

# Vegetation management cost pass through

November 2013

## Contents

Overview .....	3
1. Introduction .....	4
2. Positive change event.....	5
2.1. Timing of the pass through application .....	5
2.2. General nominated pass through event.....	5
3. Efficiency of ActewAGL’s decisions and actions.....	12
3.1. Overview of ActewAGL’s 2012/13 vegetation management.....	12
3.2. Vegetation Inspection .....	14
3.3. Vegetation clearance .....	15
4. Costs .....	20
4.1. Change in cost.....	20
4.2. Eligible and positive pass through amounts.....	20
4.3. Distribution Determination.....	21
4.4. Actual Expenditure.....	21
Appendix 1 – Regulatory requirements for cost pass through .....	25
Positive pass through .....	25
Relevant factors .....	26
Efficiency of ActewAGL’s decisions and actions .....	26

## Overview

After a period of dry weather the ACT experienced two very wet years with annual rainfall in 2010/11 and 2011/12 reaching 867 mm and 778 mm, well above the long term average of 620 mm and at a level not exceeded since 1988/89, over 20 years prior.

The scale of vegetation growth and encroachment on clearance zones following these years of high rainfall was not apparent until ActewAGL's preparation for the 2012/13 bushfire season.

ActewAGL's ground inspection crews and aerial surveys indicated that the higher rainfall had shortened the time taken for vegetation to regrow into clearance zones. Higher vegetation encroachment required ActewAGL to increase inspection activities and clear a greater volume of vegetation from clearance zones.

The unexpected and uncontrollable increase in vegetation growth materially increased ActewAGL's 2012/13 vegetation management (inspection and clearance) costs by \$1.9m above the allowance in the Australian Energy Regulator's (AER) 2009-14 ACT Distribution Determination. The change in cost represents 1.07 per cent of ActewAGL's 2012/13 annual revenue requirement.

ActewAGL has undertaken actions to reduce the magnitude of the eligible pass through amount, including reprioritising labour, using new technology to increase productivity and continuing to reinforce community awareness of the vegetation clearance requirements.

# 1. Introduction

ActewAGL experienced a material increase in vegetation management costs in 2012/13 due to the uncontrollable and unexpected increase in vegetation growth following two years of above average rainfall. ActewAGL therefore considers that a general nominated pass through event as defined in the AER's 2009-14 ACT Distribution Determination has occurred. ActewAGL is seeking the approval of the AER to pass through a positive pass through amount in 2014/15 network prices.

This submission provides the information required under the National Electricity Rules (NER) in order for the AER to assess the pass through claim. ActewAGL's submission has been divided into three sections:

- the first section explains how the pass through event qualifies as a positive pass through event, and specifically a general nominated pass through event;
- the second section provides evidence on the efficiency of ActewAGL's decisions and actions in respect of the positive change event; and
- the last section provides a detailed breakdown and explanation of the costs.

Appendix 1 provides an index of where each regulatory requirement has been addressed.

## 2. Positive change event

ActewAGL experienced a material increase in vegetation management costs as a result of an uncontrollable and unexpected increase in vegetation growth rates, which followed above average rainfall in the ACT. ActewAGL considers that this event meets the criteria of the general nominated pass through event specified in the AER's 2009-14 ACT Distribution Determination<sup>1</sup>.

### 2.1. Timing of the pass through application

To pass through a positive pass through amount, Clause 6.6.1(c) of the NER requires that a distribution network service provider (DNSP) submits to the AER a statement seeking approval within 90 business days of the relevant positive change event occurring.

ActewAGL considers that the material increase in vegetation management costs as a result of the uncontrollable and unexpected increase in vegetation growth rates occurred throughout 2012/13. Although the ACT experienced above average rainfall in 2010/11 and 2011/12 a material increase in costs did not occur until 2012/13.

ActewAGL considers that vegetation clearance costs in 2013/14 will continue to remain higher than the allowance set in the distribution determination in 2009. However, it is not yet known whether the increase in costs will be material, and therefore whether the occurrence of the pass through event will continue into 2013/14.

Given this uncertainty ActewAGL has submitted this pass through application solely for actual costs incurred in 2012/13.

As the pass through event occurred throughout 2012/13, this pass through event application has been submitted within 90 business days of 30 June 2013.

### 2.2. General nominated pass through event

The AER's 2009-14 ACT Distribution Determination defines a general nominated pass through event to occur in the following circumstances:

- an uncontrollable and unforeseeable event that falls outside of the normal operations of the business, such that prudent operational risk management could not have prevented or mitigated the effect of the event, occurs during the next regulatory control period
- the change in costs of providing distribution services as a result of the event is material, and is likely to significantly affect the DNSP's ability to achieve the operating

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<sup>1</sup> AER 2009, *Australian Capital Territory distribution determination 2009-10 to 2013-14*, Final Decision, p.136

expenditure objectives and/or the capital expenditure objectives (as defined in the transitional chapter 6 rules) during the next regulatory control period

- the event does not fall within any of the following definitions:

‘regulatory change event’ in the NER (read as if paragraph (a) of the definition were not a part of the definition);

‘service standard event’ in the NER;

‘tax change event’ in the NER;

‘terrorism event’ in the NER;

‘feed-in tariff direct payment event’ in this final decision;

‘smart meter event’ in this final decision (read as if paragraph (a) of the definition were not a part of the definition);

‘emissions trading scheme event’ in this final decision’ (read as if paragraph (a) of the definition were not a part of the definition).

For the purposes of this definition:

- an event will be considered unforeseeable if, at the time the AER makes its distribution determination, despite the occurrence of the event being a possibility, there was no reason to consider that the event was more likely to occur than not to occur during the regulatory control period

- ‘material’ means the costs associated with the event would exceed 1 per cent of the smoothed revenue requirement specified in the final decision in the years of the regulatory control period that the costs are incurred.

Whether an event fits into the above definition depends on three components:

- Whether the event is uncontrollable and unforeseeable;
- Whether the change in cost is material; and
- Whether the event falls into any other definition defined in the NER or distribution determination.

