for a fair sharing between TNSPs and network users of opex efficiency gains and efficiency losses.<sup>48</sup> We must also have regard to the following factors in developing and implementing the EBSS:<sup>49</sup>

- the need to ensure that benefits to electricity consumers likely to result from the scheme are sufficient to warrant any reward or penalty under the scheme
- the need to provide service providers with a continuous incentive to reduce opex
- the desirability of both rewarding service providers for efficiency gains and penalising service providers for efficiency losses
- any incentives that service providers may have to capitalise expenditure
- the possible effects of the scheme on incentives for the implementation of non-network alternatives.

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<sup>45</sup> AER, *Electricity transmission network service providers, efficiency benefit sharing scheme*, September 2007.

<sup>46</sup> AER, *Efficiency benefit sharing scheme*, 29 November 2013.

<sup>47</sup> NER, clause 11.58.3(a)(3).

<sup>48</sup> NER, clause 6A.6.5(a).

<sup>49</sup> NER, clause 6A.6.5(b).

## 2.2 Reasons for proposed approach

The current EBSS applies to TransGrid in the current regulatory control period.<sup>50</sup> As part of our Better Regulation program we consulted on and published the new EBSS, taking into account the requirements of the rules.

The new EBSS retains the same form as the current EBSS, and merges the distribution and transmission schemes. Changes in the new EBSS relate to the criteria for adjustments and exclusions under the scheme.<sup>51</sup> We may also exclude categories of opex not forecast using a single year revealed cost approach from the scheme on an ex post basis if doing so better achieves the requirements of the rules. We also amended the scheme to provide flexibility to account for any adjustments made to base year opex to remove the impacts of one-off factors. The new EBSS also clarifies how we will determine the carryover period. These revisions affect how we will calculate carryover amounts for future regulatory control periods.<sup>52</sup>

In this attachment we set out why we propose to apply the new EBSS to the subsequent period. This informs our reasons for proposing to apply the new EBSS in the transitional period.

### 2.2.1 Reasons for applying the EBSS in the subsequent period

We propose to apply the new EBSS to the subsequent period. In developing the new EBSS we had regard to the requirements under the rules, as set out in the scheme and accompanying explanatory statement.<sup>53</sup> This reasoning extends to the factors we must have regard to in implementing the scheme.

The EBSS must provide for a fair sharing of efficiency gains and losses.<sup>54</sup> Under the scheme, TNSPs and consumers receive a benefit where a TNSP reduces its costs during a regulatory control period and both bear some of any increase in costs.

Under the EBSS, positive and negative carryovers reward and penalise TNSPs for efficiency gains and losses respectively.<sup>55</sup> The EBSS provides a continuous incentive for TNSPs to achieve opex efficiencies throughout the subsequent period. This is because the TNSP receives carryover payments so it retains any efficiency gains or losses it makes within the regulatory period for the length of the carryover period. This is regardless of the year in which it makes the gain or loss.<sup>56</sup>

This continuous incentive to improve efficiency encourages efficient and timely opex throughout the regulatory control period, and reduces the incentive for a TNSP to inflate opex in the expected base year. This provides an incentive for TNSPs to reveal their efficient opex which, in turn, allows us to better determine efficient opex forecasts for future regulatory control periods.

The EBSS also leads to a fair sharing of efficiency gains and losses between TNSPs and consumers. For instance the combined effect of our forecasting approach and the EBSS is that opex efficiency gains or losses are shared approximately 30:70 between TNSPs and consumers.

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<sup>50</sup> AER, *Electricity transmission network service providers, efficiency benefit sharing scheme*, September 2007.

<sup>51</sup> We will no longer allow for specific exclusions such as uncontrollable opex or for changes in opex due to unexpected increases or decreases in network growth.

<sup>52</sup> AER, *Efficiency benefit sharing scheme*, 29 November 2013.

<sup>53</sup> AER, *Efficiency benefit sharing scheme*, 29 November 2013;

AER, *Explanatory statement, Efficiency benefit sharing scheme for electricity network service providers*, 29 November 2013.

<sup>54</sup> NER, clause 6A.6.5(a).

<sup>55</sup> NER, clauses 6A.6.5(b) and 6A.6.5(a).

<sup>56</sup> NER, clause 6A.6.5(b)(1).

This means for a one dollar efficiency saving in opex the TNSP keeps 30 cents of the benefit while consumers keep 70 cents of the benefit.

Example 2.1 shows how the EBSS operates. It illustrates how the benefits of a permanent efficiency improvement are shared approximately 30:70 between a network service provider and consumers.

### **Example 2.1 How the EBSS operates**

Assume that in the first regulatory period, a network service provider's forecast opex is \$100 million per annum (p.a.).

Assume that during this period the service provider delivers opex equal to the forecast for the first three years. Then, in the fourth year of the regulatory period, the service provider implements a more efficient business practice for maintaining its assets. As a result, the service provider will be able to deliver opex at \$95 million p.a. for the foreseeable future.

