

# STATION FAILURE REPORTING

## VICTORIA POWER STATION

AGM(G) / DGM(MC)

Date: 25.02.2016

Time: 1400h

### 1. Plant Tripped (X)

Pre Fault Load at 1330h

<i>Turbine/Generator Unit 1</i>	*	*
<i>Turbine/Generator Unit 2</i>	-	40MW, 34MVA <sub>r</sub>
<i>Turbine/Generator Unit 3</i>	-	47MW, 05MVA <sub>r</sub>

\* Generator 01 released for Governor Refurbishment work

### 2. Trip Originated due to

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### 3. Expected Time to Restore the Unit

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### 4. Remarks

- Before the disturbance, Unit 01 was released for Governor Refurbishment work, U02 synchronized and performing Hz control, Unit 03 also synchronized
- Heavy system disturbance experienced with a large power swing around at 1400h.
- A large system frequency variation observed and unit 02 & 03 behavior was observed extremely unstable. Therefore informed SCC and opened CB 220, 230 and CB 320, 330 and U02, 03 isolated from system. Both machines did not trip and kept spinning during the time (Unit 03 Alarms: Over speed Stg 1, NPS Stg1, o/p limited by load limiter) (1357h)
- As informed by SCC Line charging attempt was made with Unit 02 via CB 230 on to KOT 1 line. But Unit 02 machine Tripped with indication of Under voltage protection operated.(1423h)
- Then, after energizing KOT 1 line from Kotmale end Unit 02 machine was successfully synchronized via CB 230 (1510h).
- Later KOT 2 line was also energized from Kotmale end and Unit03 machine also synchronized via CB 330 (1522h)

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Electrical Engineer (Operations) – Victoria

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Date

Copy: Chief Engineer (System Control Centre)

<b>REPORT ON SYSTEM DISTURBANCE / PLANT FAILURE</b>
<b>VICTORIA POWER STATION</b>

Chief Engineer (System Control Centre)

**Date:** 25.02.2016

**Time:** 1400h

**1. Generators**

(a) Pre Fault Condition: at 1200 h

Unit	Active Power [MW]	Reactive Power [MVar]	Voltage [kV]	AVR [On/Off]	Whether in free Governor Operation [Yes/No]	Remarks on Load limiter / Speed set point / Actuator reference Point
1	-	-	-	-	-	*
2	50	40	12.5	On	Yes	45MW of Reference MW (A, ep1)
3	45	05	12.4	On	Yes	50MW of Reference MW (A, ep2)

\* Generator 01 released for Governor Refurbishment work

(b) Nature of failure:

Unit	Auto/Manual Trip	Time of Tripping	Indications and / or any Remarks
1	-	-	*
2	-	-	CB 230, 220 manually opened after informing SCC due to disturbance. (Unit 02 kept spinning)
3	-	-	CB 330, 320 manually opened after informing SCC due to disturbance. (Unit 03 kept spinning)  Alarms at CD: Over speed Stage 1, NPS Stage 1, Output limited by Load limiter

\* Generator 01 released for Governor Refurbishment work

**2. Transmission Lines**

(a) Pre Fault Condition: at 1200 h

Transmission Line	MW	MVar	kV	A
Vic - Rand	8 Export	30 Import	224	80
Vic - Kot 1	28 Export	36 Export	224	130
Vic - Kot 2	40 Export	34 Export	224	140

(b) Nature of Failure:

Transmission Line	Auto/Manual Trip	Time of Tripping	Indications and /or any Remarks
Vic - Rand	Not Tripped	-	-
Vic - Kot 1	Not Tripped	-	-
Vic - Kot 2	Not Tripped	-	-

### 3. Restoration of Supply

Equipment	Restored Time
Unit 1	Synchronized at 1727h for testing (work permit not cancelled)*
Unit 2	Synchronized at 1510h (After tripping when Line charge attempt at 1423h)
Unit 3	Synchronized at 1522h

\* Generator 01 released for Governor Refurbishment work

### 4. Brief description of incident by Officer in Charge (at that time)

- Before the disturbance, Unit 01 was released for Governor Refurbishment work, U02 synchronized and performing Hz control, Unit 03 also synchronized
- Heavy system disturbance experienced with a large power swing around at 1400h.
- A large system frequency variation observed and unit 02 & 03 behavior was observed extremely unstable. Therefore informed SCC and opened CB 220, 230 and CB 320, 330 and U02, 03 isolated from system. Both machines did not trip and kept spinning during the time (Unit 03 Alarms: Over speed Stg 1, NPS Stg1, o/p limited by load limiter) (1357h)
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- Later KOT 2 line was also energized from Kotmale end and Unit03 machine also synchronized via CB 330 (1522h)

### 5. Observation of Officer in Charge (at that time)

		Action Taken
Operations error	-	-
Equipment malfunctions	-	-
System Disturbance	Y	-
Any other	Y	Unit 02 tripped by Under voltage protection when CB230 closed during <u>line charging</u> attempt on KOT1 line (U02 Synchronized after energizing KOT 1 from Kotmale end)

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Electrical Engineer (Operations) – Victoria

.....  
Date

### 6. Remedial Action taken to avoid re-occurrence of such failure

Informed AMHE Protection Engineer on Unit 02 Tripping by under voltage Protection during Line Charging Attempt

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Chief Engineer – Victoria

.....  
Date

Copy: DGM (MC)  
EE (I&D)  
EE (M)  
ME  
EE (O)