

TRANSMISSION COMPANY OF NIGERIA

To: MD (S/O, M/O), TCN - Abuja

From: Director (NCC), Osogbo

DAILY OPERATIONAL REPORT MONDAY 20/03/2017

FOR: EVENTS OF SUNDAY 19/03/2017

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	17,720	01:00	19/03/2017
GENERATION CAPABILITY	6917	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	4432.7	-do-	-do-
PEAK GENERATION	4303.1	-do-	-do-
LOWEST GENERATION	3796.3	10:00	19/03/2017
8-HOURLY DURATION PEAK	4303.1	0000-0800	-do-
	4134.9	0900-1600	-do-
	4286.5	1700-2400	-do-
PEAK GENERATION TO DATE	5074.7	21:30	02/02/2016
MAXIMUM AVAILABLE CAPACITY TO DATE	7492.6	06:00	14/04/2014
MAXIMUM PEAK GENERATION CAPABILITY TO DATE	7099	07:00	13/04/2014
MAXIMUM ENERGY GENERATED (MWH) TO DATE	109,372.10	0000-2400	02/02/2016

1.2 CRITICAL VOLTAGE

DETAILS	KV	STATION	HRS
NOMINAL VOLTAGE	330		
STATUTORY LIMITS	280.5 - 346.6		
HIGHEST VOLTAGE FOR THE DAY	361	Omotosho T/S	11:00
LOWEST VOLTAGE FOR THE DAY	292	Sakete T/S	12:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	51.53	20:26
LOWEST FREQUENCY	48.79	20:14

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 22 nd Feb, 2017		No. of days since last total collapse: 25												
Date of last partial collapse: 16 th March, 2017		No. of days since last partial collapse: 04												
Highest No of days ever attained in-between total collapses: 134		Highest No of days ever attained in-between partial collapses: 240												
	Jan	Feb.	Mar.	Apr	May	Jun	Jul	Aug	Sep.	Oct	Nov	Dec	Total	
2009	Total	1	--	--	--	2	5	5	4	1	--	--	1	19
	Partial	--	5	4	3	3	--	1	--	2	1	1	1	20
2010	Total	--	3	1	--	3	3	--	2	2	1	4	22	
	Partial	1	--	--	1	1	3	4	4	3	2	--	1	20
2011	Total	--	--	--	--	4	3	1	1	2	1	--	13	
	Partial	--	1	1	--	--	--	--	1	--	1	2	--	6
2012	Total	--	--	2	1	5	2	1	--	2	2	1	16	
	Partial	--	--	2	3	--	--	--	1	--	1	1	8	
2013	Total	--	1	2	2	3	4	1	1	1	4	2	22	
	Partial	--	--	--	--	--	--	--	2	--	--	--	2	
2014	Total	2	--	--	2	--	3	1	--	1	--	--	9	
	Partial	--	--	--	--	1	--	--	--	--	2	1	4	
2015	Total	1	--	1	--	2	--	1	--	--	1	--	6	
	Partial	--	--	1	--	2	--	--	1	--	--	--	4	
2016	Total	--	--	2	3	6	5	--	1	1	2	2	22	
	Partial	--	--	1	--	1	3	1	--	--	--	--	6	
2017	Total	5	3	--	--	--	--	--	--	--	--	--	8	
	Partial	1	--	1	--	--	--	--	--	--	--	--	2	

1.5 BREAKDOWN OF PEAK & OFF PEAK GENERATION (NATIONAL PEAK & OFF PEAK)

STATION	TURBINE	PEAK GEN. (MW)	OFF-PEAK GEN(MW)
1 KAINJI	HYDRO	405	403
2 JEBBA	HYDRO	365	350
3 SHIRORO	HYDRO	300	210
4 EGBIN ST2 - 5	STEAM	216	182
5 SAPELE	STEAM	0	0
6 DELTA	GAS	305	305
7 AFAM IV-V	GAS	0	0
8 GEREGU GAS	GAS	290	222
9 OMOTOSHO GAS	GAS	205.3	152.7
10 OLORUNSOGO GAS	GAS	174.4	167.2
11 GEREGU NIPP	GAS	135	60
12 SAPELE NIPP	GAS	222.8	221.4
13 ALAOJI NIPP	GAS	115	112.5
14 OLORUNSOGO NIPP	GAS	0	0
15 OMOTOSHO NIPP	GAS	147.9	72.7
16 ODUKPANI NIPP	GAS	216.1	220.5
17 IHOVBOR NIPP	GAS	109.1	108.1
18 OKPAI	GAS	430	422
19 AFAM VI	GAS	108	108
20 IBOM POWER	GAS	110.3	83.3
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	53.2	52.8
24 TRANS AMADI	GAS	0	0
25 RIVERS IPP	(GAS)	0	0
26 EGBIN ST6	STEAM	217	166
27 PARAS ENERGY	GAS	65.8	65.8
28 GBARAIN NIPP	GAS	112.2	111.3
TOTAL		4303.1	3796.3