This efficiency improvement affects regulated revenues in two ways:

1. Through forecast opex. If we use the penultimate year of the regulatory period to forecast opex in the second regulatory period, the new forecast will be \$95 million p.a. If the efficiency improvement is permanent, all else being equal, forecast opex will also be expected to be \$95 million p.a. in future regulatory periods.
2. Through EBSS carryover amounts. The service provider receives additional carryover amounts so that it receives exactly six years of benefits from an efficiency improvement. Because the service provider has made an efficiency improvement of \$5 million p.a. in Year 4, to ensure it receives exactly six years of benefits, it will receive annual EBSS carryover amounts of \$5 million in the first four years (Years 6 to 9) of the second regulatory period.

As a result of these effects, the service provider will benefit from the efficiency improvement in Years 4 to 9. This is because the annual amount the service provider receives through the forecast opex and EBSS building blocks (\$100 million) is more than what it pays for opex (\$95 million) in each of these years.

Consumers benefit from Year 10 onwards after the EBSS carryover period has expired. This is because what consumers pay through the forecast opex and EBSS building blocks (\$95 million) is lower from Year 10 onwards.

Table 2 provides a more detailed illustration of how the benefits are shared between service providers and consumers over time.



**(Example 2.1 continued)**

**Table 2 Example of how the EBSS operates**

Year	Regulatory period 1					Regulatory period 2					Future
	1	2	3	4	5	6	7	8	9	10	
Forecast ( $F_t$ )	100	100	100	100	100	95	95	95	95	95	95 p.a.
Actual ( $A_t$ )	100	100	100	95	95	95	95	95	95	95	95 p.a.
Underspend ( $F_t - A_t = U_t$ )	0	0	0	5	5	0	0	0	0	0	0 p.a.
Incremental efficiency gain ( $I_t = U_t - U_{t-1}$ )	0	0	0	5	0	0*	0	0	0	0	0 p.a.
Carryover ( $I_1$ )		0	0	0	0	0					
Carryover ( $I_2$ )			0	0	0	0					
Carryover ( $I_3$ )				0	0	0	0				
Carryover ( $I_4$ )					5	5	5	5	5		
Carryover ( $I_5$ )						0	0	0	0	0	
<b>Carryover amount (<math>C_t</math>)</b>						<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0 p.a.</b>
Benefits to NSP ( $F_t - A_t + C_t$ )	0	0	0	5	5	5	5	5	5	0	0 p.a.
Benefits to consumers ( $F_1 - (F_t + C_t)$ )	0	0	0	0	0	0	0	0	0	5	5 p.a.
Discounted benefits to NSP**	0	0	0	5	4.7	4.5	4.2	4.0	3.7	0	0
Discounted benefits to consumers**	0	0	0	0	0	0	0	0	0	3.5	58.8***

Notes: \* At the time of forecasting opex for the second regulatory period we don't know actual opex for year 5. Consequently this is not reflected in forecast opex for the second period. That means an underspend in year 6 will reflect any efficiency gains made in both year 5 and year 6. To ensure the carryover rewards for year 6 only reflect incremental efficiency gains for that year we subtract the incremental efficiency gain in year 5 from the total underspend. In the example above,  $I_6 = U_6 - (U_5 - U_4)$ .

\*\* Assumes a real discount rate of 6 per cent.

\*\*\* As a result of the efficiency improvement, forecast opex is \$5 million p.a. lower in nominal terms. The estimate of \$58.7m is the net present value of \$5 million p.a. delivered to consumers annually from year 11 onwards.

Table 3 sums the discounted benefits to NSPs and consumers from the bottom two rows of Table 2. As illustrated below, the benefits of the efficiency improvement are shared approximately 30:70 in perpetuity between the service provider and consumers.

**Table 3 Sharing of efficiency gains—Year 4 forecasting approach, with EBSS**

	NPV of benefits of efficiency improvement <sup>1</sup>	Percentage of total benefits
Benefits to service provider	\$26.1 million	30 per cent
Benefits to consumers	\$62.3 million	70 per cent
Total	\$88.3 million	100 per cent

In implementing the EBSS we must also have regard to any incentives TNSPs may have to capitalise expenditure.<sup>57</sup> Where opex incentives are balanced with capex incentives, a TNSP does not have an incentive to favour opex over capex, or vice-versa. The CESS is a symmetric capex scheme with a 30 per cent incentive power. This is consistent with the incentive power for opex when we use an unadjusted base year approach in combination with an EBSS. During the subsequent period when the CESS and EBSS are applied, incentives will be relatively balanced, and TNSPs should not have an incentive to favour opex over capex or vice versa. The CESS is discussed further in attachment 3.

