SAFETY ALERT

COUNTIESPOWER

High Potential Near Miss Following the Use of High Voltage Contact Tester (Capacitive Tester)

Background:

An overhead team was required to replace a faulty pole mount transformer. The crew was testing the live side of the HV isolators to prove that their Sofamel HV contact tester was functioning correctly. This was being undertaken before the team was required to test the deenergised side of the HV isolators, earth the isolators, and undertake the transformer replacement.

Event:

A known live HV jumper on the supply side of the isolators was tested using the HV tester and the first attempt gave no response, therefore indicating that the lines were not live. Knowing that the lines should be live, after receiving this result the crew tested a 2nd time on the HV jumper and once again the detector showed no voltage present. The 3rd test was performed on the steel connectors on the top of the isolators, resulting in positive indication that there was high voltage present. Upon closer inspection it was found that the HV jumpers feeding the tops of the HV isolators were a PVC conductor (insulated only for Low voltage), which can be found on older parts of the network where connections are made to the copper overhead conductor.

Moving Forward

This high potential safety observation comes following various industry safety alerts around best practice use of HV contact testers (see the attached hazard alert).

Note: HV contact testers rely on direct contact between the metallic surfaces of the tester electrode and the overhead conductors to indicate a high voltage. Even though the PVC insulated jumper is only insulated to low voltage, the residual voltage at the surface of the PVC is not great enough to activate the voltage detector.

For all circumstances using High Voltage Contact Testers on the following key points must be adhered to at all times.

1. Direct steel to steel contact must be made.
2. Line jumpers **must not** be used to test for high voltage with a HV contact tester. Instead the overhead line conductor should be used or in the case of overhead transformer installations or HV cable risers, the earthing spigot on isolators should be used.
3. Ensure that the tester **is not** reaching across other phases as this can effect results.
4. All other circumstances referred to in the attached hazard alert.