

Title: The Technology response to the Bushfires Royal Commission – using technology to reduce the probability of electricity fire starts

by

Graeme McClure, Principal Engineer Protection, Control and Automation, AusNet Services

12:00 pm – 1:00 pm, Monday, 5 October 2015
Room NA 1.418, GTP building (Ground Floor),
Deakin University, Waurn Ponds, Geelong, Australia

RSVP – <http://www.deakin.edu.au/research/cisr/workshops/ieee-smc-vic.php>

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Abstract

The Technology response to the Bushfires Royal Commission – using technology to reduce the probability of electricity fire starts

The Victorian electrical distribution network is converting to resonant earthing in bushfire prone areas. The use of resonant earthed electrical distribution feeders with residual current compensation is a technology “considered worth investigation” for used on Victorian Electricity Distribution feeders to reduce the possibility of fire starts. This recommendation was made by the Victorian Bushfire Taskforce, set up by the Department of Primary Industries (DPI) Victoria and Energy Safe Victoria (ESV), in response to recommendation 27 of the 2009 Victorian Bushfires Royal Commission. This technology is characterised by its rapid response rate and extremely low residual currents that flow into a fault. Resonant earthing systems with residual current compensation are commercially used for improving network reliability and have never been evaluated for use for its ability to reduce fire starts. The presentation shall cover the performance of preliminary testing of resonant earth systems and other technology to minimise the potential for fire starts from electrical distribution line faults.

Biography:

Graeme McClure, Principal Engineer Protection, Control and Automation

Graeme is a technical specialist on network aspects of smart grid at AusNet Services. He is responsible for AusNet Services technology review in response to the Victorian Bushfires Royal Commission. He is also the technical lead on AusNet Services self healing network, integrated Volt / Var strategy, integrating embedded generation and storage, and enhanced distribution network control. AusNet Services self-healing network has been in service for three years and has changed several aspects of operating the network. Distributed generation at AusNet Services ranges from wind farms to domestic solar. Many mid-sized embedded generators produce power from tip gas and water transfer. Integrated Volt Var control (IVVC) and embedded energy storage are seen as key technologies for the future.

Prior to working with AusNet Services, Graeme was employed as product development manager at Doble for Asia Pacific, Middle East and Africa regions. He also previously held a position as product development manager for outdoor automated distribution switchgear at ABB in Raleigh, N.C. Graeme began his engineering career as an engineer-in-training with the State Electricity Commission of Victoria and hold a degree in electrical and mechanical engineering.