We must also consider the possible effects of implementing the EBSS on incentives for non-network alternatives.<sup>58</sup>

- Expenditure on non-network alternatives generally takes the form of opex rather than capex. Successful non-network alternatives should result in the TNSP spending less on capex than it otherwise would have.
- It is proposed both the CESS and EBSS will apply in the subsequent period. As a result a TNSP has an incentive to implement a non-network alternative if the increase in opex is less than the corresponding decrease in capex. In this way, the TNSP will receive a net reward for implementing the non-network alternative.<sup>59</sup> 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 non-network alternatives when calculating rewards and penalties under the scheme. This was because TNSPs may otherwise receive a penalty for increasing opex without a corresponding reward for decreasing capex.<sup>60</sup>

## 2.2.2 Reasons for applying the EBSS in the transitional period

Under the transitional rules we may:<sup>61</sup>

- apply the current EBSS
- apply the current EBSS with modifications
- not apply the EBSS.

We propose to apply the current EBSS, modified to align it with the new EBSS, in the transitional period. This means that we are effectively applying the new scheme to the transitional year. We have taken this approach because:

- We consider it is preferable to apply the new scheme consistently to all network service providers as soon as practicable. The new EBSS and accompanying explanatory statement were published on 29 November 2013.<sup>62</sup> In developing the new scheme we had regard to the criteria in the rules and took into account stakeholder views. We developed the new EBSS for all network service providers with the intent of applying a nationally consistent approach to incentives for opex performance.

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<sup>57</sup> NER, clause 6A.6.5(b)(3).

<sup>58</sup> NER, clause 6A.6.5(b)(4).

<sup>59</sup> When the TNSP spends more on opex it receives a 30 per cent penalty under the EBSS. However, when there is a corresponding decrease in capex the TNSP receives a 30 per cent reward under the CESS. So where the decrease in capex is larger than the increase in opex the TNSP receives a larger reward than penalty, a net reward.

<sup>60</sup> 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.

<sup>61</sup> NER, clause 11.58.3(a)(3).

<sup>62</sup> AER, *Efficiency benefit sharing scheme*, 29 November 2013; AER, *Explanatory Statement, Efficiency Benefit Sharing Scheme*, 29 November 2013.

- It is preferable for the same scheme to apply for the entirety of the regulatory control period. As discussed, the new EBSS revises the approach to adjustments and exclusions. Therefore, applying the current EBSS in the transitional period followed by the new EBSS for the subsequent period could result in exclusions being permitted in the transitional period but not the remainder of the period, and an inconsistent approach to adjustments. Applying different schemes within the same period also adds administrative complexity.

In the remainder of this attachment we discuss why we consider the EBSS should continue to apply in the transitional year.

If we apply the EBSS in the transitional period, the same benefits associated with the scheme will apply as discussed in attachment 2.2.1. For instance, TNSPs will still face continuous incentives to achieve opex efficiencies. This incentivises TNSPs to reveal their efficient opex which, in turn, allows us to better determine efficient opex forecasts for future regulatory control periods.

Under the transitional rules, we will not make a determination on opex allowances for the transitional period until our determination for the subsequent period. This means we will not finalise TNSPs' opex allowances for the transitional period until towards the end of 2014–15. This poses difficulties for TNSPs and does create some significant uncertainties.

We considered how this might impact the operation of the EBSS and carried out modelling for a range of potential scenarios. These scenarios included continuing the EBSS in the transitional period where final opex targets are uncertain, not continuing it or suspending its operation, and comparing situations where there are potential efficiency gains and potential efficiency losses.

Our analysis indicates that not continuing the scheme would create distorted incentives that are likely to be significantly greater than the effects of continuing the scheme with uncertain targets in the transitional period. We discussed these issues with stakeholders, including the TNSPs. Stakeholders agreed that, in the circumstances, the preferable outcome is for the EBSS to apply.

### **Operation of the EBSS when TNSPs do not have final opex targets**

Under the EBSS, TNSPs receive the additional benefits of an efficiency gain for a fixed period (e.g. six years for a recurrent efficiency gain). The financial incentives a business faces are based on the additional expected reward that business would receive for an efficiency gain. That is, how much a TNSP gets to keep of every extra dollar it is able to save continues to operate as an incentive. Under the EBSS, the proportion of benefits of an efficiency gain retained by a TNSP does not change based on the opex target, so there is still a continuing incentive to make efficiency gains.

While TNSPs may not know their final opex targets until our final determination is made in the latter part of the transitional period, our draft determination will be released in November 2014. This is five months after the start of the transitional period and will contain a draft opex allowance. This will provide a degree of guidance for TNSPs in the earlier part of the transitional period.

