

AER Technical Advisory Group



Targeted Technical Advice

Subject: Advice on ActewAGL vegetation management cost pass through – Review of ActewAGL response to AER draft determination

Advice request by: Matthew Le Cornu

Team: Networks

Technical Advisor: John Thompson

Reviewed by: Anthony Seipolt
Yili Zhu
Mark Wilson

TrackIT ID: 54608

Record No:

Issue Date: 30/06/2014

TAG Curriculum Vitae: [D14/62889](#)

Background and reference documents: [D14/73053](#)

Issue Description

In response to the AER's draft determination ActewAGL submitted a response supported by a report prepared by Jacobs Group (Australia) Pty Limited (Jacobs). The TAG has been requested to provide advice on the issues raised in the Jacobs' report.

In summary, based on the information provided by ActewAGL the TAG remains of the opinion that ActewAGL did not take reasonable steps to minimise or avoid the cost impacts of the regrowth event and that the business' vegetation management costs are inefficient for the reasons give below.

TAG Advice

The Jacobs' report comments on the previous advice provided by the TAG on 23 May 2014 ([D14/73053](#)). Specifically, Jacobs addresses three matters:

1. contracting methodology
2. unit rate costs
3. ActewAGL's vegetation management strategy

With regards to contracting methodology Jacobs contends that '...DNSPs in Australia use a mix of contracting strategies ...'¹, and notes various contracting models.

The TAG agrees that DNSP's employ a range of contracting models in managing vegetation. For example, in Victoria CitiPower and Powercor utilise a lump sum incentive based model linked to outcome performance specifically because other models, including agreements based on a schedule of rates, rewarded the contractor for undertaking increased levels of clearing².

It is noted that the entity previously known as Aurora Energy (now part of Tasmanian Networks Pty Limited, trading as TasNetworks) also adopted a unit rate based model based on [REDACTED]

¹ Jacobs Group, 'Vegetation Management Cost Pass-through application', 17 June 2014, p. 3.

² <http://www.aer.gov.au/sites/default/files/Vegetation%20Management%20submission%20200712.pdf>

In NSW all three DNSPs use different contracting models with AusGrid and Endeavour employing varying forms of performance based approaches. Like ActewAGL, Essential Energy has historically utilised an hourly rate based approach but has recently recognised, along with Networks NSW,³ that performance based unit rate models (e.g. area based, whole of network, etc.) can provide greater efficiencies, and has undertaken to move towards outcomes based models based around unit rate structures.

Consequently, while we agree that DNSPs use various contracting models, the issue is not that DNSPs use various models but rather which models tend to be reasonably efficient and effective. In our experience and in the various documents noted above, hourly rate models are generally associated with higher costs and tend to pass the risk to the NSP. Unit rate models on the other hand tend to support performance based outcomes and consequently are more broadly adopted throughout the industry.

Jacobs also contends that the ‘... use of hourly rate contracts for un-programmed, unexpected, or emergency response work is the most common practice across the Australian electricity supply industry, and we believe that it constitutes what a prudent and efficient operator would have done under the circumstances that ActewAGL experienced in 2011/12 and 2012/13.’⁴

In characterising the ActewAGL response to the regrowth event as un-programmed, unexpected, or emergency response work, Jacobs seems to be suggesting that ActewAGL’s vegetation management work throughout 2012/13 was not programmed, was unexpected or was reactive to an emergency situation, which is far from the fact.

There is a small percentage of vegetation management work that is reactive and un-programmed. This included storm activities and other emergency works. These works represent a very small component of the overall vegetation management activity and may be dealt with on an hourly rate contract. In lump sum contracts, these works included in the overall contract scope of works and are not subject to additional hourly rate payments.

While hourly rate contracts may be more common than unit rate models for the types of works Jacobs is describing, we strongly disagree that the bulk of vegetation management is of the character of un-programmed, unexpected, or emergency response work. On the contrary, in our opinion regrowth following a saturating rain event can at the very least be observed and should be responded to in a planned and controlled manner. In our opinion ActewAGL had time to assess the situation, consider the impact of its approach on the broader program of works, reprioritise its works programs including lower priority vegetation management works, and engage contactors under a contacting model appropriate to the circumstances.

With regards to unit rate costs Jacobs contends that the benchmark used to assess the overall efficiency of ActewAGL’s vegetation management unit costs is flawed due to a number of factors. Specifically that the benchmark failed to consider:

- the impact of the high rainfall in period in 2010/11 and 2011/12 on regrowth rates, not only in the ACT, but also across the eastern states.
- the extent to which the network concerned is impacted by vegetation - a lightly vegetated supply area will have lower costs than a heavily vegetated area
- normalising factors that drive cost differences such as vegetation density and growth rates

To test these claims the TAG has considered the total vegetation management costs of DNSPs normalised against kilometres of maintained vegetation corridors (or maintained km’s) for the DNSPs that are in the geographical vicinity of ActewAGL.