1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	9,553.00	398.04	9,535.00	397.29
2 JEBBA	HYDRO	8,614.00	358.92	8,602.40	358.43
3 SHIRORO	HYDRO	6,430.00	267.92	6,400.43	266.68
4 EGBIN ST2 - 5	STEAM	4,541.00	189.21	4,321.20	180.05
5 SAPELE	STEAM	-	0.00	-	0.00
6 DELTA	GAS	7,158.78	298.28	6,988.80	291.20
7 AFAM IV-V	GAS	-	0.00	-	0.00
8 GEREGU GAS	GAS	5,342.10	222.59	5,316.71	221.53
9 OMOTOSHO GAS	GAS	4,354.00	181.42	4,319.50	179.98
10 OLORUNSOGO GAS	GAS	4,024.49	167.69	3,994.69	166.45
11 GEREGU NIPP	GAS	2,575.38	107.31	2,562.36	106.77
12 SAPELE NIPP	GAS	5,135.52	213.98	5,114.36	213.10
13 ALAOJI NIPP	GAS	2,702.00	112.58	2,681.10	111.71
14 OLORUNSOGO NIPP	GAS	867.90	36.16	843.00	35.13
15 OMOTOSHO NIPP	GAS	3,281.10	136.71	3,238.60	134.94
16 ODUKPANI NIPP	GAS	4,950.61	206.28	4,924.61	205.19
17 IHOVBOR NIPP	GAS	2,570.00	107.08	2,547.45	106.14
18 OKPAI	GAS	10,119.00	421.63	9,940.50	414.19
19 AFAM VI	GAS	2,606.82	108.62	2,511.84	104.66
20 IBOM	GAS	2,240.60	93.36	2,231.00	92.96
21 ASCO	GAS	-	0.00	-	0.00
22 A.E.S	GAS	-	0.00	-	0.00
23 OMOKU	GAS	1,292.90	53.87	1,264.34	52.68
24 TRANS AMADI	GAS	-	0.00	-	0.00
25 RIVERS IPP	GAS	-	0.00	-	0.00
26 EGBIN ST6	STEAM	4,421.00	184.21	4,208.40	175.35
27 PARAS ENERGY	GAS	1,610.40	67.10	1,603.00	66.79
28 GBARAIN NIPP	GAS	2,624.60	109.36	2,603.40	108.48
TOTAL		97,015.20	4,042.30	95,752.69	3,989.70