In addition, we use controllable opex to measure efficiency gains or losses under the EBSS and this tends to be largely recurrent and predictable. Also, an efficiency gain or loss made in the first year of the regulatory period (i.e. the transitional period) only inputs into the carryover amount a TNSP receives in the first year of the following period as the carryover period and the regulatory

period overlap almost entirely. This is compared to efficiency gains or losses made in later years of the regulatory period which input into carryover amounts for multiple years in the following period.<sup>63</sup>

### Not applying the EBSS affects other regulatory years

The EBSS operates on an incremental basis, and performance in one year is related to performance in the previous year. Not applying the EBSS in the transitional period could disrupt the incentives provided by the EBSS to make efficiency gains in other years. Specifically:

- The measurement of efficiency gains under the EBSS is not only a function of how a TNSP performed against its opex targets in a particular year. That is, the scheme does not only reward efficiency gains in absolute terms. We calculate efficiency gains on an incremental basis and it is the incremental gain or loss that is rewarded or penalised under the scheme. That is, efficiency gains relate to how a TNSP performs in a given year compared to how it performed in the previous year.<sup>64</sup>
- Consider the 2014–19 regulatory period, where the transitional period is 'Year 1'. Even if we do not apply the EBSS in Year 1 a TNSP's performance in that year influences its incremental performance in Year 2 (2015–16). In turn its performance in Year 2 then shapes how we measure its performance in Year 3 (2016–17), and so on.

### Impacts of not applying the EBSS on TNSPs and consumers

Appendix A sets out the impacts on TNSPs and consumers if we do not apply the EBSS in the transitional period.

Not applying the EBSS to the transitional period alters the carryover payments a TNSP receives. In turn, this alters the sharing of efficiency gains and losses between TNSPs and consumers. This may have undesirable outcomes for TNSPs or consumers, inconsistent with the factors we must have regard to in developing and implementing the EBSS. These potential perverse outcomes are explained as follows:

- We find that not applying the scheme is unlikely to have a neutral impact on TNSPs or consumers. In some circumstances, a TNSP may receive an additional benefit if we do not apply the EBSS than it otherwise would not have if we applied the scheme. In turn, this benefit comes at the expense of a detriment to consumers. In other circumstances, a TNSP may experience detriment if we do not apply the EBSS that it would not have if we applied the scheme. In turn, this detriment means consumers benefit where they otherwise would not have. We do not consider there is any reason why TNSPs should receive additional benefits, while consumers suffer detriment, and vice-versa.
- If we did not apply the EBSS to the transitional period we find that, depending on the circumstances, a TNSP could retain an efficiency gain or loss made in the transitional year for longer or less than the carryover period. This would disrupt the continuous incentive the

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<sup>63</sup> A TNSP retains an efficiency gain or bears an efficiency loss for the length of the carryover period. The carryover period is five years in this case. For its performance in the transitional period a TNSP may make an efficiency gain (or loss) in the transitional period. It would retain the gain (or incur the loss) for the remainder of the regulatory period—four more years. Then it would receive an EBSS carryover amount in the first year of the following period—completing the five year carryover period.

<sup>64</sup> TNSPs are not simply rewarded or penalised simply for under or over spending on opex in a given year. Suppose a TNSP spends as forecast in year one, then underspends in year two, then underspends again but by exactly the same amount in year three. It has made an efficiency gain in year two because it performed better than in year one. But, it has not made an efficiency gain in year three, even though it is still underspending, because it has not performed any better than in year two.

scheme otherwise provides. This is because the continuous incentive depends on a TNSP retaining gains or losses for the length of the carryover period.<sup>65</sup>

- In other circumstances, if we do not apply the EBSS we find a TNSP could be better off after an efficiency loss in the transitional period, compared to if we applied the scheme. Conversely, a TNSP could be worse off after an efficiency gain compared to if we applied the scheme. This is contrary to the rules which provide for the desirability of rewarding TNSPs for efficiency gains and penalising TNSPs for efficiency losses.<sup>66</sup>
- The impact on carryover payments alters the sharing of efficiency gains and losses between TNSPs and consumers. As discussed, the implicit power of the incentive under the EBSS is approximately 30 per cent. In developing the new EBSS we concluded this was suitable and provides for a fair sharing of efficiency gains and losses between TNSPs and consumers. If we did not apply the EBSS in the transitional period, the power of the incentive would change, and efficiency gains or losses would be shared differently to how they would be if we applied the scheme. We do not consider there is any compelling reason why the power of the incentive in the transitional year should be different to 30 per cent.

### Capitalising expenditure

In implementing the EBSS in the transitional period we must have regard to any incentives TNSPs may have to capitalise expenditure.<sup>67</sup> The incentive for capitalising opex is related to the interaction between the EBSS and CESS. During the transitional period we cannot apply the CESS.<sup>68</sup>

However, the incentive to incur efficient capex is highest in the first year of the regulatory period.<sup>69</sup> Without the CESS a TNSP could bear more than 30 per cent of the cost of a capex overspend in the first year of the regulatory period.<sup>70</sup> Therefore the incentive to capitalise opex in the transitional period may be relatively weaker when the EBSS applies but not the CESS.

