

C.E. (System Control Centre),

REPORT ON SYSTEM DISTURBANCE / PLANT FAILURE

Power Station: **Kotmale Power Station** Date: 29/05/2018 Time: 06:10 hrs

Failure at a Glance: At 06:10 hrs. Unit 01 – Generator & Main Transformer Tripped (CB 320 & CB 330 Opened). It was observed “Transformer Protection operated” alarm at control room of Kotmale Power Station.

Pre-fault condition:

Generators:

Readings at 06:10 hrs (before Trip)

Unit No.	MW	MVar	Voltage kV	AVR on/off	Governor	Remarks
01	65	-5	13.3	ON	Auto, ep2	
02	66	-5	13.5	ON	Auto, ep2	
03	55	-5	13.4	ON	Auto, ep2	

Transmission Lines:

Readings at 07:39hrs (Readings are got from SCADA)

Transmission Line	MVar	MW	A	kV
Anu 01	21	-33	103	217.6
Anu 02	21	-33	102	218.4
Vic 01	14	37	118	218.7
Vic 02	13	37	117	218.0
UK 01	0	77	127	219.9
UK 02	-2	77	128	219.3
Biy 01	-18	-149	387	218.1
Biy 02	-21	-147	394	217.8

(b). Nature of failure:

Equipment	Auto/M an trip	Time of tripping	Indications & Alarms / Remarks
Unit 01-Transformer	Auto	06:10	At Control Room White Indications <ul style="list-style-type: none"> • 320 Trip Cct faulty • 330 Trip Cct faulty Transformer protection operated Transformer fan failure At Relay room Cabinet RAA.1 U01: Ex. Tr F87T and Ex. Tr F87N Tr. Pro. Relay <ul style="list-style-type: none"> • Relay Pickup Cabinet D 11 RP 220/13.8 kV Ge Tr 01 Y fan failure (Flag) B phase PRV Trip (Flag) At Power House <ul style="list-style-type: none"> • Substation protection operated

3. Restoration

Equipment	Restored time
Unit 01 Transformer	07:32 hrs on 29/05/2018

4. Brief description of incident by officer in charge [OEE] at that time:

At 06:10 hrs, Unit 01 Generator tripped when running at 65 MW at Kotmale Power Station. It was observed "Transformer Protection operated" alarm at control room. After we checked all the protection relay related to Unit # 01 Transformer and verified that there were no tripping indication in all of them. Ensured Buchholz and PRV of B phase were not activated. Also Unit # 01 transformer bay thoroughly examined and ensured there were no any abnormalities. After getting the concurrence of CE, initially unit # 01 main transformer energized at 07:32 am. and generator started and synchronized at 7:41 am.

Eng. K.V.A.M. HUSSAIN
Electrical Engineer (Operations)
Kotmale Power Station

5. Remedial actions taken to avoid reoccurrence of such failure / [EE (C&I/ EEM)'s note]:

Checked all the trip logs of protection relays namely D11_ET1_F87N, D11_ET1_F87T, D11_GT1_F67N, D11_GT1_F87N & D11_GT1_F87T and verified that no trip event occurred at 06:10 hrs on 29/05/2018. Observed 215A peak Neutral current before tripping in BEN Fault recorder. Hence, animal intrusion is suspected. However, root cause under investigation.

Eng. U.S. DUDUKDENIYA
EE(M) - KOTMALE PS

6. Remarks

It is required to investigate the absence of logging of any tripping command (signal)

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Officer In-Charge of the Power Station

Eng. U.R.S.S. SENADHIRATHNE

CHIEF ENGINEER

KOTMALE POWER STATION
Copy: DGM (MC) - E.E. PI.

Date: 30/05/2018