NR/L3/ELP/SAI25 – Working on or near lineside track feeder disconnectors at the interface of an auxiliary 25kV supply to a Principal Supply Point

Guidance note

Issue 1 26/03/25 Matt Skinner, Principal Engineer, Technical Authority Contact Systems Team

Working on a lineside track feeder disconnector

Further to recent discussions on the arrangements required to work on an Overhead Line Equipment (OLE) lineside disconnector which is at the interface of an auxiliary 25kV supply to a Principal Supply Point traction supply, the following approach may be applied in lieu of the content of NR/L3/ELP/SAI25/Appendix D.

The preferred hierarchy is:

a) *Where reasonably practicable, and in addition to the earthing arrangements required to earth the OLE associated with the relevant lineside disconnector, the low voltage (LV) circuit breaker between the traction rectifier and the LV side of the auxiliary transformer should be secured in the open position prior to work commencing.*

However, it is recognised that there is no process currently to record and inform the Nominated Person (NP) that such an action has been undertaken. It's also recognised that there is a resource demand to achieve this which would involve additional risks including driving.

b) *In addition to the earthing arrangements required to earth the OLE associated with the relevant lineside disconnector, a circuit main earth (CME) shall be applied (duplicate portable earths) to the cable sealing end (as is the practice today).*

Staff undertaking work on the disconnector may work up to the duplicate portable earths but shall not interfere with them whilst the Overhead Line Permit (OLP) is in place.

The rational for this approach is that the likelihood of the District Network Operator (DNO) supply failing and there being a fault with the traction rectifier package that would cause a back feed scenario, is very low. In the event that it does occur, the two portable earths will be adequate mitigation against the risk of an inverted supply.

Working where a lineside track feeder disconnector is within the OLP along-track limits

The interim solution where work will NOT take place within 600mm of the disconnector, is as follows:

a) *The lineside disconnector shall be operated in accordance with the relevant isolation instructions.*

b) *Where the isolation instructions do not require the disconnector to be opened, then:*

- *where 400m (¼ mile) earthing is in place, no further actions are required*
- *where 3200m (2 mile) earthing is in place, an additional earth shall be applied within 200m of the lineside track feeder disconnector connection to the electrical sections being isolated*

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Working where a lineside track feeder disconnector is within the overall Form B limits but NOT within the OLP along-track limits

The interim solution is as follows:

a) *The lineside disconnector shall be operated in accordance with the relevant isolation instructions*

b) *Where the isolation instructions do not require the disconnector to be opened, then no further action is necessary*

Next Steps

The ESD Programme and Technical Authority will undertake further work such that all parties have a clear set of instructions and a process to work to for this scenario in the future. We will address this matter as part of the work on issue 5 of NR/L3/ELP/SAI25.

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