

Detailed Report

Date of Submission : 08-06-2026 14:57

KIADB-HAROHALLI - 220KV tripped at 31-05-2026 19:52 and
restored at 31-05-2026 20:07

Summary of Event (घटना का सारांश) :

On 31.03.2026 at 19:47:34:141 Hrs , 220kV Somanahalli -- Harolalli line tripped sensing at. R-N fault in Zone-2 , fault location 16.88km, fault current recorded in R phase was 9.7kA. Due to non-receipt of carrier signal, Harohally line breaker at Somanahally tripped in around 360msec. By this time the Bus A sectionaliser breaker also tripped on operation of EFR. Fault current recorded was 3.07kA, non-directional EFR trip time is around 325msec.

Tripping of the above line resulted on main supply failure to Harohally ,KIADB Harohally and Kanakapura 220kV substations and load loss of around 97 MW was reported due to this tripping. 220kV Harohalli, KIADB Harohalli Kanakapura substation loads were taken on TK Halli source at 20:05 Hrs by charging TK Hally-Kanakapura line. At 20.07 Hrs, Somanahally-Harohally line was test charged from Somanahally end and the line tripped on operation of SOTF sensing RY fault.

At the same time 500MVA ICT-1 tripped at Somanahalli Powergrid station end on operation of Differential and REF protection.

Nature of line fault : In Harohally line 'R' Phase jump cut near Gandhi Nagara, Kaggalipura limits was observed.

No load loss occurred during second time trip (at 20.07 Hrs) as the load were shifted on to TK halli source already.

Time and Date of the event (घटना का समय और दिनांक) : 31-05-2026 19:52

Name of the Substation/Generating Station/Pooling Station affected (Along with Voltage level) : KIADB-HAROHALLI - 220KV

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) :

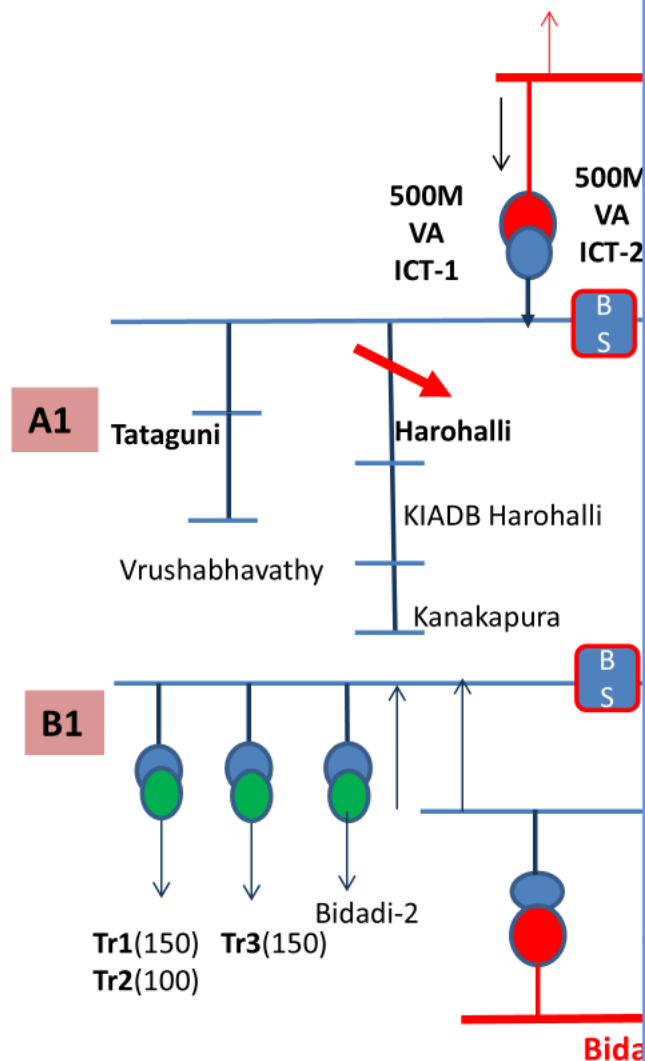
Bus Configuration Type :

