

ORDER
ENERGY COORDINATION ACT 1994 S. 18B

TO: ALL PERSONS CARRYING OUT HIGH VOLTAGE LIVE LINE WORKING AND TESTING OF LIVE WORKING EQUIPMENT

PRELIMINARY

Pursuant to s.18B of the *Energy Coordination Act 1994*, this Order dated 13 April 2021 is issued to and affects all service providers undertaking high voltage (HV) live line work and the testing of HV live line equipment.

LIVE LINE WASHING HIGH VOLTAGE FLASHOVER ON 22 JANUARY 2020

On 22 January 2020 a line crew was carrying out live line washing of insulators on a HV 22kV overhead powerline in preparation to apply an insulator coating. During the washing process there was a flashover across the live line washing stick being operated by a line worker.

Washing of overhead power insulators is carried out by using high pressure demineralized water to clean dirt and contaminants off insulators. The task requires a line worker, operating from an elevated work platform and using a HV rated live line washing stick, to high pressure clean each insulator. The live line washing stick, sometimes referred to as a washing wand, comprises of a live line work stick and an insulated high pressure non-conductive hydraulic hose.

This accident is under investigation by Building & Energy. While the investigation is not complete, it appears that there has been a failure with the live line work stick.

Opinion

Based on evidence obtained thus far from the investigation, I have formed the opinion that there was a deficiency in the type of live line washing stick being used at the time of the incident. Moreover I have formed the opinion the testing of the live line washing stick did not meet the minimum requirements.

ACTIONS REQUIRED

1. All service providers carrying out live work must ensure all high voltage live work sticks comply with the Australian Standard AS 5804.1 – 2010 *High voltage live working Part 1: General*, in particular section 10 - *Equipment*. Section 10.6 reference's AS 5804.3 *High voltage live working Part 3: Stick work*, which provides details on live work sticks. Section 4.1 stipulates;
 - a. Live work sticks must be foam-filled, hollow sticks must not be used.
 - b. Live work sticks must comply with ASTM F711 *Standard Specification for Fibreglass-Reinforced Plastic (FRP) Rod and Tube Used in Live Line Tools*, or IEC 60855 *Live working – Insulating foam-filled tubes and solid*

rods. Both these standards specifies the process in the manufacture of a purpose built live line work sticks. Most importantly the finished stick must carry information affixed to the stick comprising of;

- i. Name of manufacturer
 - ii. Month and year of manufacture and
 - iii. That the product meets the requirements and bears the designated number of the applicable standard, ASTM F711 or IEC 60855.
2. Prior to use, as specified in the Australian Standard, all live working sticks and hydraulic hoses are to be regularly inspected and undergo regular wet and dry electrical testing. Line workers must ensure all live work equipment that is to be used is within test date and suitable for the work being performed.
 3. Service providers operating testing facilities must ensure live work equipment is tested according to Australian Standard AS 5804 – 2010 Parts 1 to 4. Only those live work sticks which bear the label confirming the stick has been manufactured to the applicable standard, ASTM F711 or IEC 60855, can be tested and be certified as safe for live line work.

This Order applies to live work sticks used for the washing of insulators and the insulator coating treatment.



Saj ABDOOLAKHAN
DIRECTOR OF ENERGY SAFETY

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