

**Endeavour Energy's  
response to Coronial  
recommendations handed  
down on 23 May 2018**

## Foreword

Endeavour Energy welcomes the Magistrate Coroner's report into the cause and origin of the 2013 Springwood and Mt Victoria bushfires and her independent assessment of the available evidence.

The Magistrate Coroner concluded that the Springwood fire began after a tree fell onto power lines causing electrical arcing, and the Mt Victoria fire started when a branch came into contact with a high voltage power line causing arcing. Both trees were standing on private property, outside Endeavour Energy's clearance zones. In the Springwood fire, the tree appeared strong, but in fact had rotted from the inside out and so collapsed at the base of its trunk and fell over powerlines in Linksvie Road Springwood. Both fires began on a day of extreme bushfire risk, with temperatures around 30 degrees and winds gusting up to 80 kilometres per hour.

The Magistrate Coroner made eight recommendations in total, with three relating to Endeavour Energy. In the interests of transparency and accountability, the purpose of this document is to explain how Endeavour Energy has actioned the recommendations.

In 2016, along with other interested parties, Endeavour Energy was invited by the Counsel Assisting the Coroner to comment on some proposed recommendations. We actioned the three proposed recommendations as they were stated at the time, with a view to helping minimise bushfire risk and to reassure our customers that we take our safety responsibilities extremely seriously. We have now reviewed these actions against the three final recommendations and have implemented all recommendations.

We hope these actions will support Endeavour Energy's existing pre-summer inspection program of all power lines in high bushfire risk areas. This includes an annual investment, on average, of \$50 million in programs to minimise bushfire risk, including:

- routine maintenance programs to identify and fix faults before the bushfire season;
- annual aerial and ground inspection of overhead power lines in bushfire prone areas;
- clearing vegetation from overhead power lines according to distances set out in industry guidelines; and
- disconnecting electricity supply on private property where customers ignore warnings to repair their private network in high bushfire risk areas.

Since 2013, we've also made greater use of helicopter patrols ahead of summer in high bushfire risk areas, fitted with special cameras which feature light detection and ranging technology, (LiDAR) as well as high definition photography capability. This technology illuminates a target with a laser and then analyses the reflected light to build a '3D' picture of the state of the overhead network, and provides a detailed view of the network assets.

Over the past year, we used LiDAR technology and high resolution photography to check for trees coming close to power lines and to inspect more than 102,000 power poles in bushfire-prone areas with a further 47,000 poles inspected from the ground.

Safety is our most important commitment and we welcome the Magistrate Coroner's recommendations to help reduce the risk of bushfires.

Rod Howard  
Chief Operating Officer  
Endeavour Energy

Coroner's Recommendation	Status Update (as at December 2018)
Recommendations involving Endeavour Energy	
<p><b>Recommendation 1:</b> <i>That Endeavour Energy revise its policies, procedures and contracts taking into account amendments to MMI0001 and MMI0013, so as to clarify in clear and concise wording, the expectations of Endeavour Energy of the contractors and the obligations of contractors carrying out work under the Vegetation Management Program and Pre Summer Bush Fire Inspection Program.</i></p>	<p><b>Policy</b></p> <p>Endeavour Energy coordinated a NSW distribution industry standards committee to provide clarity and clearer definitions for key terms used in vegetation management with a particular emphasis on the definition of "hazard tree." These definitions were included in an updated version of the Industry Standards Safety Committee 3 (ISSC3) document available online since 2 November 2016 at <a href="https://www.resourcesandenergy.nsw.gov.au/energy-supply-industry/pipelines-electricity-gashttps://www.resourcesandenergy.nsw.gov.au/energy-supply-industry/pipelines-electricity-gas-networks/electricity-networks/safety-electricity-industry-safety-steering-committee-guidelinesnetworks/electricity-networks/safety#electricity-industry-safety-steering-committee-guidelines">https://www.resourcesandenergy.nsw.gov.au/energy-supply-industry/pipelines-electricity-gashttps://www.resourcesandenergy.nsw.gov.au/energy-supply-industry/pipelines-electricity-gas-networks/electricity-networks/safety-electricity-industry-safety-steering-committee-guidelinesnetworks/electricity-networks/safety#electricity-industry-safety-steering-committee-guidelines</a></p> <ol style="list-style-type: none"> <li>1. Endeavour Energy then updated its Company Policy 9.1.1 Bushfire Risk Management to reflect these clearer definitions and made this policy available on its intranet site for use by staff and contractors</li> </ol>
	<p><b>Procedures</b></p> <ol style="list-style-type: none"> <li>1. Endeavour Energy revised Mains Maintenance Instruction 0001 (MMI0001) and MMI013. The definitions within both of these documents have been aligned to the ISSC3 document containing the clarified, industry wide definition.</li> <li>2. MMI0034 "Pre summer bushfire inspections" was also revised and amended to ensure consistency with the clarified, industry wide definition contained in the ISSC3 document. The revised version of MMI0034 "Pre-summer bushfire inspections" was approved on 24 November 2016 and can be found at <a href="http://www.endeavourenergy.com.au">www.endeavourenergy.com.au</a>.</li> <li>3. MMI0001, MM0034 and MMI013 and any amendments have been communicated to Endeavour Energy staff through formal channels and through face to face presentations to vegetation management staff and contractors.</li> </ol> <p><b>Contracts</b></p> <ol style="list-style-type: none"> <li>1. Endeavour Energy has reviewed its contracts to clarify our expectations and the obligations of contractors in relation to vegetation management across our network.</li> <li>2. The contracts for Vegetation Management and Pre Summer Bushfire Inspection have been revised to ensure that the specifications in these contracts refer to the amended versions of MMI0001 and MMI0013. As a result, these contracts include the industry wide updated definitions of key terms, including "hazard trees".</li> <li>3. Contractors were informed by letter about the updates to MMI0001 and MMI013.</li> </ol>