Each of these aspects is discussed in turn below.

### **2.2.1. Uncontrollable and unforeseeable**

#### *Uncontrollable*

The rate at which vegetation grows within ActewAGL’s distribution area is not controllable by ActewAGL. The AER noted in assessing SA Power Networks vegetation clearance cost pass through submission “...in general terms, vegetation growth rates are typically driven by moisture availability and temperature. These climactic factors are beyond the

control of SA Power Networks.”<sup>2</sup> ActewAGL considers that these comments apply equally to the ACT.

#### *Unforeseeable*

The general nominated pass through event defines unforeseeable as “if, at the time the AER makes its distribution determination, despite the occurrence of the event being a possibility, there was no reason to consider that the event was more likely to occur than not to occur during the regulatory control period.”

The “more likely than not to occur” objective test was employed by the AER in assessing SA Power Network’s 2013 vegetation clearance general nominated pass through event submission. Although the relevant pass through event relied upon an event being “unexpected” rather than “unforeseeable” the AER applied an almost identical interpretation:

...if, despite the occurrence of the event being a possibility, there was no reason to consider that the event was more likely than not to occur during the regulatory control period.<sup>3</sup>

In assessing whether the event was “more likely than not to occur” the AER examined whether there was historical information available in 2009 that would have led a reasonable person to consider the rainfall event was more likely to occur than not to occur and considered the availability of forecast information on likely climatic conditions.

The historical information available to ActewAGL when it was preparing its regulatory proposals for 2009-14 would not have led a reasonable person to consider the above average rainfall in 2010/11 and 2011/12 to be more likely than not to occur.

Figure 1 shows the annual rainfall anomaly (the difference from the mean) for the ACT between 1940/41 and 2012/13. The figure shows the rainfall anomaly in 2010/11 and 2011/12 is the highest since 1988/89, over 20 years prior.

Figure 1 was created using data from the only ACT weather station (the Canberra Airport<sup>4</sup>), in the Australian Reference Climate Station Network (ARCSN) which was established for “high quality, long-term climate monitoring, particularly with regard to climate change analysis.” Stations selected to be part of the ARCSN were chosen with a preference of high quality and long climate records, a location in an area away from large urban centres, and a reasonable likelihood of continued, long-term operation.<sup>5</sup>

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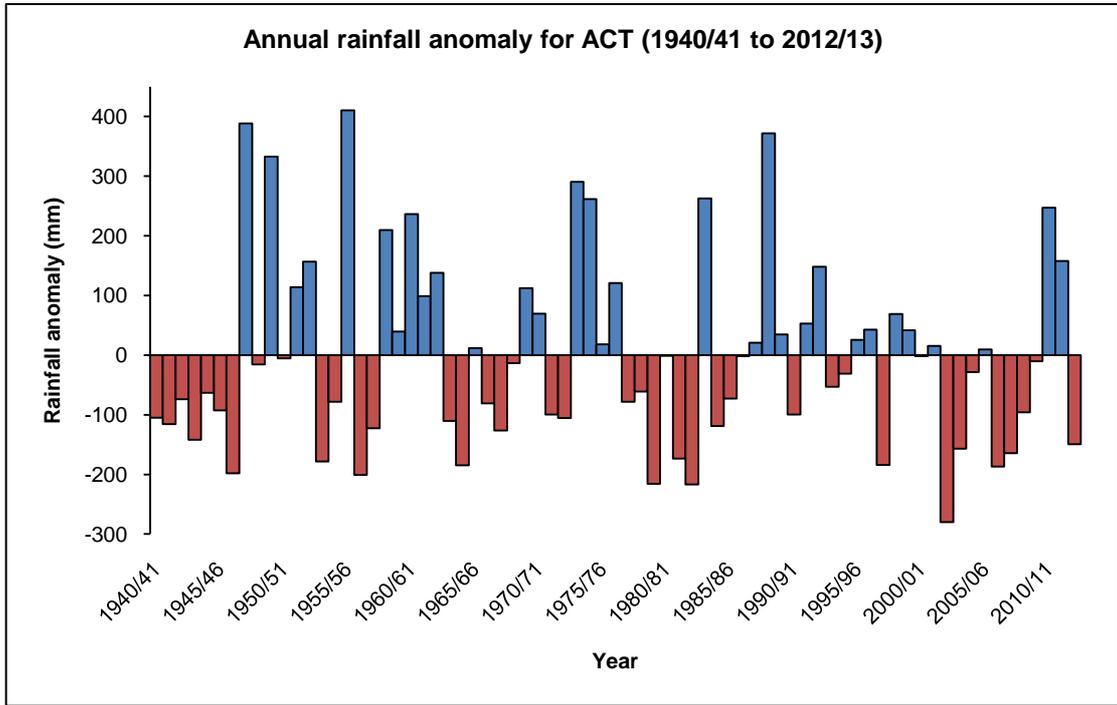
<sup>2</sup> AER 2013, *SA Power Networks cost pass through application for Vegetation management costs arising from an unexpected increase in vegetation growth rates*, Final Decision, p.19

<sup>3</sup> AER 2013, *SA Power Networks cost pass through application for Vegetation management costs arising from an unexpected increase in vegetation growth rates*, Final Decision, p.19

<sup>4</sup> Data was combined from two distinct stations. Station 70351 opened in 2008 and still in operation and station 70014 opened in 1939 and closed in December 2010.

<sup>5</sup> Bureau of Meteorology, *Australia’s Reference Climate Station Network*, viewed 3 September 2013, < <http://www.bom.gov.au/climate/change/reference.shtml>>

Figure 1. Annual rainfall anomaly for ACT (1940/41 to 2012/13)



In assessing the availability of forecast information on likely climatic conditions in the SA Power Networks submission, the AER examined the Bureau of Meteorology seasonal outlooks and reports on the El Niño-Southern Oscillation (ENSO) and Indian Ocean Dipole. The AER concluded that "forecasting information typically available is not useful in anticipating climatic conditions across a five year regulatory control period due to short forecasting horizon and, in any event, cannot predict the nature of specific weather events."<sup>6</sup> ActewAGL agrees with this assessment.