GENERATION POSITION AT 06:00HRS OF MONDAY 20/03/2017

	STATIONS	AVAILABLE UNITS	INSTALLED GENERATION CAPACITY (MW)	GENERATION CAPABILITY(MW)	UNITS ON BAR (MW)	CAPABILITY OF UNITS ON BAR (MW)	GENERATION AT 06:00HRS(MW)	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	1G5, 6, 11 & 12 4	440	440	1G5, 6, 11 & 12 4	402	402	1G7 - Out on stator winding failure. 1G8 - Out due to loss of supply to the auxiliary. 1G9 - Out due to burnt 7.5MVA 33/0.415kV & 183.6MVA 16/330kV station service transformer and generator transformer. 1G10 - Shut down due to thrust bearing temperature problem.
	JEBBA HYDRO	2G1, 3 - 5 4	385.6	380	2G1, 3 - 5 4	364	364	2G2 - Out on maintenance. 2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	411G2 & 3 2	300	300	411G2 & 3 2	300	300	411G1 & 4 - Out on maintenance.
	EGBIN STEAM	ST2, 3 & 5 3	660	660	ST2 1	192	192	ST1 - Tripped on generator CB trouble. ST2 - Not on spinning reserve due to Egbin G/S management decision and its generation limited to 192MW due to gas constraints. ST4 - Out of production since 17/11/2016. ST3 & 5 - Shut down due to gas constraints.
	SAPELE (STEAM)	0 0	0	0	0 0	0	0	ST1 - Shut down due to shortage of clean water. ST2 - Tripped on vacuum switch problem. ST3 - Undergoing rehabilitation. ST4 & 5 - Awaiting major overhaul. ST6 - Tripped on gas control valve not following reference point.
	DELTA (GAS)	GT4, 6 - 13, 16 & 19 11	425	380	GT7- 10, 12, 13, 16 & 18 8	305	305	GT3 & 5 - Out due to generator winding fault. GT4, 6 & 11 - Out due to gas constraints. GT14 - Out on major overhaul. GT17 - Out on excitation trouble. GT15 - Out for maintenance of combustion nozzle. GT16 & 18 - Not on spinning reserve due to Delta G/S management decision. GT19 - Shut down due to gas constraints. GT20 - Out on major inspection.
	AFAM IV & V (GAS)	0 0	0	0	0 0	0	0	GT1 - 12 - De-commissioned and scrapped. GT13 - 16 - Out on blade failure. GT17 & 18 - Out due to burnt generator transformer. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	GT12 & 13 2	295	295	GT13 1	145	142	GT11 - Out on synchrocheck relay fault at 330kV switchyard. GT12 - Out due to high frequency. GT13 - On frequency response.
	OMOTOSHO GAS	GT1 - 8 8	336	304	GT2-4 & 6 - 8 6	228	216.8	GT1 - Out due to burnt isolator arm. GT2 - 4 & 6 - 8 - On frequency response. GT5 - Out due to gas constraints.
	OLORUNSOGO GAS	GT1 - 5, 7 & 8 7	294	266	GT1 - 5 5	190	181.1	GT1 - 5 - On frequency response. GT6 - Out on vibration trouble. GT7 & 8 - Out due to gas constraints.
NIPP	GEREGU NIPP	GT21 - 23 3	435	435	GT22 1	120	86	GT21 & 23 - Out due to gas constraints. GT22 - On frequency response but limited to 120MW.
	SAPELE NIPP	GT2 & 4 2	226.2	226.2	GT2 & 4 2	226.2	226.2	GT1 - Out on undisclosed fault. GT3 - Out on bearing lift pump trouble.
	ALAOJI NIPP GAS	GT1, 2 & 4 3	375	360	GT4 1	116.3	116.3	GT1 & 2 - Out due to gas constraints. GT3 - Shut down due to generator air inlet filter trouble.
	OLORUNSOGO NIPP GAS	GT1 - 3 3	375	360	GT2 1	85.1	85.1	GT1 & 3 - Out due to gas constraints. GT4 & ST2 - Out of production since 25/10/2016.
	OMOTOSHO NIPP GAS	GT1, 2 & 4 3	375	360	GT2 & 4 2	240	141.5	GT1 - Out due to gas constraints. GT2 & 4 - On spinning reserve. GT3 - Out of production since 28/11/2016.
	ODUKPANI NIPP	GT1 & 3 2	250	240	GT1 & 3 2	229.8	229.8	GT2 - Tripped due to high exhaust temperature. GT4 - Out on unit transformer problem. GT5 - Tripped on loss of excitation
	IHOVBOR NIPP	GT1 1	112.5	112.5	GT1 1	111.6	111.6	GT2 & 3 - Out on fault. GT4 - On maintenance.
IPP	OKPAI GAS/STEAM	GT11,12 & ST18 3	450	450	GT11, 12 & ST18 3	430	430	Available units on bar.
	AFAM VI GAS/STEAM	GT11 - 13 & ST10 4	650	650	GT11 1	108	108	GT12,13 & ST10 - Out due to gas constraints.
	IBOM POWER GAS	GT3 1	115.3	115.3	GT3 1	104.5	104.5	Available unit on bar.
	AES	0 0	0	0	0 0	0	0	Out of production since 27/09/2014.
	ASCO	0 0	0	0	0 0	0	0	GT1 - Shut down due to leakage in the furnace.
	OMOKU GAS	GT2, 3 & 5 3	75	60	GT2, 3 & 5 3	52.8	52.8	GT1 - Out on maintenance. GT4 - Out for overhaul. GT6 - Tripped on loss of flame.
	TRANS-AMADI	0 0	0	0	0 0	0	0	Out of production since 20/11/2016.
	RIVERS	0 0	0	0	0 0	0	0	Out of production since 16/09/2016.
	GBARAIN NIPP GAS	GT2 1	112.5	112.5	GT2 1	112.4	112.4	Available unit on bar.
	SUB TOTAL	70	6687.1	6506.5	50	4062.7	3907.1	Frequency = 51.31Hz.