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<p><b>Recommendation 2:</b> <i>That Endeavour Energy revise its policies, procedures and contracts so as to require contractors engaged under the Vegetation Management Program and Pre Summer Bushfire Inspection Program to ensure that persons carrying out scoping work have received appropriate training and equipment including but not limited to a "sounding hammer" or "rubber mallet" and the appropriate training in the use of that equipment to enable them to carry out the works contracted to be performed.</i></p>	<p><b>Policy</b></p> <ol style="list-style-type: none"> <li>1. Endeavour Energy coordinated a NSW distribution industry standards committee to provide clarity and clearer definitions for key terms used in vegetation management with a particular emphasis on the definition of "hazard tree." These definitions were included in an updated version of the Industry Standards Safety Committee 3 (ISSC3) document available since 2 November 2016 <a href="https://www.resourcesandenergy.nsw.gov.au/energy-supply-industry/pipelines-electricity-gasnetworks/electricity-networks/safety#_electricity-_industry-_safety-_steering-_committee-_guidelines">https://www.resourcesandenergy.nsw.gov.au/energy-supply-industry/pipelines-electricity-gasnetworks/electricity-networks/safety#_electricity-_industry-_safety-_steering-_committee-_guidelines</a></li> <li>2. Endeavour Energy then updated its Company Policy 9.1.1 Bushfire Risk Management to reflect these definitions and made this policy available on its intranet site for broad use by staff.</li> </ol> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Endeavour Energy revised MMI0001 and MMI013. The definitions within both standards have been aligned to ISSC3.</li> <li>2. The revised version of MMI 0034 "Pre-summer bushfire inspections" was approved on 24 November 2016 and can be found at <a href="http://www.endeavourenergy.com.au">www.endeavourenergy.com.au</a>.</li> <li>3. MMI0001, MM0034 and MMI013 have been communicated to Endeavour Energy staff through formal channels and through face to face presentations to vegetation management staff and contractors</li> <li>4. The use of sounding hammers has been included in the Endeavour Energy Hazard Tree Course.</li> <li>5. Sounding hammers have been purchased and issued to Endeavour Energy's AQF Level 5 arborists.</li> <li>6. The Hazard/Discretionary Works Work Place Instruction WVM 0840 has been updated to include the use of sounding hammers.</li> </ol> <p><b>Contracts</b></p> <ol style="list-style-type: none"> <li>1. Vegetation Management and Aerial Patrol and Analysis (i.e. pre-summer bushfire inspection) contracts have been checked. The contract specifications refer to MMI0001 and MMI0013 as amended. Hence, as the standards are updated as per item 2 under <b>Procedures</b> heading above the updated definition of "hazard trees" now forms part of the contracts.</li> <li>2. A registered training organisation (Workspace) was engaged to develop a course outline and key learning outcomes for hazard tree identification as defined in the revised standards MMI0001 and MMI0013 reported above. The course (which includes the use of sounding hammers) will become part of the national competency framework for vegetation management. The course content is finalized and is expected to be accredited for inclusion in the national competency framework by mid 2019.</li> <li>3. The course was delivered to all Endeavour Energy Tree Management Officers on 7 June 2017.</li> <li>4. The course was delivered to all contractor staff during the period 7 June 2017 to 20 April 2018.</li> </ol>

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<p><b>Recommendation 8:</b> That Endeavour Energy:</p> <p>a) <i>Introduce or revise policies and procedures to require employees and its contractors to co-operate with and assist NSW Police, the Rural Fire Service and/or Fire and Rescue NSW in the course of fire investigations in which Endeavour Energy assets may be implicated in the cause of the fire; and</i></p> <p>b) <i>Liaise with NSW Police, the Rural Fire Service or Fire and Rescue NSW to develop a memorandum of understanding setting out Endeavour Energy's role in assisting with fire investigations in which Endeavour Energy assets may be implicated in the cause of the fire.</i></p>	<p><b>Policies and procedures</b></p> <ol style="list-style-type: none"> <li>1. Endeavour Energy revised its Company Procedure (GAM 0121) – Fire Incident Investigation on 8 August 2016 to include additional requirements for Endeavour Energy's Lead Investigator to liaise with and provide reasonable information and assistance to the relevant fire investigating authority.</li> <li>2. Endeavour Energy has liaised with NSW Police, the Rural Fire Service or Fire and Rescue NSW to develop a memorandum of understanding (MoU).</li> <li>3. The MoU was executed by all parties by 29 November 2018.</li> <li>4. Endeavour Energy has revised its policies and procedures to reflect the terms of the MoU.</li> <li>5. Training of relevant Endeavour Energy employees in the requirements of the MoU and its practical implementation is occurring.</li> </ol>