Adding to the uncertainty at the time of the regulatory determination was the impact of climate change. In 2006 the Commonwealth Scientific and Industrial Research Organisation (CSIRO) noted that "Annual average rainfall may tend to decrease in the southwest and in the southeast. In other areas, including parts of eastern Australia, projected rainfall changes are uncertain."<sup>7</sup> Consequently, the impact of climate change added an additional layer of uncertainty over any predictions made using historical data.

<sup>6</sup> AER 2013, *SA Power Networks cost pass through application for Vegetation management costs arising from an unexpected increase in vegetation growth rates*, Final Decision, p.22

<sup>7</sup> Preston, BL and Jones R.N. 2006, *Climate Change Impacts on Australia and the Benefits of Early Action to Reduce Global Greenhouse Gas Emissions*, A consultancy report for the Australia Business Roundtable on Climate Change, Commonwealth Scientific and Industrial Research Organisation

## 2.2.2. Change in cost

A general nominated pass through event occurs if the change in costs as a result of the event is material; and likely to significantly affect the DNSP's ability to achieve the operating and/or capital expenditure objectives (as defined in the transitional chapter 6 of the NER). These two conditions are addressed in turn.

### *Materiality*

Materiality for a general pass through event is defined in ActewAGL's Distribution Determination to mean "the costs associated with the event exceed 1 per cent of the smoothed revenue requirement specified in the final decision in the years of the regulatory control period that the costs are incurred"<sup>8</sup>. Costs due to the vegetation pass through amount are 1.10 per cent of the smoothed revenue requirement in 2012/13 and exceed the stated materiality threshold.

Table 1. Vegetation management costs and the smoothed revenue requirement

\$2012/13	2012/13
Above allowance vegetation management costs	\$1.9 million
Smoothed revenue requirement (SRR)	\$169.6 million
Above allowance vegetation clearance costs/ SRR	1.10%

In addition, the vegetation cost pass through amount is material, using the definition within the NER. The NER defines materially to mean:

For the purposes of the application of clause 6.6.1, an event results in a *Distribution Network Service Provider* incurring materially higher or materially lower costs if the change in costs (as opposed to the revenue impact) that the *Distribution Network Service Provider* has incurred and is likely to incur in any *regulatory year* of a *regulatory control period*, as a result of that event, exceeds 1% of the *annual revenue requirement* for the *Distribution Network Service Provider* for that *regulatory year*.

Using this definition the vegetation management costs are also material:

Table 2. Vegetation management costs and the annual revenue requirement

\$m, \$2012/13	2012/13
Above allowance vegetation clearance costs	\$1.9 million
Annual revenue requirement (ARR)	\$172.9 million
Above allowance vegetation clearance costs/ ARR	1.07%

*Significantly affect the DNSP's ability to achieve the operating and/or capital expenditure objectives*

ActewAGL considers that the vegetation growth event significantly affected ActewAGL's ability to achieve the operating expenditure objectives. Clause 6.5.6 of the transitional chapter 6 of the NER defines these objectives:

<sup>8</sup> AER 2009, *Australian Capital Territory distribution determination 2009-10 to 2013-14*, Final Decision, p.137

- (1) meet or manage the expected demand for *standard control services* over that period;
- (2) comply with all applicable *regulatory obligations or requirements* associated with the provision of *standard control services*;
- (3) maintain the quality, reliability and security of supply of *standard control services*;
- (4) maintain the reliability, safety and security of the *distribution system* through the supply of *standard control services*.

The increased vegetation growth slows inspection of vegetation encroachment and requires increased clearance work leading to corresponding increases in costs. The increased costs mean that the regulatory allowance is insufficient to:

- meet the regulatory obligations and requirements, such as those specified in Utilities Act 2000, Utility Networks (public Safety) regulations 2001, Tree Protection Act 2005 and Land (Planning and Environment) Act 1991; and
- maintain the quality, reliability and security of supply of standard control services and the distribution system.

As a result, ActewAGL's ability to achieve the operating expenditure objectives is significantly affected.

Neither the NER nor the 2009 ACT Distribution Determination provide a definition of "significant". The 2009 ACT Distribution Determination made reference to a "significant materiality threshold" and considered that one per cent should generally apply to pass through events.<sup>9</sup> The same decision also defines the one per cent materiality threshold for the general nominated pass through event. This implies that the one per cent threshold is significant and can provide a basis for interpreting whether the affect on ActewAGL's ability to achieve the operating expenditure objectives is significant.

This approach is supported by the AER's approach to assessing whether costs are material, using the "ordinary meaning" of materiality, prior to a specific threshold being incorporated into the NER in 2012.

The AER noted that cost pass through applications must be considered in the context of the building block regime (including the operating and capital expenditure objectives), subsections 7A(6) and (7) of the National Electricity Law and the National Electricity Objective.<sup>10</sup> Using the ordinary meaning of material, that is 'to an important degree; considerably' in the context of a pass through application the AER had, as understood by the AEMC<sup>11</sup>, in practice applied a one per cent threshold of the annual revenue requirement.

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<sup>9</sup> AER 2009, *Australian Capital Territory Distribution Determination 2009-10 to 2013-14*, Final Decision, p.130

<sup>10</sup> AER 2011, *Cost pass through application in relation to the NSW Solar Bonus Scheme*, Decision, p.25

<sup>11</sup> AEMC 2012, *National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012*, Final Determination, p.187

This supports ActewAGL's view that the one per cent threshold that guides materiality can also guide whether the expenditure objectives are *significantly* affected.

As the AER had considered costs that exceeded a one per cent threshold to be material, in the ordinary sense of the word, this provides a suitable guide to whether ActewAGL's ability to achieve the operating expenditure objectives is affected.