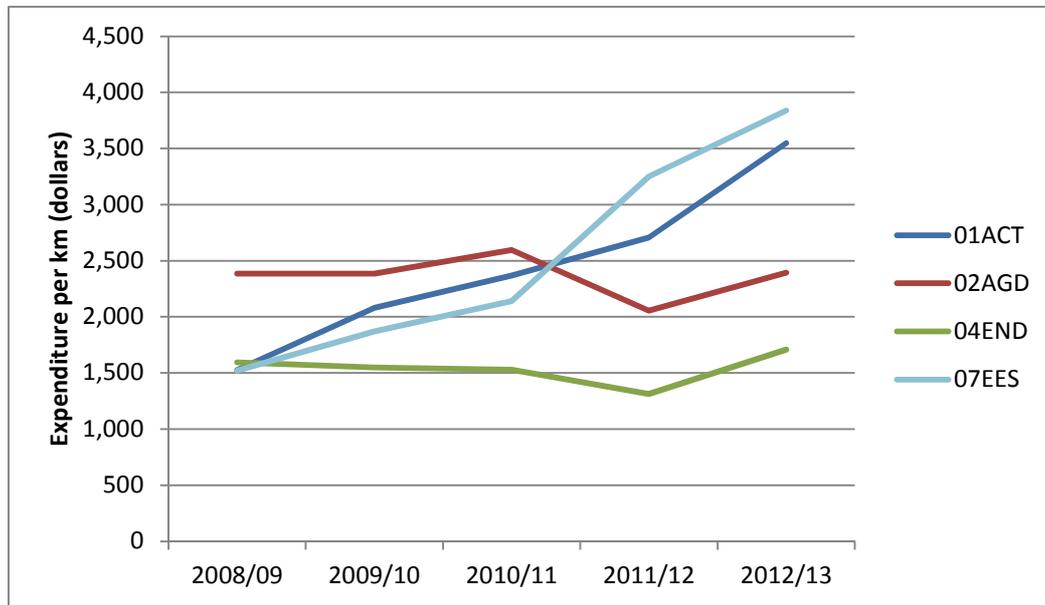
By using the length of the corridors maintained we are reasonably accounting for the extent to which the network is impacted by vegetation and by selecting those DNSPs with supply areas in the geographical

³ Essential Energy, ‘Item 6.2, Appendix – Vegetation Management Review Findings, 2014, p. 9.

⁴ Jacobs Group, ‘Vegetation Management Cost Pass-through application’, 17 June 2014, p. 3.

vicinity we expect that similar species of predominant vegetation will be reasonably accounted for. As noted by Jacobs, the selection of DNSPs in the geographical vicinity will also reasonably account for the impact of the high rainfall period that impacted on the ACT as well as across the eastern states.

On this basis we have excluded Queensland and DNSPs Victoria as the vegetation species, climatic conditions and bushfire management requirements are significantly different to the areas around the ACT, the central and southern NSW coastal regions. The following figure shows the result of this analysis⁵.



As Jacobs correctly points out, we need to account for the factors that differentiate the circumstances and hence costs incurred by the businesses. Accordingly we note that Essential Energy's cost increase from 2010/11 to 2012/13 relate to inefficiencies in practices and contracting methods that have been identified by the business in their recent regulatory submission. In particular we note that Essential Energy has identified that "The hourly rate model creates little or no incentive for contractors to deploy resources efficiently as all of their costs are covered. In fact the reverse is the case with an hourly rate model creating an incentive to over service the business."⁶ As a consequence Essential Energy has undertaken to move to an outcomes based contractor management model⁷ and has stated that 'For the 2014-19 regulatory control period, a decrease in annual vegetation management costs arises due to achievement of efficiencies through a number of strategic reform initiatives further detailed in the vegetation management AMP.'⁸

It is also noted that Essential Energy services a large areas of northern NSW which exhibit vegetation and climate conditions more allied to Queensland than the ACT. While it is recognised that this drives Essential Energy's vegetation costs higher than the benchmark rates in this sample no adjustments have been to the data to account for these differences.

Allowing for the circumstances and cost impacts noted above, the figure shows that the total vegetation management costs incurred by AusGrid and Endeavour have remained relatively flat on a per km basis over the entire period including the drought years as well as the high rainfall in period of 2010/11 - 2011/12.