Bus Coupler Status : NA

Bus 1 Connected Elements	Bus 2 Connected Elements	Bus 3 Connected Elements	Bus 4 Connected Elements

Station Connectivity / SLD during
antecedent

Complete outage of 220kV Harohalli, KIADB-Ha sectionaliser (A1-A2) at Somanahally 220kV



Weather Conditions : Rainy

Elements under outage prior to the event :

Other Information (Antecedent Cnditions) : **Bus Configuration at Somanahally 220KV Substation and elements under tripped condition in Prefault condition are as follows:**

220kV Bus A:

Section 1 : 500MVA ICT-1, Tataguni and Harohalli lines

Section 2: Lines Mylasandra-1, Mylasandra-2, Keonics city, Khodaya, 500MVA ICT 2 & 3, Bus Sectionaliser was in closed condition.

220kV Bus B:

Lines Bidadi-1, Bidadi-2, Malur (idle charged) line and local load of Somanahally, Bus Sectionaliser was in closed condition.

Elements under outage in the prefault:

220kV Kanakapura –TK Halli line was idle charged condition from Kanakapura SS end. Hence, KIADB Harohally & Kanakapura Substations were radial on Somanahally Source through Somanahally-Harohally line.

Renewable Energy Trip : False

Details of SPS Operation (if any): : False

Reason of tripping : Fault Tripping

Type of Fault : LL

phases inv : None, None

Auto Reclosure Operation : No

Fault Clearing Time (ms) : 360.0

Load and Generation Loss (लोड और जेनरेशन हानि) :

Total Generation Loss (MW)	Total Load Loss(MW)
0 MW	97 MW

Duration of interruption (रुकावट की अवधि) :

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

Equipment Type	Equipment Make
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List of elements tripped during the event : 1.

Station Connectivity/SLD during the event :

Analysis of the event : At 220kV Somanahalli 220kV Somanahalli-BWSSB Harohalli-KIADB Harolalli-Kanakapura tripped on DPR at 19:47 Hrs,

Trip Details: Zone 2 Trip. Along with the line Bus A sectionaliser breaker also tripped.

Main 1 Relay: Distance - 16.88Kms, Fault Values: IR - 8kA, IY - 0A, IB - 0A, UA - 105.5kV, Ub - 130kV, UC - 126kV, R=3.59ohm, X= 6.719ohm

Main 2 Relay: Distance - 16.33Kms, Fault Values: IR - 9.67kA, IY - 1.793kA, IB - 2.215kA, Fault resistance - 2.922 ohms.

When the line was test charged at 20.07 Hrs line tripped on SOTF due to persistant fault involving R and Y phases

Protection / Operational Issues observed :

Restoration Details : After attending the jump cut near Gandhi Nagara, Kaggalipura by TLM Kanakapura, 220kV Somanahalli-BWSSB Harohalli-KIADB Harolalli-Kanakapura line was test charged as per the request of TLM Kanakapura at 04:50 Hrs on 01.06.2026 from 220kV Somanahalli to BWSSB Harohalli. Found normal. 220kV Somanahalli - BWSSB Harohalli line tied at 06:43 Hrs at 220kV station Somanahalli. Tie opened at 220kV Station Kanakapura, load is normalisedfrom 220kV station Somanahalli.

DR Time synchronization issues observed (सुरक्षा/ प्रचालन समस्या) : False

Remedial Measures Taken (सुधारात्मक सुझाव) : 1. Line fault was attended

2. Bus sectionaliser non directional OC and EF protection settings have been reviwed

Relay/PLCC Operation Details	:	
Control Panel Anunciation	:	SOTF operated
Main I Relay Indications	:	
Main II Relay Indications	:	
Other Relay Indications	:	Master trip Relay (86),
PLCC Counter Increment I/T	:	
PLCC Counter Increment D/T	:	
Fault Current Value (kAmp)	:	12.5
LA Counter	:	
Remarks	:	
Attachments	:	