Vegetation management costs were \$1.9 million above the allowance in 2012/13<sup>12</sup>. This amount is 1.07 per cent of the 2012/13 annual revenue requirement and 1.10 per cent of the smoothed revenue requirement. As this amount exceeds the AER's previous interpretation of material, using its ordinary meaning, and the "significant materiality threshold" applied in the 2009 ACT Distribution Determination, the ability for ActewAGL to achieve the operating expenditure objectives is significantly affected.

### **2.2.3. Does not fall into another relevant definition**

The vegetation management pass through event does not fall into any other event definition in the NER or any event nominated in the ACT distribution determination.

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<sup>12</sup> Further detail is presented in the section costs

### 3. Efficiency of ActewAGL's decisions and actions

The third relevant factor the AER must take into account in making a pass through determination is the efficiency of ActewAGL's decisions and actions in relation to the risk of the pass through event. ActewAGL considers that its actions were efficient as:

- the event was uncontrollable and unexpected: no action or decision by ActewAGL could have reduced the risk of the pass through event;
- the processes and systems employed by ActewAGL ensured that the vegetation management costs incurred (inspection and clearance), constituting the eligible pass through amount, are efficient;
- ActewAGL undertook steps that have reduced the magnitude of the costs, including continuing to run customer awareness campaigns and implementing ongoing process improvement to vegetation management practices and charging third parties where they are liable for the costs; and
- no further action could reasonably be taken to reduce the costs and no such action or omission has increased the magnitude of the costs.

#### 3.1. Overview of ActewAGL's 2012/13 vegetation management

ActewAGL has experienced a material increase in vegetation management costs as a result of an uncontrollable and unexpected increase in vegetation growth rates which followed above average rainfall in the ACT.

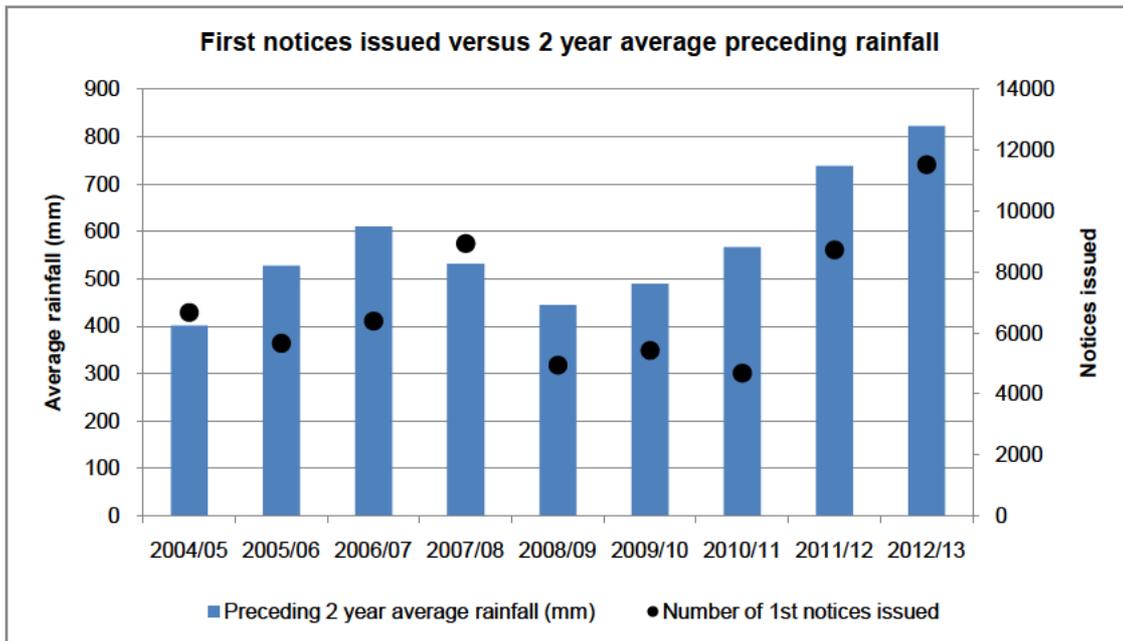
After a period of dry weather the ACT experienced two very wet years with annual rainfall in 2010/11 and 2011/12 reaching 867 mm and 778 mm, well above the long term average of 620 mm and at a level not exceeded since 1988/89, over 20 years prior.

Vegetation growth is impacted by climatic conditions over the preceding years. Accordingly, the wet years in 2010/11 and 2011/12 caused a material increase in vegetation management costs in 2012/13. This is illustrated in Figure 2 which charts average annual rainfall over the preceding two years against the number of notices to clear vegetation issued to property occupants by ActewAGL's urban inspection crews.<sup>13</sup> Note that ActewAGL's regulatory proposal estimate was based on data available up to July 2007.

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<sup>13</sup> See the section *ground visual inspection* below for further details on notices.

Figure 2. Notices given versus two year average preceding rainfall



ActewAGL was aware of the link between rainfall and vegetation growth; however, the subsequent impact on cost was initially unknown and could not be predicted.

In preparation for the 2012/13 bushfire season ActewAGL regularly monitored (initially fortnightly then weekly) the progress of mitigation activities. Due to the higher level of vegetation encroachment relative to previous years, ActewAGL conducted an aerial survey of rural overhead assets in high bushfire risk zones in August 2012.

The aerial survey identified vegetation encroachment not found by ground based crews. This was due to the advantage of the aerial perspective and more accurate measurement using LiDAR<sup>14</sup> technology.

ActewAGL's inspection activities continued throughout the year including two more aerial surveys in December 2012 and March 2013 supporting the ground based inspection teams.

Higher levels of vegetation encroachment slowed the progress of ground based inspection teams while also increasing the workload. ActewAGL responded by allocating more resources to ground based inspection teams to ensure that the inspection program was completed.

Although higher vegetation growth increased inspection costs through more ground based patrols and the use of aerial inspections, the majority of the additional cost increase is due to the clearance costs. Higher vegetation growth directly increased the volume of work required and the clearance costs incurred.

