Linesperson climbing iron pierces live 11kV cable on pole causing flashover

In May a service partner linesperson in SPM, who was working off climbing irons to connect a generator, slipped causing his climbing iron to pierce a live 11kV cable on the pole, resulting in a flashover. There were no injuries.

The cable subsequently caught fire and continued to burn until the network was remotely isolated and a fire extinguisher was utilised to put out the flames.

The work on the H pole involved connecting a generator to two LV cable circuits to allow a generator to be connected. Both cables were fed from the Lucy 400 fuse mounts. Due to the set up of the fuses direct connection of a generator for synchronisation is not possible therefore the linesperson was required to work around the pole to attach the generator leads to the outgoing LV cables. This formed his decision to use climbing irons rather than a ladder owing to the need to work at various positions for a short duration. Additionally, traffic access on site hindered the use of a MEWP.

The LV fuses had been positioned at a relatively high level, although the cable guard had not been extended. The climbing iron pierced the cable above the cable guard. Had the guard been extended it would have most probably prevented the piercing.



H Pole - with cable alight



Damage to climbing iron

Recommendations and action points

Although the use of climbing irons on poles with live cables attached is permitted under the safety rules and pole access procedures, the investigation made the following recommendations.

- Perform a site specific risk assessment and apply the hierarchy of pole access whilst taking into account specific risks on the pole such as live cables, appropriate mechanical guarding and any attached or protruding objects. The following documents provide guidance:
    - OHL-17-005 Pole Access **(access internally to SPEN only)**
    - SMS-04-034 Working at Height on Plant and Structures within SP Energy Networks **(access internally to SPEN only)**
- New installations must have LV fuses installed at the correct height and cable guards installed to a height commensurate with the height of any plant that may require access via the use of climbing irons.
- Provision of a means of connecting generator cables at all pole mounted fuse units would enable compatibility with synchronised generator connection.