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How safe is safe enough? Effective safety frameworks.

Gaye Francis, Tim Procter and Richard M Robinson

R2A Due Diligence Engineers, Melbourne; gaye.francis@r2a.com.au

Abstract

Electrical networks in Australia and New Zealand operate in an evolving and interesting regulatory space with overlapping financial, safety and security of supply issues. There is also a plethora of sometimes contradictory standards. Wending a path that simultaneously satisfies all of the competing issues is complex and fraught with methodological superstition. This undoubtedly creates substantial unnecessary expense and waste.

From the viewpoint of an effective safety framework, the key issues we believe are causing the greatest angst at the moment are as follows:

1. Competition v Cooperation Policy

The mantra of competition policy is being considered in isolation from the rest of the competing requirements for the safe (and reliable) delivery of electrical energy. This includes both security of supply and safety generally, and especially in Victoria major bushfires started by the electricity network. For example, high reliability requires redundancy whereas commercial efficiency is typically achieved by running without headroom. The current manifestation of economic competition policy does not deal effectively with disaster scenarios (where cooperation is essential) especially for low likelihood, high consequence events, such as black or ash bushfire days.

2. Risk Management Standard v Work Health and Safety Legislation

The obligations of Work Health and Safety (WHS) legislation conflict with the Risk Management Standard (ISO31000) which most corporates and governments mandate. This is creating very serious confusion, particularly with the understanding of economic regulators.

The risk management standard tries to manage 'risk' to 'acceptable' levels, whereas the model WHS and Victorian OHS legislation ensures that everyone is entitled to the same minimum level of protection (but not necessarily the same level of risk).

3. Network Standards with internal contradictions

Standards with internal contradictions like *AS 5577:2013 – Electrical network safety management systems* and the *EG(0) Power System Earthing Guide* create enormous tensions. Specifically, they advocate using target risk criteria such as ALARP, below which risks are deemed 'tolerable' and do not require further action, a position in conflict with the health and safety legislation passed by all Australian parliaments and decisions of the High Court of Australia.

These key points will be discussed in this paper together with a possible way forward.

Key words:

Due Diligence, Risk Management, Electricity Safety Management Systems