<sup>14</sup> LiDAR (light detecting and ranging) is a remote sensing technology

Further detail on each component of the proposed pass through amount is detailed in turn.

### **3.2. Vegetation Inspection**

In 2012/13 ActewAGL used aerial surveys to support ground visual inspection to check whether vegetation required clearing away from overhead powerlines, due to the increase in vegetation encroachment.

#### **3.2.1. Ground visual inspection**

ActewAGL inspects all vegetation on a three year cycle. Rural and urban areas are each segregated into three sectors with one sector undergoing a full detailed inspection and the remaining two a visual inspection. The less labour intensive visual inspection provides ActewAGL with an understanding of vegetation growth in out of cycle sectors and reduces costs, relative to conducting full inspections annually of all network assets.

In urban areas one sector is targeted for a full inspection each year. Letters are sent advising occupants of the properties that inspections will commence in seven days. If vegetation is found encroaching the minimum clearance distances then the occupants are issued a notification to clear the vegetation. A second inspection is carried out after 21 days of the notification. If the offending vegetation has not been cleared ActewAGL organises the clearing and charges the cost of the work to the occupant of the property.

Similarly, a formal notice process has been developed where ActewAGL provides notice to the ACT Government for unleased land.

As with urban areas, one rural sector is targeted each year for detailed inspection. However, all rural bushfire prone areas are inspected annually such that any required work identified can be completed prior to the start of the bushfire season.

#### **3.2.2. Aerial helicopter inspection**

In July 2012, as part of its monitoring of the progress of bushfire mitigation activities, ActewAGL noted that the level of vegetation encroachment was significantly higher than in previous years. An aerial survey of rural overhead assets in high bushfire risk zones was commissioned for August 2012.

All high risk vegetation encroachment, together with any high priority pole and line defects, was reported directly from the aircraft at the end of the flying day. A combination of internal reactive crews and contract vegetation crews were dispatched the following day for rectification. Lower risk encroachment was also identified and actioned after the conclusion of the flights.

In November 2012, ActewAGL reviewed the performance of the August survey and commissioned another aerial survey in December 2012 for urban areas. The advantage of aerial surveys in urban areas is magnified due to the buildings obstructing sight lines and access issues faced by ground crews. ActewAGL considered that the increased

vegetation growth rates in rural areas would have also occurred in urban areas and may have not been identified by the existing ground based inspection program.

The December aerial survey confirmed ActewAGL's analysis finding vegetation encroachment not identified by ground based crews, including in areas that had previous been inspected and cleared over the previous two years. As with the August aerial survey, high risk vegetation was reported at the conclusion of each flying day and internal reactive crews and contract vegetation crews were dispatched the following day to rectify any high risk vegetation encroachment.

A further aerial survey was commissioned in March 2013. The survey monitored vegetation growth since the previous clearance work, assisted in auditing the vegetation clearance work undertaken and provided a deeper understanding of the makeup of vegetation in the ACT. The survey information was also used to assist in preparation for the 2013/14 bushfire season, in particular allowing more efficient targeting of ground based inspection and clearance crews.

Based on the success of the aerial surveys ActewAGL modified its vegetation management strategy. Henceforth, ActewAGL intends to undertake:

- An annual inspection of areas designated as bushfire prone and the transmission corridor; and
- A two yearly aerial helicopter inspection on all urban high voltage power lines.<sup>15</sup>

### 3.3. Vegetation clearance

Responsibility for vegetation clearance rests with either the property occupant, ActewAGL or the ACT Government depending on the location and attributes of the vegetation. As a result, ActewAGL does not incur the entire cost nor has full control over vegetation clearance.

ActewAGL incurs the costs of clearing vegetation from network assets where there is pre-existing vegetation, in natural areas and when urgent clearing is required. These responsibilities are set out in Table 3.

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<sup>15</sup> ActewAGL had previously considered aerial surveys but not deployed them due to the flying height of the helicopters. Advances in detection technology allow the helicopters to fly at greater heights increasing safety and providing a cost effective option to ActewAGL.

Table 3. Vegetation clearance responsibility

	Private land	Public Land	
		Unleased land	National land
<b>Vegetation clearance responsibility</b>	Land holder for non pre-existing vegetation. Otherwise ActewAGL	ActewAGL is responsible for vegetation in natural areas, specifically national parks, nature reserves, special purpose reserves and Namadgi National Park  Vegetation in urban areas is maintained by ACT Government Territory and Municipal Services	Vegetation is dealt with on a case by case basis through direct contact with the National Capital Authority

*Private land*

Responsibility for private land<sup>16</sup> is captured within clause 110 of the Utilities Act 2000. The Act allows ActewAGL to issue notices to land-holders requiring:

- (a) the felling or lopping of trees on private land; or
- (b) the trimming of roots of trees or other plants on private land; or
- (c) the clearing or removal of vegetation on private land.

If the land-holder does not carry out the activity in accordance with the notice ActewAGL may carry out the activity and recover reasonable expenses incurred, unless the vegetation was growing on the land before the network facility was installed.

No recoverable expenses invoiced by ActewAGL have been included in the proposed pass through amount.

The notice issued by ActewAGL requires occupants of the properties to clear vegetation to no less than the minimum clearances set out under the Utility Networks (Public Safety) Regulation 2001). Although the notice suggests trimming trees an extra distance away to allow for regrowth, this is not required. Limited clearance lessens the time taken for the vegetation to again encroach on overhead lines requiring additional inspections and increasing the costs incurred by ActewAGL.

In contrast, ActewAGL and the ACT Government<sup>17</sup> clear vegetation to allow for three years of regrowth consistent with ActewAGL’s inspection cycle.

*Public land*

Responsibility for public land, that is national land or unleased Territory land, is not outlined in the Utilities Act 2000. As a result, vegetation clearance is managed by a Site Management Agreement for Controlled Land (Urban Nature reserves, Special Purposes

<sup>16</sup> The Utilities Act 2000 states that private land means land other than public land.