### Non-network alternatives

We must also consider the possible effects of implementing the EBSS on incentives for non-network alternatives.<sup>71</sup> When the CESS and EBSS both apply a TNSP has an incentive to implement a non-network alternative if the increase in opex is less than the corresponding decrease in capex. During the transitional period we cannot apply the CESS.<sup>72</sup> In addition, under the new EBSS we will no longer allow for specific exclusions such as non-network alternatives.<sup>73</sup>

However, this may not create a significant disincentive to implementing non-network alternatives because:

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<sup>65</sup> NER, clause 6A.6.5(b)(1).

<sup>66</sup> NER, clause 6A.6.5(b)(2).

<sup>67</sup> NER, clause 6A.6.5(b)(3).

<sup>68</sup> NER, clause 11.58.3(a).

<sup>69</sup> TNSPs only retain the benefits (or bear the costs) of any underspend (overspend) until the end of the regulatory control period. In year one, any benefit/penalty from an underspend/overspend will last for four years before the RAB is updated for actual capex. In year two, any benefit/penalty from an underspend/overspend will last for three years, and so on. In year five the benefit/penalty will be approximately zero. Hence, the power of the incentive declines over the regulatory period.

<sup>70</sup> Depending on the life of the asset, assuming the regulatory WACC and the TNSP's true WACC are both 8 per cent, and using actual depreciation; see AER, *Incentives issues paper*, pp. 9–11.

<sup>71</sup> NER, clause 6A.6.5(b)(4).

<sup>72</sup> NER, clause 11.58.3(a).

<sup>73</sup> AER, EBSS scheme, p. 7.

- As discussed above, without a CESS the TNSP's reward for reducing capex can be higher than 30 per cent in the first year of the regulatory period. The disincentive to increase opex from the EBSS remains set at 30 per cent. Therefore the incentive to implement a non-network alternative which reduces capex and increases opex in the transitional period is likely to be the same or greater than it would have been if both the CESS and EBSS applied.
- TNSPs must include spending on non-network alternatives in developing their expenditure forecasts, and efficient spending for non-network alternatives would be included in a TNSP's allowance. The rewards and penalties under the CESS and EBSS would only apply to non-network alternatives implemented during the period that were not accounted for in the TNSP's expenditure allowance. The transitional period is very close to the time when we make our determination, to the point that it overlaps. TNSPs should have a fairly certain idea of non-network alternatives they intend to implement that may reduce capex and increase opex in the transitional period. It is likely such non-network alternatives will be considered at the determination for inclusion in expenditure allowances.

### 3 Capital expenditure sharing scheme

The capital expenditure sharing scheme (CESS) provides financial rewards for TNSPs whose capex becomes more efficient and financial penalties for those that become less efficient. Consumers benefit from improved efficiency through lower regulated prices in the future. This attachment sets out our proposed approach and reasons for how we intend to apply the CESS to TransGrid in the transitional and subsequent regulatory control periods.

The CESS approximates efficiency gains and efficiency losses by calculating the difference between forecast and actual capex. It shares these gains or losses between TNSPs and network users.

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 TNSP's share of the underspend or overspend should be.
- We calculate the CESS payments taking into account the financing benefit or cost to the TNSP of the underspends or overspends.<sup>74</sup> We can also make further adjustments to account for deferral of capex and ex post exclusions of capex from the RAB.
- The CESS payments will be added or subtracted to the TNSP's regulated revenue as a separate building block in the next regulatory control period.

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

#### 3.1 Proposed approach

We propose to apply the CESS as set out in our capex incentives guideline to TransGrid in the subsequent regulatory control period.<sup>75</sup>

We cannot apply the CESS to TransGrid in the transitional regulatory control period. This is because the transitional rules provide the AER must not apply a CESS in a transmission determination made for a TNSP for the transitional regulatory control period.<sup>76</sup>

In deciding whether to apply a CESS to a TNSP in the subsequent regulatory control period, and the nature and details of any CESS we apply to a TNSP, we must:<sup>77</sup>

- make that decision in a manner that contributes to the capex incentive objective<sup>78</sup>

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<sup>74</sup> We calculate benefits as the benefits to the TNSP 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 TNSP of the overspend.

<sup>75</sup> AER, *Capital expenditure incentive guideline for electricity network service providers*, pp. 5–9.

<sup>76</sup> NER, clause 11.58.3(a)(2).

<sup>77</sup> NER, clause 6A.6.5A.

<sup>78</sup> NER, clause 6A.5A(a); the capex criteria are set out in clause 6A.6.7(c)(1)-(3) of the NER.



- consider the CESS principles,<sup>79</sup> *capex objectives*,<sup>80</sup> other incentive schemes, and where relevant the *opex objectives*, as they apply to the particular TNSP, and the circumstances of the TNSP.

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.

