Detailed Report

Date of Submission : 12-10-2026 17:41

RAICHUR_KA - 220KV tripped at ***28-09-2026 05:57*** and restored at ***28-09-2026 07:23***

Summary of Event (घटना का सारांश)	:	**Prefault scenario:** Raichur -Jurala lines were under idle charged condition from Raichur end. On 28.09.2026 at 05:57 Hrs. 220kV RAICHUR-RTPS line 2 Tripped at both ends sensing R-N fault. Protection operations at both the ends are as follows: **At Raichur end:** Relays operated in Zone-1 sensing 'R' phase to Ground fault at a distance 4.6 km, fault current recorded in R phase was 6.2kAmps. Auto-reclosure blocked due to persisting carrier failure. **At RTPS end:** RTPS-Raichur line -2 tripped in Zone-2 sensing 'R' phase to Ground fault. AR was blocked due to carrier failed condition. Simultaneously RTPS-Raichur line – 1 also tripped at RTPS end (Zone-2 start observed from DR due to parellel line fault), tripped upon receiving the carrier signal. Line-1 was intact at Raichur end. Due to tripping of both lines, complete outage occurred to Raichur substation.
Time and Date of the event (घटना का समय और दिनांक)	:	28-09-2026 05:57
Name of the Substation/Generating Station/Pooling Station	:	RAICHUR_KA - 220KV

affected (Along with Voltage level) :

Event Category (श्रेणी के साथ इवेंट प्रकार) : GD - 1

Location/Control Area (स्थान/नियंत्रण क्षेत्र) : KARNATAKA

Configuration of Bus (HV/LV) . Along with details of Bus split Operation (if any) :

Bus Configuration Type : Double Bus with Bus coupler

Bus Coupler Status : NA

Bus 1 Connected Elements	Bus 2 Connected Elements	Bus 3 Connected Elements	Bus 4 Connected Elements
1. 220KV-RAICHUR_KA-UPPER_JURALA-2 2. 220KV-RTPS-RAICHUR_KA-2	1. 220KV-RAICHUR_KA-UPPER_JURALA-1 2. 220KV-RTPS-RAICHUR_KA-1		

Station Connectivity / SLD during antecedent :

Weather Conditions : Normal

Elements under outage prior to the event : 1. RAICHUR_KA - 220KV

Other Information (Antecedent Cnditions) :

Renewable Energy Trip : False

Details of SPS Operation (if any): : False

Reason of tripping : Fault Tripping

Type of Fault : SLG

phases inv :

Auto Reclosure Operation : No

Fault Clearing Time (ms) : None

Load and Generation Loss (लोड और जेनरेशन हानि) :

Total Generation Loss (MW)	**Total Load Loss(MW)**
0 MW	98 MW

Duration of interruption (रुकावट की अवधि) :

Details of Equipment Failure (if any during the event): :

Equipment Type	**Equipment Make**

List of elements tripped during the event : 1.

Station Connectivity/SLD during the event :

Analysis of the event : **Analysis of the event:** Upon verification, it was found that, during commissioning of DTPC, the carrier commands were made parallel to existing PLCC and receive command of line-2 was clubbed with Line-1 due to which command received in line-2 was extended to line – 1 resulting in spurious tripping of line-1 at RTPS end.

Protection / Operational Issues observed :

Restoration Details : **Restoration:**

1. RTPS-Raichur line-1 charged at 07:23 Hrs.
2. RTPS-Raichur line-2 charged at 07:34 Hrs.

DR Time synchronization issues observed (सुरक्षा/ प्रचालन समस्या)	:	False
Remedial Measures Taken (सुधारात्मक सुझाव)	:	**Remedial Action taken:** Mixing of carrier receive signal from DTPC at RTPS was rectified. Carrier fail issue in line-2 will be resolved by communication wing.
Relay/PLCC Operation Details	:	
Control Panel Anunciation	:	RTPS-2 Main-1: Tripped on DPR, Zone-1, R-phase, L=4.156KM,AR lock, Trip ph ABC . RTPS-2 Main-2: Tripped on DPR Zone-1, R-phase, L=4.565KM, Ia=6.255kA, Ib=779.1A, Ic=934.2A, Fault Resistance=2.747ohm, Relay trip time=80.27ms. Auto recloser not operated due to carrier unhealthy because of failure of COX relay, shortly same will be replaced. At our end, 220KV RTPS-1 line was not tripped. At RTPS end, both 220KV RTPS-1 and RTPS-2 lines are tripped, RTPS-1 line tripped on DPR, Zone-2, R-phase, L=23.23KM and RTPS-2 line tripped on DPR, Z2, L=13.77KMs, Ia=8.749KA.
Main I Relay Indications	:	RTPS-2 Main-1: Tripped on DPR, Zone-1, R-phase, L=4.156KM,AR lock, Trip ph ABC
Main II Relay Indications	:	RTPS-2 Main-2: Tripped on DPR Zone-1, R-phase, L=4.565KM, Ia=6.255kA, Ib=779.1A, Ic=934.2A, Fault Resistance=2.747ohm, Relay trip time=80.27ms
Other Relay Indications	:	
PLCC Counter Increment I/T	:	
PLCC Counter Increment D/T	:	
Fault Current Value (kAmp)	:	6.255
LA Counter	:	R: 101, Y: 101, B: 102
Remarks	:	

Attachments :