<sup>17</sup> ActewAGL 2011, *Notification to clear trees*, August, p.1

Reserves, National Parks and former ACT Forests Estates). A Code of Practice between ActewAGL and the ACT Government Conservator of Flora and Fauna defines vegetation management responsibilities for unleased Territory land.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Vegetation that interferes with network facilities on national land is dealt with on a case by case basis through direct contact with the National Capital Authority.

#### *Urgent Circumstances*

In urgent circumstances, ActewAGL may do whatever is necessary to stop or remove an action that interferes with the safe or efficient operation of the network or facility without notice to the land-holder at its own expense.<sup>21</sup>

Any urgent clearance work in rural areas was undertaken by reprioritising existing contract crews and as such, did not result in ActewAGL incurring higher costs.

For urban areas, in the absence of the unexpected increased vegetation growth, ActewAGL would have identified any encroachment before urgent circumstances occurred through its ground based inspection program. This would have enabled a notice to be issued to the land occupant and avoided ActewAGL incurring the clearance costs.

However, the higher vegetation growth resulted in encroachment in areas ahead of when they had been planned to be inspected. This encroachment was identified by the December 2012 aerial survey. At the end of each flying day high priority clearance was identified and crews were sent out the next day to clear the vegetation. In the case of urgent clearance a notice could not be issued due to time constraints and ActewAGL incurred the cost. This amount is included in the proposed pass through amount.

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<sup>18</sup> ACT Territory and Municipal Services and ActewAGL, *Code of practice: practical guide and standards for co-operation between ACT Parks, Conservation and Lands & ActewAGL, version 1 09/09*, p.35

<sup>19</sup> PCL refers to ACT Parks, Conservation and Lands.

<sup>20</sup> ACT Territory and Municipal Services and ActewAGL, *Code of practice: practical guide and standards for co-operation between ACT Parks, Conservation and Lands & ActewAGL, version 1 09/09*, p.35

<sup>21</sup> Utilities Act 2000 (ACT) s110(8)

### **3.3.1. Efficiency of vegetation clearance expenditure**

Vegetation clearance is undertaken by contractors. ActewAGL's contractor engagement process uses competitive tension between contractors to ensure that costs invoiced are efficient.

ActewAGL maintains a list of preferred suppliers selected from a competitive tender process. The hourly rate for each supplier is determined under this process ensuring an efficient price.

[Redacted content]

### **3.3.2. Marketing campaign**

Each year, ActewAGL undertakes a targeted advertising campaign to increase awareness of vegetation clearance requirements on private land, including television commercials, print advertisements, radio, social media and the ActewAGL website. The campaigns with particular relevance to 2012/13 are those that ran during October 2011, May/June 2012 and October/November 2012.

The key message provided is to keep trees and vegetation 1.5 metres clear of powerlines, poles and ground-mounted assets. The focus was on the customer and why it was important to them and the impact and the potential inconvenience, for example extended service interruptions. The safety aspect was also a focus in the trees and powerlines press ads.

These programs encouraged property occupants to be proactive in maintain vegetation on their land reducing the number of notices issued in urban areas increasing inspection rates and in turn lowering the costs incurred. In the absence of ActewAGL continuing to run these campaigns, vegetation management costs would be higher.

The cost of these advertising campaigns is not included in the proposed pass through amount as it is included in the 'Other Costs: Advertising and Marketing' in the AER's 2009 Distribution Determination.

### **3.3.3. Ongoing and continuous improvement**

Over time ActewAGL has continued to improve the productivity of its vegetation management. In addition to the introduction of aerial inspections ActewAGL has developed and deployed a mobile data capture system in 2012/13.

The new system replaced the old system which required vegetation inspectors to travel to a depot and spend time completing paper based forms to collect information and issue notices. The new system allows vegetation inspectors to wirelessly log information and issue notices as inspections are conducted.

The new system was rolled out towards the end of 2012/13. The system has improved the productivity of inspectors, reducing the total the hours logged and the costs incurred.

### **3.3.4. Changes to vegetation clearance regulations**

[Redacted text block]

On 30 May 2013, ActewAGL provided a submission to the ACT Environment and Sustainable Development Directorate (ESDD) seeking support for a review of tree clearance and outlining a proposal to amend regulations for vegetation clearances from power lines in the ACT<sup>22</sup>. [Redacted text]

- [Redacted list item]
- [Redacted list item]
- [Redacted list item]
- [Redacted list item]

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■ [Redacted footnote text]

## 4. Costs

Clause 6.6.1(c)(6) of the NER requires ActewAGL to provide evidence of the actual or expected costs incurred as a result of the positive change event. ActewAGL has calculated the pass through amount by comparing actual expenditure against the cost build up used in ActewAGL's regulatory proposal which formed the basis of the regulatory allowance in the AER's 2009 Distribution Determination. Only incremental costs which occurred solely as a result of the pass through event have been included.

### 4.1. Change in cost

The proposed pass through amount comprises above allowance costs due to:

- dedicated contractor costs;
- increased other costs (for example traffic control and minor materials); and
- internal labour reprioritisation to vegetation management and the consequent need to extend the engagement of pole inspection contractors.

Table 4. Change in cost

\$2012/13	Change in cost
Contractor costs	1,566,308
Other	1,102
Labour (costs arising from labour reprioritisation)	290,101
Overheads	-
Total	1,872,512

Detail on each of these components is provided below.

### 4.2. Eligible and positive pass through amounts

Clause 6.6.1(c) requires the DNSP to provide information on the eligible pass through amount and the proposed pass through amount. The AER clarifies the distinction between the two amounts:

eligible pass through amount refers to the expenditure incurred by the DNSP and positive pass through amount refers to the amount to be passed through to users.<sup>23</sup>

Where the expenditure incurred involves both capital and operating expenditure (capex and opex), the eligible and proposed amounts will differ. The eligible amount is total capex plus opex, while the proposed pass through amount is only opex plus return on and of capital plus tax liability. However, in ActewAGL's case all the costs incurred are opex. The eligible and proposed amounts are therefore the same.