## 3.2 Reasons for proposed approach

We cannot apply the CESS to TransGrid in the transitional regulatory control period.<sup>81</sup> But we propose to apply the CESS to TransGrid in the subsequent regulatory control period as we consider this will contribute to the capex incentive objective.<sup>82</sup>

TNSPs are currently not subject to a CESS. As part of our Better Regulation program we consulted on and published version 1 of the capex incentives guideline which sets out the CESS.<sup>83</sup> The guideline specifies that in most circumstances we will apply a CESS, in conjunction with forecast depreciation to roll-forward the RAB.<sup>84</sup> We also propose to apply forecast depreciation, which is discussed further in attachment 5 below.

In developing the CESS we took into account the capex incentive objective, capex criteria, capex objectives, and the CESS principles. We also developed the CESS to work alongside other incentive schemes that apply to TNSPs, including the EBSS and STPIS.

For capex, the sharing of underspends and overspends happens at the end of each regulatory period when we update a TNSP's RAB to include new capex. If a TNSP spends less than its approved forecast during a period, it will benefit within that period. Consumers benefit at the end of that period when the RAB is updated to include less capex compared to if the TNSP had spent the full amount of the capex forecast. This leads to lower prices in the future.

Without a CESS the incentive for a TNSP to spend less than its forecast capex declines throughout the period.<sup>85</sup> Because of this a TNSP may choose to spend capex earlier, or on capex when it may otherwise have spent on opex, or less on capex at the expense of service quality—even if it may not be efficient to do so.

With the CESS a TNSP faces the same reward and penalty in each year of a regulatory control period for capex underspends or overspends. The CESS will provide TNSPs with an ex ante incentive to spend only efficient capex. TNSPs that make efficiency gains will be rewarded through the CESS. Conversely, TNSPs that make efficiency losses will be penalised through the CESS. In this way, TNSPs 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 a TNSP is subject to the CESS, its capex is more likely to be efficient and to reflect the costs of a prudent TNSP.

<sup>79</sup> NER, clause 6A.6.5A(c).

<sup>80</sup> NER, clause 6A.6.7(a).

<sup>81</sup> NER, clause 11.58.3(a)(2).

<sup>82</sup> NER, clause 6A.5A(a); the capex criteria are set out in clause 6A.6.7(c) of the NER.

<sup>83</sup> AER, *Capital expenditure incentive guideline for electricity network service providers*, pp. 5–9.

<sup>84</sup> AER, *Capital expenditure incentive guideline for electricity network service providers*, pp. 10–11.

<sup>85</sup> As the end of the regulatory period approaches, the time available for the TNSP to retain any savings gets shorter. So the earlier a TNSP incurs an underspend in the regulatory period, the greater its reward will be.



When the CESS, EBSS and STPIS apply to TNSPs the incentives for improvements in opex, capex and service outcomes are more balanced. This encourages businesses to make efficient decisions on when and what type of expenditure to incur, and to efficiently trade off expenditure reductions with service quality and reliability.

## 4 Expenditure forecast assessment guideline

This attachment sets out our intention to apply our expenditure forecast assessment guideline (guideline)<sup>86</sup> including the information requirements to TransGrid for the 2014–15 transitional regulatory control period and the 2015–19 subsequent regulatory control period. We propose applying the guideline as it sets out our new expenditure assessment approach developed and consulted upon during the Better Regulation program. The guideline outlines for TNSPs and interested stakeholders the types of assessments we will do to determine efficient expenditure allowances, and the information we require from the businesses to do so.

We were required to develop the guideline under the rules.<sup>87</sup> The guideline is based on a nationally consistent reporting framework allowing us to compare the relative efficiencies of TNSPs and decide on efficient expenditure allowances. The rules required TransGrid to advise us by 30 November 2013 of the methodology it proposes to use to prepare forecasts.<sup>88</sup> In the F&A we must set out our proposed approach to application of the guideline.<sup>89</sup> This will provide clarity to TransGrid and assist it with the information it should include in its revenue proposal.

The guideline contains a suite of assessment/analytical tools and techniques to assist our review of revenue proposals by network service providers. We intend to apply the assessment techniques set out in the guideline. The techniques include:<sup>90</sup>

- benchmarking (economic techniques and category analysis)
- methodology review
- governance and policy review
- predictive modelling
- trend analysis
- cost benefit analysis
- detailed project review (including engineering review).

We developed the guideline to apply broadly to all electricity transmission and distribution businesses. However, some customisation of the data requirements contained in the guideline might be required. While we do not anticipate any such requirements at present, any data customisation issues would be addressed through the RIN that we will issue to TransGrid for the next regulatory control period.

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<sup>86</sup> We published this guideline on 29 November 2013. It can be located at [www.aer.gov.au/node/18864](http://www.aer.gov.au/node/18864).

<sup>87</sup> NER, clauses 6.4.5, 6A.5.6, 11.53.4 and 11.54.4.

<sup>88</sup> NER, clauses 6A.10.1B(b)(1) and 11.58.4(n).