1.7B **GENERATION POSITION AT 06:00HRS OF MONDAY 20/03/2017 FOR UNITS ON BILATERAL AGREEMENT**

GENERATOR	ST6	MW	MWh	ST6	MW	MWh	REMARKS
	1			1			
EGBIN	1	220	220	1	181	181	Available unit on bar.
PARAS ENERGY	GT2 - 9	72	72	GT2 - 9	67.5	67.5	Available units on bar.
	8			8			
SUB TOTAL	9	292	292	9	248.5	248.5	
GRAND TOTAL	79	6979.1	6798.5	59	4,311.20	4,155.60	Frequency = 51.31Hz.

1.7C **BILATERAL AGREEMENT UNITS DISPATCH - SUNDAY 19/03/2017**

FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	REMARK	
120MW EGBIN ST6 GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY					
OGBA	U-STEEL	on	0100hrs	24	Nil
	PTCEXPRESS	10	1300hrs	24	Nil
	SANKYO	on	0100hrs	24	Nil
	FEEDER 8	10	0300hrs	24	Nil
IKORODU	PULK IT	1	0700hrs	24	Nil
	INDUSTRIAL	15	2100hrs	21	Faulty Transformer sec. C.T. clamp
	SPINTEX	5	0100hrs	22	Urgent outage
	DANGOTE	2	0100hrs	18	Tripped on E/F
	LAND CRAFT	20	0600hrs	24	nil
ALAUUSA	TR4 -15MVA	3.6	2200hrs	23	Outage on 132kV line
	TR5 -15MVA	3.7	1400hrs	23	Outage on 132kV line
	ALAUUSA	8.7	1300hrs	23	Outage on 132kV line
MLAND	PTC (MARYLAND)	15	1600hrs	24	Nil
TOTAL LOAD		94			

**BILATERAL AGREEMENT LOAD DISPATCH
60MW PARAS ENERGY GENERATION TO CEB**

FEEDER	MAX	TIME	HOURS IN SERVICE	REMARK
SAKATE/IKEJA WEST 330KV LINE	68.5	14:00	24	Nil

1.8 HYDROLOGICAL DATA: MONDAY 20/03/2017

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	140.21	102.01	364.93
TAIL WATER ELEVATION (METERS)	104.25	74.2	270.5
GROSS OPERATING HEAD (METERS)	35.96	27.81	94.43
AVERAGE TURBINE DISCHARGE (M3/SEC)	1241	1444	318
AVERAGE SPILLAGE (M3/SEC)	91	0	0
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1332	1444	318
COMPUTED INFLOW (M3/SEC)	566	1375	0
STORAGE DIFFERENTIAL	-766	-69	-318
MAXIMUM LEVEL FOR SPILLAGE COMMENCEMENT	141.73	103	382.5
MINIMUM LEVEL BELOW WHICH NO GENERATION	130	99	355

1.9 MAXIMUM/ALLOCATED LOAD/MINIMUM LOADS FOR ABUJA AND LAGOS AS AT SUNDAY 19/03/2017

DISCO	MAXIMUM LOAD(MW)	TIME(HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD(MW)	TIME(HRS)
ABUJA	487.9	24:00	478.76	304.02	18:00
EKO	500	18:00	400.56	318	21:00
IKEJA	515.4	05:00	656.21	421.8	23:00

2.0 GAS POSITION: MONDAY 20/03/2017

STATION	SIGNED ACQ Annual Contracted Quantity MMSCF/D	NGC DECLARED QUANTITY (MMS317.578CF/D)	INSTALLED CAPACITY OF THERMAL STATIONS (MW)	PREVIOUS DAY OFF-TAKE (MMSCF/D)	CAPABILITY OF UNITS ON BAR OF THERMAL STATIONS (MW)	DIFFERENCE (MW)
EGBIN P/S	192		1100		373	727
DELTA (GAS)	305		765		305	460
OMOTOSHO GAS	216.8		336.8		228	108.8
OMOTOSHO NIPP	141.5		500		240	260
OLORUNSOGO (GAS)	181.1		336		190	146
OLORUNSOGO NIPP	0		750		85.1	664.9
SAPELE NIPP	226.2		500		226.2	273.8
SAPELE STEAM	0		720		0	720
AFAM IV-V	0		300		0	300
AFAM VI	108		650		108	542
GEREGU GAS	142		435		295	140
GEREGU NIPP	86		435		120	315
OKPAI (GAS/STEAM)	430		480		430	50
ALAOJI NIPP	116.3		504		116.3	387.7
IHOVBOR NIPP	111.6		450		111.6	338.4
IBOM	104.5		198		104.5	93.5
ODUKPANI NIPP	226.6		625		229.8	395.2
TOTAL	2587.6		9084.8		3162.5	5922.3