<sup>23</sup> AER 2012, *Powercor cost pass through application of 13 December 2011 for costs arising from the Victorian Bushfire Royal Commission*, March, p. 12

The eligible pass through amount in respect of the increased vegetation management costs is \$1.9 million plus \$0.3 million for the time cost of money. ActewAGL proposes to pass through the full \$2.1 million positive pass through amount in 2014/15 network prices, commencing 1 July 2014.

### 4.3. Distribution Determination

ActewAGL’s vegetation management cost allowance for 2009-14 was based on an forecast made by ActewAGL in July 2007. ActewAGL’s regulatory proposal for the Distribution Determination included vegetation management costs based on two project cost estimates. This estimate can be broken into four components across each of the regulatory years.

The AER did not accept ActewAGL’s proposed labour cost escalators, instead incorporating lower escalators reducing the operating expenditure allowance. ActewAGL has applied the AER’s determined labour cost escalators to calculate the effective components of the AER’s final decision allowance.

**Table 5. Breakdown of the AER’s Final Decision allowance**

<b>\$2012/13</b>	<b>2012/13</b>
Contract Costs	1,450,842
Labour Expenditures	978,283
Overheads	485,168
Other	26,904
<b>Total Cost</b>	<b>2,941,198</b>

The forecast method is similar to that of SA Power Networks where vegetation management forecast costs were based on historical clearance undertaken during the previous regulatory control period in which South Australia experienced an extended period of below average rainfall and above average temperatures.<sup>24</sup>

### 4.4. Actual Expenditure

#### 4.4.1. Contractor payments

##### *Vegetation clearance*

Vegetation clearance costs have increased with the higher level of vegetation encroachment due to increased unexpected and uncontrollable growth rates.

The bulk of ActewAGL’s contractor payments were made to four vegetation clearance suppliers. Other costs include minor repair costs for nearby infrastructure which was damaged (eg sewer mains and fences) and advice from consultants.

<sup>24</sup> AER 2013, *SA Power Networks cost pass through application for Vegetation management costs arising from an unexpected increase in vegetation growth rates*, Final Decision, p.21

ActewAGL has invoiced \$ [REDACTED] for recovery of clearance costs to ACT Government or property occupants, consistent with the requirement that ActewAGL takes action to reduce the magnitude of the eligible pass through amount. The proposed pass through amount includes the total contractor payments minus the invoiced clearance costs.

Notices are issued to property owners who are in predominately urban areas whereas ActewAGL’s clearance costs are for rural areas and in urban areas but only where there are “pre-existing” trees or in urgent circumstances.

**Table 6. Contractor payments**

\$ 2012/13	
Vegetation clearance provider 1	[REDACTED]
Vegetation clearance provider 2	[REDACTED]
Vegetation clearance provider 3	[REDACTED]
Vegetation clearance provider 4	[REDACTED]
Aerial Survey	[REDACTED]
Other costs	[REDACTED]
<b>Total</b>	<b>3,123,112</b>

*Aerial Survey*

ActewAGL engaged an aerial service provider based on references from other DNSPs and availability. Given the time constraints it was important that a survey be undertaken such that any vegetation encroachment could be identified and rectified ahead of the onset of the bushfire season.

The aerial survey served two purposes: vegetation encroachment and asset inspection. Only costs related to vegetation encroachment have been included. Itemised invoices were provided and costs allocated based on their purpose: vegetation or asset inspection.

**4.4.2. Labour Costs**

ActewAGL incurred significantly higher labour costs due to the higher number of hours that had to be allocated to vegetation management. The bulk of these hours were incurred in inspecting ActewAGL’s assets with the remainder conducting tasks including administrative processing of notices.

ActewAGL has a pool of staff capable of performing inspections of assets. Staff members are typically dedicated to a specific task, for instance vegetation or asset inspection. Due to the higher vegetation growth ActewAGL reprioritised labour from other projects to focus on vegetation inspection.

In 2012/13 ActewAGL’s internal systems logged 20,496 hours against vegetation management projects compared to 12,636 hours projected in ActewAGL’s regulatory cost estimates. The additional 7,860 hours is evidence of the increased scale of work undertaken by ActewAGL. Contractors were not engaged due to the time required to tender, select, and authorise additional vegetation inspections and timely response

required by the vegetation growth. Moreover, reprioritisation reduced the magnitude of the cost of the pass through event. In the absence of this reprioritisation ActewAGL would have incurred either contractor vegetation inspection costs or 7,860 labour hours above the existing total operating expenditure allowance.

Prior to 2012/13 a pole inspection contractor was engaged to support ActewAGL's pole inspection program with the intention of concluding the work during 2012/13. The pole inspection contractor was selected from a competitive tender and costs were incurred on a per unit basis.

As internal labour was reprioritised to vegetation management, the pole inspection contract was not ended as envisaged. In the absence of increased vegetation growth ActewAGL would have allocated more inspection resources on asset inspection. Hence, the increased vegetation growth incurred higher unexpected costs, measured by the incremental cost of the pole inspections contract extension in 2012/13.

ActewAGL has calculated that from September 2012 contract pole inspections cost \$290,101 and that is the direct cost incurred from the labour reprioritisation of internal labour, in response to the increased vegetation growth.

#### **4.4.3. Overheads**

Allocation of overheads to specific projects is determined by the cost allocation method approved by the AER in March 2008. The cost allocation method allocates costs in proportion to the number of hours booked against each project. As ActewAGL allocated an additional 7,860 hours to vegetation management the allocation of overheads increased.

As outlined above, ActewAGL reprioritised labour which avoided incurring costs above the total operating expenditure allowance. Accordingly the increased allocation of overheads has not been included in the proposed pass through amount as the incremental cost increase is effectively captured in the contract of the pole inspection contractor.

