

ADDITIONAL AGENDA OCC 148

**Agenda point for discussion in 148<sup>th</sup> OCC (AGENDA FROM NTPC)**

**Problem of excessive vibrations in GTs of Rihand Stage – III and Vindhyachal Stage-IV during operation of Rihand - Dadri HVDC on monopolar mode with ground return**

- Shifting of 2x500MW Rihand Stage-III units (Unit# 5&6) from NR Grid to WR Grid through Vindhyachal Pooling Station was successfully done on 28th Nov' 17 with coordination in real time between POSOCO, NTPC and Powergrid (WRTS-II).
- With Rihand stage-III units connected to Vindhyachal Pooling Station, problem of excessive vibrations in GTs of Rihand stage III (and Vindhyachal Stage-IV also) has been observed whenever Rh- Dadri HVDC is run on single pole in ground return mode. The observations during the period 27<sup>th</sup> Nov'17 to 5<sup>th</sup> March'18 at Rihand is enclosed in the attached sheet(ANNEXURE AA).
- The issue was briefly discussed in the 142nd OCC Meeting against agenda point no 18 and where it was decided that system study was required to be done to further deal with this problem. Previous experience of NTPC in this regard was also sought which was subsequently provided to NRLDC by Rihand station.
- It is apparent that DC current passes through these GTs during above situation which is detrimental for the GTs and which may lead to their failure.
- It is therefore requested that a solution may kindly be arrived to deal with the above situation at the earliest.

## ANNEXURE AA

**Details of Mono Polar operation of Rihand -Dadri Bipoles between 27 Nov'17 to 05 March'18**

Element Under Outage	Shutdown		Charging		Shutdown Duration (hh.mm)	
	Date	Time (hh.mm)	Date	Time (hh.mm)		
Pole2	27.11.17	10.18	03.12.17	20.25	144.07	<b>Rihand III Power shifted from NR to WR on 28.11.18 at 13.38hr</b>
Pole2	07.12.17	10.39	07.12.17	18.01	7.62	
Pole1	09.12.17	17.29	09.12.17	19.44	2.15	<b>Both Pole tripped at 09.12.17, 17.29 hr (Monopole Operation for 11 minutes only )</b>
Pole2	09.12.17	17.29	09.12.17	19.55	2.26	
Pole2	14.12.17	9.35	14.12.17	9.58	0.23	
Pole2	19.12.17	19.15	19.12.17	19.47	0.32	
Pole2	21.12.17	4.17	20.12.17	5.02	0.85	
Pole2	21.12.17	11	21.12.17	13.28	2.28	
Pole2	29.12.17	22.27	29.12.17	23.11	0.84	
Pole2	03.02.18	17.22	07.02.18	13.42	92.2	
Pole2	07.02.18	15.23	07.02.18	16.37	1.14	
Pole2	09.02.18	9.03	13.02.18	19.43	106.4	
Pole1	05.03.18	9.14	05.03.18	13.22	4.08	
<b>Total Pole Outage since 27.11.17</b>					<b>364.44</b>	
<b>Total Monopole Open since Shifting of Rihand III to WR</b>					<b>342.54</b>	

**GT Neutral DC current for all units**

Unit # 1	2.3 A
Unit # 2	2.3 A
Unit # 3	2.3 A
Unit # 4	2.3 A
Unit # 5	2.3 A
Unit # 6	2.3 A