1 MMSCF IS EQUIVALENT TO 3.75MW

2.1 SYSTEM BLACK START CAPABILITY

- Delta, Shiroro & Egbin - Available.

3.0 SYSTEM SPINNING RESERVE AS AT 0600HRS OF MONDAY 20/03/2017 = 40MW. FREQUENCY 51.31Hz.

S/N	POWER STATION	UNIT ON SPINNING RESERVE	RESERVE CAPABILITY	ACTUAL RESERVE (MW)	TOTAL (MW)
1	Egbin	ST2	100	0	0
		ST4		0	
		ST5		0	
		ST6		0	
3	Delta	GT16	40	0	0
		GT17	40	0	
4	Olorunsogo NIPP	GT1	40	0	0
		GT2		0	
		GT3		0	
		GT4		0	
5	Geregu NIPP	GT22	35	0	0
6	Omotosho NIPP	GT1	40	0	40
		GT2		20	
		GT3		20	
		GT4		0	
TOTAL (MW)			295	40	40

4.0 UNUTILIZED GENERATION CAPABILITY

The unutilized generation capability for Monday 20/03/2017 as at 0600Hrs was = 2142MW.

S/NO	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNUTILIZED GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO GAS CONSTRAINTS:					
				0	1997
				0	
1	Geregu NIPP GT21 & 23	290	0	290	
2	Olorunsogo NIPP GT1 & 3	240	0	240	
3	Omotosho NIPP GT1	120	0	120	
4	Egbin ST2, 3 & 5	660	192	468	
5	Delta GT4, 6 -13,16 & 18	380	305	75	
6	Olorunsogo Gas GT7 & 8	76	0	76	
7	Omotosho Gas GT5	38	0	38	
8	Alaoji NIPP GT1 & 2	240	0	240	
9	Afam VI GTs 11, 12 & ST10	450	0	450	
				0	
				0	
IT IS ENVISAGED WITH IMPROVED PLANT AVAILABILITY AND RELIEF FROM EXISTING POWER SYSTEM NETWORK RELATED CONSTRAINTS, ADDITIONAL 1579.28MMSCF OF GAS (EQUIVALENT TO 5922.3MW) WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.					
4.2 DUE TO LINE CONSTRAINTS					
				0	0
				0	
				0	
				0	
4.3 DUE TO HIGH FREQUENCY OCCASIONED BY LOSS OF DISCOS' FEEDERS					
1	Geregu Gas GT12	145	0	145	145
			0	0	
			0	0	
			0	0	
			0	0	
			0	0	
4.4 DUE TO WATER MANAGEMENT					
			0	0	0
			0	0	
Total					2142

5.0 OUTAGES:

5 (A) FORCED OUTAGES (GENERATION):-

- 1 20:26 - 20:44Hrs, Geregu NIPP GT22 went on house load due to high frequency of 51.50Hz. LHR = 65MW.
- 2 20:26Hrs, Geregu Gas GTs12 & 13 tripped due to high frequency of 51.53Hz. LHR = 129MW & 121MW respectively. At 23:24Hrs - GT13 was tied.

5 (B) FORCED OUTAGES TRANSMISSION

- 1 09:32 - 09:59Hrs & 10:19 - 18:06Hrs, Omotosho Gas 105MVA 10.5/330kV generator transformer MTI secondary CB tripped on auxiliary relay trip ABC 1 & 2. No load loss as the tie CB was in service.
- 2 20:25 - 20:40Hrs Birnin-Kebbi T/S 150MVA 330/132kV transformer 19T3 primary and secondary CBs tripped on high secondary voltage of 150kV due to load loss at Niamey T/S.

5 (C) PLANNED OUTAGES:-

- 1 10:19 - 17:58Hrs, Omotosho/Ikeja West 330kV line (cct M5W) was taken out for live line crew to change glass insulators to silicon composite type between towers #416 – 417 & 428 – 434. About 65MW generation was reduced at Omotosho NIPP to maintain service on ccts B5M, B6N & N6W.