<sup>89</sup> NER, clause 6A.10.1A(b)(5).

<sup>90</sup> AER, *Expenditure assessment guideline for electricity transmission*, 29 November 2013, pp. 12-13.

## 5 Depreciation

As part of the roll forward methodology, when the RAB is updated from forecast capex to actual capex at the end of a regulatory control period, it is also adjusted for depreciation. This attachment sets out our proposed approach to calculating depreciation when the RAB is rolled forward to the commencement of the 2019–24 regulatory control period.<sup>91</sup>

The depreciation we use to roll forward the RAB can be based on either:

- Actual capex incurred during the regulatory control period (actual depreciation). We roll forward the RAB based on actual capex less the depreciation on the actual capex incurred by the TNSP; or
- The capex allowance forecast at the start of the regulatory control period (forecast depreciation). We roll forward the RAB based on actual capex less the depreciation on the forecast capex approved for the regulatory control period.

The choice of depreciation approach is one part of the overall capex incentive framework.

Consumers benefit from improved efficiencies through lower regulated prices. Where a CESS is applied, using forecast depreciation provides the incentives for TNSPs to pursue continuous capex efficiencies. Using actual depreciation increases these incentives. There is more information on depreciation as part of the overall capex incentive framework in our capex incentives guideline.<sup>92</sup> In summary:

- If there is a capex overspend, actual depreciation will be higher than forecast depreciation. This means that the RAB will increase by a lesser amount than if forecast depreciation were used. So, the TNSP will earn less revenue into the future (i.e. it will bear more of the cost of the overspend into the future) than if forecast depreciation had been used to roll forward the RAB.
- If there is a capex underspend, actual depreciation will be lower than forecast depreciation. This means that the RAB will increase by a greater amount than if forecast depreciation were used. Hence, the TNSP will earn greater revenue into the future (i.e. it will retain more of the benefit of an underspend into the future) than if forecast depreciation had been used to roll forward the RAB.

The incentive from using actual depreciation to roll forward the RAB also varies with the life of the asset. Using actual depreciation will provide a stronger incentive for shorter lived assets compared to longer lived assets. Forecast depreciation, on the other hand, leads to the same incentive for all assets.

### 5.1 Proposed approach

We propose to use the forecast depreciation approach to establish the RAB at the commencement of the 2019–24 regulatory control period for TransGrid. This will apply to both the transitional period and subsequent period. We consider this approach will provide sufficient incentives for TransGrid to achieve capex efficiency gains over the 2014–15 transitional regulatory control period and the 2015–19 subsequent regulatory control period.

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<sup>91</sup> NER, clause 6A.10.1A(b)(6).

<sup>92</sup> AER, *Capital expenditure incentive guideline for electricity network service providers*, pp. 10–11.

In the F&A paper we must set out our proposed approach as to whether we will use actual or forecast depreciation to establish a TNSP's RAB at the commencement of the following regulatory control period.<sup>93</sup>

We are required to set out in our capex incentives guideline our process for determining which form of depreciation we propose to use in the RAB roll forward process.<sup>94</sup> Our decision on whether to use actual or forecast depreciation must be consistent with the capex incentive objective. We must have regard to:<sup>95</sup>

- any other incentives the service provider has to undertake efficient capex
- substitution possibilities between assets with different lives
- the extent of overspending and inefficient overspending relative to the allowed forecast
- the capex incentive guideline
- the capital expenditure factors.

## 5.2 Reasons for proposed approach

Consistent with our capex incentives guideline, we propose to use the forecast depreciation approach to establish the RAB at the commencement of the 2019–24 regulatory control period.

We had regard to the relevant factors in the rules in developing the approach to choosing depreciation set out in our capex incentives guideline.<sup>96</sup>

Our approach is to apply forecast depreciation except where:

- there is no CESS in place and therefore the power of the capex incentive may need to be strengthened, or
- a TNSP's past capex performance demonstrates evidence of persistent overspending or inefficiency, thus requiring a higher powered incentive.

In making our decision on whether to use actual depreciation in either of these circumstances we will consider:

- the substitutability between capex and opex and the balance of incentives between these
- the balance of incentives with service outcomes
- the substitutability of assets of different asset lives.

We have chosen forecast depreciation as our proposed approach because, in combination with the CESS, it will provide a 30 per cent reward for capex underspends and 30 per cent penalty for capex overspends, which is consistent for all asset classes. In developing our capex incentives guideline, we considered this to be a sufficient incentive for a TNSP to achieve efficiency gains over the regulatory control period in most circumstances.

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<sup>93</sup> NER, clause S6A.2.2B.

<sup>94</sup> NER, clause 6A.5A(b)(3).

<sup>95</sup> NER, clause S6A.2.2B.

<sup>96</sup> AER, *Capital expenditure incentive guideline for electricity network service providers*, pp. 12–13.

As discussed in attachment 3, TransGrid is not currently subject to a CESS but we propose to apply the CESS in the subsequent regulatory control period.

