TRANSPOWER

SAFETY ALERT!

17th July 2014

Whirinaki CB 2872 not fully opened – Red phase live

WHAT HAPPENED?

On the 10th July an audible noise coming from WHI 11 kV Bus B switchgear led to a decision for an urgent outage on 11th July 2014 to investigate the cause.

During the switching operation to remove Bus B, the operator noticed a single phase voltage still present on Bus D, which is not normal. Further switching and opening the disconnectors isolated the single phase voltage. Investigations identified the voltage originated from Bus A through the opened CB2872.

Testing using Voltage detector Device (VDD) identified that red phase was still live via CB 2872.

Switchers then noticed the IVIS display on CB 2872 indicating red phase live. Red phase of CB 2872 had failed to open and a continuous current of 20 Amps detected.

Review of switching history found that the mal operation of CB 2872 first occurred on 23rd Oct 2012 and five switching operations have occurred without realizing the anomaly until the outage on 11th July 2014.

IVIS panel

IMMEDIATE ACTION TAKEN

- Isolated WHI CB 2872 from Bus B by opening DIS 1214 at the transfer Bus D. CB 2872 is not to be operated to avoid any major failure or damage.
- Yellow tags “Do no operate ES 1219 and DIS 1214” were placed on the control mimic panel in the WHI’s relay and control room.
- Temporary Hazard Board warning “Do no operate DIS 1214 and ES 1219”.
- SCADA Tag on CB 2872: “CLEAR 11KV SWITCHGEAR OF ALL PERSONNEL PRIOR TO SWITCHING and CB 2872 Closed on Red phase only - should be opened. CB 2872, DIS 1214, ES 2879 and ES 1219 not to be operated until resolved”.
- Investigation and repair is under action with Bus A outage planned on 27th August 2014.

ROOT CAUSE

Mal-operation of CB 2872 is still under investigation.

LEARNINGS

- **Check the Intelligent Voltage Indication System (IVIS) display or where fitted voltage presence neon indicators on switchgear panel when CB’s are opened. Noting for signs of voltage presence indications prior to using the Voltage Detector Device (VDD) to check.**
- **Check the SCADA tabular indication for breaker’s voltage.**
- **Ensure that VDD testing is undertaken on all types of breakers (indoor and outdoor) prior to isolating via disconnector and earthing.**
- **Treat everything live until proven dead.**

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