5(D) URGENT OUTAGES:

- 1 09:17 - 19:12Hrs, Omotosho NIPP GT4 was shut down to reduce load flow on Benin/Omotosho 330kV line cct B5M due to planned outage on 330kV cct M5W. LHR = 64.8MW.

6 GENERATOR MERIT ORDER BASED ON SYSTEM RESPONSE AND GRID RELIABILITY

- GROUP 1 - HYDRO IN HIGH FLOOD PERIOD SEASON, KAINJI, JEBBA AND SHIRORO.
- GROUP 2 - ALL UNITS OFFERING REGULATING RESERVE.
- GROUP 3 - ALL UNITS OFFERING SPINNING RESERVE.
- GROUP 4 - ALL UNITS OFFERING FREE GOVERNOR FREQUENCY RESPONSE.
- GROUP 5 - ALL UNITS OFFERING VOLTAGE SUPPORT OUTSIDE NORMAL LEVEL.
- GROUP 6 - ALL UNITS USED TO AVOID OVERLOADING TRANSMISSION LIMITS.
- GROUP 7 - ALL UNITS IN LOCATION TO DIMINISH LOSSES
- GROUP 8 - ALL UNITS NOT OFFERING ANY SERVICES.

8 (A) COMMUNICATION MEDIA

STATIONS	NO. INSTALLED	NO. WORKING
PLC/PAX	37	34
OPTIC FIBRE	13	11
PLS	14	7

8 (B) SCADA RTU STATUS

5 (E) EMERGENCY OUTAGES:-

The under mentioned lines were opened on frequency control:-

- 1 20:16 - 20:20Hrs, 20:27 - 20:30Hrs & 21:17 - 21:21Hrs, Osogbo/Akure/Ado-Ekiti 132kV line. LHR = 29MW, 29MW & 30MW respectively. Frequency was 48.79Hz, 48.79Hz & 48.87Hz respectively.
- 2 20:17 - 20:21Hrs & 20:44 - 20:51Hrs, Osogbo/Offa/Omuaran 132kV line. LHR = 19MW & 21MW respectively. Frequency was 48.75Hz & 49.00Hz respectively.
- 20:27 - 20:37Hrs, Kaduna/Zaria 132kV line. LHR = 91MW. Frequency was 48.71Hz.

5 (F) AUTOMATIC UNDER FREQUENCY OPERATION:

- 1 20:28 - 20:37Hrs, Mando T/S 3x60MVA 132/33kV transformers T1, T2 & T3. LHR = 45MW each.

5 (G) 330KV LINES THAT ARE OUT ON VOLTAGE CONTROL:-

ccts, U2A, A2K, K4U & J2L.

5 (H) 330KV LINES THAT ARE OUT ON FAULT:- ccts L7G & A1S.

4 (I) 330KV LINES THAT ARE OUT ON BREAKER PROBLEM:- ccts K1J & N4J.

5 (J) 330KV LINES THAT ARE OUT ON PLANNED OUTAGE:- NIL.

9 WEATHER REPORT: Rainfall at New Haven.

10 INTERNATIONAL LINES:-

A IKEJA WEST/SAKATE 330KV LINE(TCN+PARAS)

Maximum load - 220MW at 01:00Hrs.
Minimum load - 171MW at 08:00Hrs.

B BIRNIN KEBBI/NIAMEY 132KV LINE

Maximum load - 76MW at 24:00Hrs
Minimum load - 43MW at 10:00Hrs

C KATSINA/GAZAOUA/MARADI 132KV LINE

Maximum load - 43MW at 22:00Hrs.
Minimum load - 29MW at 16:00Hrs.

11 MISCELLANEOUS:-

- 1 06:06Hrs, Delta P/S GT16 was tied. The unit has been out due to gas constraints.
- 2 06:24 through 24:00Hrs, Delta P/S GT19 was shut down due to gas constraints. 85MW was transferred to GT16.
- 3 13:02Hrs, Paras Energy GT2 was tied. The unit was out due to gas constraints.
- 4 14:00Hrs, Olorunsogo NIPP GT2 was tied. The unit has been out due to gas constraints.