For TransGrid, at this stage, we consider the incentive provided by the application of the CESS in combination with the use of forecast depreciation and our other ex post capex measures should be sufficient to achieve the capex incentive objective.<sup>97</sup>

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<sup>97</sup> Our ex post capex measures are set out in the capex incentives guideline, *AER capex incentives guideline*, pp. 13–19; the guideline also sets out how all our capex incentive measures are consistent with the capex incentive objective, *AER capex incentives guideline*, pp. 20–21.

## 6 Small scale incentive scheme

The rules provide that we may develop small-scale incentive schemes to test innovative approaches to incentives.<sup>98</sup> Small scale incentive schemes are intended to provide for incentives for improved performance not already covered by the existing incentive schemes in the rules and may cover matters not related to expenditure by TNSPs.<sup>99</sup>

We have not yet developed any such schemes. Therefore, in this F&A paper we are not proposing to apply any such schemes to TransGrid in the subsequent regulatory control period. Further, the transitional rules preclude us from applying any such schemes in the transitional regulatory control period.<sup>100</sup>

We note, however, that changes to the STPIS (version 4) introduce new incentives for TNSPs to improve the capability of existing assets to provide greater value to generators and consumers and avoid the need for asset augmentation.

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<sup>98</sup> NER, clause 6A.7.5. AEMC, *Final determination, National Electricity Amendment (Economic Regulation of Network Service Providers) Rule*, November 2012, p. 13

<sup>99</sup> AEMC, *Final determination, National Electricity Amendment (Economic Regulation of Network Service Providers) Rule*, November 2012, p. 212.

<sup>100</sup> NER, clause 11.58.3(a)(2).

## A Appendix—not applying the EBSS in the transitional period

To not apply the EBSS in the transitional period we could:

- option 1—set the efficiency gain in the transitional period to zero
- option 2—assume the TNSP spends exactly its allowance in the transitional period.

Both option 1 and option 2 have potentially undesirable outcomes for both TNSPs and consumers compared to applying the EBSS as normal.

Take the example of the 2014–19 regulatory period, with the transitional period as Year 1. Under the scheme a TNSP retains an efficiency gain or bears an efficiency loss for the length of the carryover period. The carryover period is five years in this case. For its performance in the transitional period a TNSP may make an efficiency gain (or loss) in Year 1. It would retain the gain (or incur the loss) for the remainder of the regulatory period—four more years. Then it would receive an EBSS carryover amount in the first year of the following period—completing the five year carryover period. The efficiency gain or loss is then shared with consumers through prices in the following year.

We find that under option 1:

- For a recurrent efficiency gain or loss made in the transitional period, a TNSP would retain the gain (or bear the loss) for one year less, and it would be shared with consumers one year sooner, compared to if we applied the EBSS.
- For a one-off efficiency loss made in the transitional period, a TNSP would receive a positive carryover payment (a reward) instead of a negative payment (a penalty) compared to if we applied the EBSS. Vice-versa for a one-off efficiency gain. This would not provide the TNSP with an incentive to reduce operating expenditure.<sup>101</sup> It would also not penalise the TNSP for the one-off efficiency loss.<sup>102</sup>

Under option 2:

- For a recurrent efficiency gain or loss made in the transitional period, the TNSP would retain a recurrent efficiency gain (or bear a loss) for one extra year, and sharing with consumers would be delayed by one year, compared to if we applied the EBSS.
- For a one-off efficiency gain or loss made in the transitional year, a TNSP would not receive any carryover payment and the gain or loss would not be shared with consumers.<sup>103</sup>

If we do not apply the EBSS using either option 1 or option 2, this affects carryover payments. This, in turn, alters the sharing of an efficiency gain or loss made in the transitional period between the TNSP and consumers. This affects the power of the incentive a TNSP faces to make efficiency improvements in that year. The share of efficiency gains and losses under these two options is shown in Table 4.

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<sup>101</sup> NER, clause 6A.6.5(b)(2).

<sup>102</sup> NER, clause 6A.6.5(b)(2).

<sup>103</sup> NER, clause 6A.6.5(a).

**Table 4      Sharing efficiency losses in the transitional period**

	EBSS in the transitional period	Percentage of total loss
<i>Recurrent efficiency loss in transitional period</i>		
TNSP	Apply EBSS	30 per cent
	Not apply with option 1	25 per cent
	Not apply with Option 2	33 per cent
Consumers	Apply EBSS	70 per cent
	Not apply with option 1	75 per cent
	Not apply with Option 2	67 per cent
<i>Non-recurrent efficiency loss in transitional period</i>		
TNSP	Apply EBSS	30 per cent
	Not apply with option 1	-45 per cent
	Not apply with Option 2	100 per cent
Consumers	Apply EBSS	70 per cent
	Not apply with option 1	145 per cent
	Not apply with Option 2	0 per cent