Cross country faults

PBSC 14 March 2017 – Agenda Item 6 – Tony Marxsen

Cross-country faults – what are they and why are they important?

Outline of conversation:

1) Test 113 (NER) and Test 158 (REFCL) at Frankston
    - Test 113 compressed
    - Test 158 compressed
2) Test 217 at Frankston
3) REFCLs displace network voltages to stop fires
4) Voltages on un-faulted phases rise 73% above normal right across the network
5) Asset failures on un-faulted phases create a second fault – a 'cross-country fault'
6) The assets that fail tend to be the usual suspects: surge diverters, underground cables, etc.
7) REFCLs can only deal with one fault at a time
8) A cross country fault means two high-current faults on the network and high fire risk
9) Cross-country faults can occur when assets fail inside HV Customer premises
10) To reduce the risk, REFCL commissioning includes network hardening and 'soak' tests