The above figure also shows the increasing trend in total vegetation management cost per km of maintained vegetation corridor incurred by ActewAGL from 2008/09 to 2012/13. This is the same trend that the TAG referred to in the context of our benchmarking analysis based on total cost per network span in our first

⁵ This analysis is based on RIN data submitted 2 June 2014. Figures are nominal.
⁶ Essential Energy, 'Item 6.2, Appendix – Vegetation Management Review Findings, 2014, p. 13.
⁷ Essential Energy, 'Item 6.2, Appendix – Vegetation Management Review Findings, 2014, p. 9.
⁸ Essential Energy 'Regulatory Proposal 1 July 2014 To 30 June 2019', 31 May 2014, p. 73.

report ([D14/73053](#)) In our opinion this clear trend in the above benchmark reinforces our earlier observations that ActewAGL's total vegetation management cost appears inefficient and that since 2008/09 there has been a marked upward trend in ActewAGL's total vegetation management cost with no evidence of any action taken by the business to arrest the impact of this trend on total costs.

The previous figure highlights that the two DNSPs with a significantly increasing cost trend both employed hourly rate contracting models. While Essential Energy has identified this model as inefficient and is seeking to change to a more efficient contracting model, ActewAGL is claiming that the cost increases are external to its control and is seeking for consumers to fund the additional costs.

Jacobs also comments on ActewAGL's vegetation management strategy contesting that ActewAGL is pro-active in their approach to vegetation management and evidences this by citing a number of practices including:

- regular ground patrols on a defined cycle
- trimming to allow for three years regrowth
- undertaking aerial patrols in 2011/12 when ground patrols became difficult due to ground conditions and when multiple clearance breaches emerged
- more regular aerial patrols to compliment ground patrols and further LiDAR trials
- advertising campaigns and advice on suitable trees and shrubs for planting near power lines

In closing Jacobs contends that '... no DNSP in Australia monitors rainfall (in an active and continuous sense), and adjusts pruning practice accordingly.'⁹ Jacobs goes on to note that 'To some extent this is what vegetation inspectors do intuitively, and ActewAGL's three year regrowth cutback is designed to accommodate.'

The TAG agrees that the practices identified by Jacob are proactive in nature. However, they are also common practices generally used by most DNSPs across the industry¹⁰. In our first report ([D14/73053](#)) the TAG was not referring to vegetation management practices in general, rather we were specifically considering to what extent the strategy used by ActewAGL, as apparent though its actions, enabled it to avoid, reduce, or mitigate the costs it incurred due to the regrowth event. In this context we contemplated good practice strategic vegetation management techniques that involve observing the drivers of cost and performance and responding through adapting practices and targeting responses to manage trends in the drivers of cost and performance.

While we agree with Jacobs that vegetation managers intuitively follow such practices, we have not cited any evidence from ActewAGL that it explicitly took reasonable managed steps to avoid the cost impacts of the regrowth, rather than rely on what appears to be undocumented, unmanaged and unstructured intuitive responses of its individual staff.

ActewAGL has not submitted any evidence that shows that the business recognised the escalating costs, or the growing unit cost trend apparent in the above benchmark or in the benchmark used in our first report ([D14/73053](#)), and hence responded in a managed way to reduce the cost impact of the regrowth event. Good industry practice requires review of costs and performance, particularly in response to significant events and this is not evident in the information provided by ActewAGL either in its earlier or most recent responses. Rather the information the TAG has reviewed suggests that ActewAGL simply continued its standard practices in the face of growing cutting volumes, growing costs, and increasing unit cost trends that would have been apparent in management key performance indicators. This view is reinforced by the advice

⁹ Jacobs Group, 'Vegetation Management Cost Pass-through application', 17 June 2014, p. 6.
¹⁰ With the exception of LIDAR that is an emerging technology.

from ActewAGL that it does not keep records and data of the volume of its vegetation management activities¹¹. This lack of key information will impact strategy development, governance practices (e.g. monitoring KPIs), work planning, efficiency improvement and risk management.

Based on the documentation submitted by ActewAGL the TAG has found no information to suggest that ActewAGL recognised the escalating costs or took reasonable steps to minimise or avoid the cost impacts of the regrowth event. Consequently we remain of the opinion that ActewAGL's vegetation management costs are inefficient and that its reactive management of the regrowth event did not reasonably minimise or avoid the associated costs but rather contributed to the cost increases.

¹¹ 20140212-sub-vegetation_second_information_request_-_submission-public-version-Redacted.pdf