#### **4.4.4. Other**

ActewAGL's cost estimate includes costs for minor material items, traffic control and disposable materials. ActewAGL incurred costs of \$28,006, slightly above the allowance of \$26,904. ActewAGL incurred less than anticipated costs on traffic management but a higher amount on disposable materials required in issuing notices. The difference of \$1,102 has been included in the proposed pass through amount.

#### **4.4.5. Time cost of money**

ActewAGL proposes to recover the change in costs in the next regulatory year 2014/15. ActewAGL has proposed to calculate the time cost of money using the same approach used in its 2012 National Energy Customer Framework cost pass through application.

The time cost of money has been calculated for 3 periods: the middle of 2012/13 to the end, the whole of 2013/14 and the start to the middle of 2014/15. Calculated amounts are

shown in table 6. The discount rate is the WACC from the 2009 ACT distribution determination.

**Table 7: Time cost of money calculations**

<b>Time cost of money (\$nominal)</b>	
Change in cost	1,857,511
2012/13, 6 months (4.30%)	79,873
2013/14, 12 months (8.79%)	170,296
2014/15, 6 months (4.30%)	90,630
<b>Total (proposed pass through amount)</b>	<b>2,198,414</b>

# Appendix 1 – Regulatory requirements for cost pass through

## Positive pass through

Clause 6.6.1(c) of the National Electricity Rules (NER) requires that ActewAGL, in seeking approval of the AER to pass through a positive pass through amount, must submit within 90 business days of the relevant positive change event occurring, a written statement which specifies:

- (1) the details of the positive change event
- (2) the date on which the positive change event occurred
- (3) the eligible pass through amount in respect of that positive change event
- (4) the positive pass through amount the Distribution Network Service Provider proposes in relation to the positive change event
- (5) the amount of the positive pass through amount that the Distribution network Service Provider proposes should be passed through to Distribution Network Users in the regulatory year in which, and each regulatory year after that in which, the positive change event occurred;
- (6) evidence:
  - a. of the actual and likely increase in costs referred to in subparagraph (3);
  - b. that such costs occur solely as a consequence of the positive change event; and ...
- (7) such other information as may be required under any regulatory information instrument.

Information relating to the timing of this submission and the first two clauses is provided in the section *Positive Change Event*. Information relating to clause 3, 4, 5 and 6 is provided in the section *Costs: Eligible and positive pass through amounts*. No other information is required to be provided under any regulatory information instrument.

## Relevant factors

This appendix provides an index of where ActewAGL has addressed each relevant factor that the AER must take into account:

Relevant Factor	Section
(1) the matters and proposals set out in any statement given to the <i>AER</i> by the <i>Distribution Network Service Provider</i> under paragraph (c) or (f); and	
(2) in the case of a <i>positive change event</i> , the increase in costs in the provision of <i>direct control services</i> that, as a result of the <i>positive change event</i> , the <i>Distribution Network Service Provider</i> has incurred and is likely to incur until: <ul style="list-style-type: none"> <li>(i) unless subparagraph(ii) applies – the end of the <i>regulatory control period</i> in which the <i>positive change event</i> occurred; or</li> <li>(ii) if the distribution determination for the <i>regulatory control period</i> following that in which the <i>positive change event</i> occurred does not make any allowance for the recovery of that increase in costs – the end of the <i>regulatory control period</i> following that in which the <i>positive change event</i> occurred;</li> </ul>	Costs
(2A) in the case of a <i>negative change event</i> , the costs in the provision of <i>direct control services</i> that, as a result of the <i>negative change event</i> , the <i>Distribution Network Service Provider</i> has saved and is likely to save until: <ul style="list-style-type: none"> <li>(i) unless subparagraph(ii) applies – the end of the <i>regulatory control period</i> in which the <i>negative change event</i> occurred; or</li> <li>(ii) if the distribution determination for the <i>regulatory control period</i> following that in which the <i>negative change event</i> occurred does not make any allowance for the pass through of those cost savings to <i>Distribution Network Users</i> – the end of the <i>regulatory control period</i> following that in which the <i>negative change event</i> occurred;</li> </ul>	Not applicable.
(3) in the case of a <i>positive change event</i> , the efficiency of the <i>Distribution Network Service Provider's</i> decisions and actions in relation to the risk of the <i>positive change event</i> , including whether the <i>Distribution Network Service Provider</i> has failed to take any action that could reasonably be taken to reduce the magnitude of the <i>eligible pass through amount</i> in respect of that <i>positive change event</i> and whether the <i>Distribution Network Service Provider</i> has taken or omitted to take any action where such action or omission has increased the magnitude of the	Efficiency of ActewAGL's decisions and actions

amount in respect of that <i>positive change event</i> ;	
(4) the time cost of money based on the <i>allowed rate of return</i> for the <i>Distribution Network Service Provider</i> for the <i>regulatory control period</i> in which the <i>pass through event</i> occurred;	Costs: Time cost of money
(5) the need to ensure that the <i>Distribution Network Service Provider</i> only recovers any actual or likely increment in costs under this paragraph (j) to the extent that such increment is solely as a consequence of a <i>pass through event</i> ;	Costs
(6) in the case of a <i>tax change event</i> , any change in the way another <i>tax</i> is calculated, or the removal or imposition of another <i>tax</i> , which, in the <i>AER's</i> opinion, is complementary to the <i>tax change event</i> concerned;	Not Applicable
(7) whether the costs of the <i>pass through event</i> have already been factored into the calculation of the <i>Distribution Network Service Provider's annual revenue requirement</i> for the <i>regulatory control period</i> in which the <i>pass through event</i> occurred or will be factored into the calculation of the <i>Distribution Network Service Provider's annual revenue requirement</i> for a subsequent <i>regulatory control period</i> ;	Costs: Distribution Determination
(7A) the extent to which the costs that the <i>Distribution Network Service Provider</i> has incurred and is likely to incur are the subject of a previous determination made by the <i>AER</i> under this clause 6.6.1; and	
(8) any other factors that the <i>AER</i> considers relevant.	Not Applicable