STATIONS	TOTAL NO OF STATIONS	NO OF RTU INSTALLED	NO OF RTU WORKING
POWER STATIONS	23	8	4
330kV	36	18	13
132kV	111	103	21

12.0 UNAVAILABLE EQUIPMENTS

12(A) UNAVAILABLE TRANSFORMERS/REACTORS:

SHIRORO REGION:

- 1 Apo T/S 60MVA 132/33kV transformer TR3 - Burnt.

KADUNA REGION:

- 1 Kumbotso 150MVA 330/132/33kV transformer T1A - Burnt control cables.

ENUGU REGION:

- 1 Onitsha T/S 90MVA 330/132/13.8kV transformer 9T2 - Out due to differential fault.

12 (B) UNAVAILABLE BREAKERS/SOLATORS

LAGOS REGION:

- 1 Akangba T.S. 132kV Bus Coupler CB - Serious Air leakage.(Undergoing repair)
- 2 Egbin/Aja 330kV line 2 (cct N4J) - faulty breaker at Aja T/S.
- 3 Otta/Ogba 132kV line isolator - defective control shaft.
- 4 Osogbo/Ikeja West and Olorunsogo/Ikeja West tie CB at Ikeja West T/S - defective pole
- 5 Oke-Aro/Ikeja West 330kV lines 1 & 2 tie CB at Ikeja West T/S - Defective pole.
- 6 Jebba G.S./Jebba T.S 330kV line 2 CB at Jebba T/S.

OSOGBO REGION:

- 1 Omotosho 330kV T/S, 2nd series 330kV CB #3322 out due to control circuit problem.
- 2 Akure T/S 60MVA 132/33kV transformer T3A primary CB - defective spring charging mechanism.
- 3 Osogbo T/S 330kV bus coupler CB - Exploded Blue Phase CT
- 4 Jebba/Osogbo 330kV line 1 (cct J1H) - Defective line isolator mechanism at Osogbo T/S

ENUGU REGION:

- 1 New Haven/YendeV 132kV line CB - Faulty Red phase CB pole. Protection is transferred to the bus coupler CB.
- 2 Abakaliki T/S 30MVA 132/33kV transformer T1A and 60MVA 132/33kV transformer T2 primary CBs - Breakers were not provided since commissioning but the transformers are protected by Nkalagu 132kV line CB.
- 3 Oji River T/S 30MVA 132/33kV transformer T1A primary CB - The breaker is completely out of service and bypassed. The transformer is either protected by Onitsha/Oji 132kV line CB or New Haven/Oji 132kV line CB.
- 4 Oturkpo/YendeV 132kV By pass isolator - Canibalized to repair the line isolator.

SHIRORO REGION

- 1 Kainji/Jebba 330kV line 1 - CB problem at Kainji T/S.
- 2 Jebba T/S 75MX reactor 2R2 CB - exploded.

12 (C) UNAVAILABLE/DEFECTIVE GROUND SWITCHES

Benin Region

- 1 Irrua T/S: Benin/Irrua 132kV line Earth Switch - faulty.

ENUGU REGION:

- 1 New Haven/Nkalagu 132kV line 2 ground switch - Canibalized Red phase female contact and canibalized Yellow phase male contact.

12(D) LAGOS REGION

- 1 Egbin/Aja 330kV line 2 (cct N4J) - faulty breaker at Aja T/S.
- 2 132kV Akangba/Ikire line 1- Faulty line isolator at Akangba T/S.
- 3 Aja/Alagbon 132kV line 2 - detached conductor on tower 56 and 57.
- 4 Agbara/Ojo line 1 on soak.

SHIRORO REGION

- 1 Lokoja/Gwagwalada 330kV line 2 - Cut sky wire between towers 339 & 340.

12(E) UNAVAILABLE CAPACITOR BANK:

- (i) Ogba T.S, (ii) Maiduguri T/S, (iii) Isolo T/S, (iv) Ado-Ekiti T/S, (v) Ilorin T/S, (vi) Akure T/S.

12 (F) LINES WITH MISSING SKY WIRE

LAGOS REGION

- 1 Omotosho/Ikeja West line (M5W) and Egbin/Ikeja West line 3 (N6W) - 21
- 2 Ikeja West/Olorunsogo line (cct R1W) - 80 spans.
- 3 330kV Ikeja West/Osogbo line. - 95 spans.
- 4 Ikeja West/Alimosho/Ogba 132kV lines 1 & 2 - 15 spans.
- 5 Ikeja West/Akangba 330kV line 2 - 1 span.
- 6 Ikeja West/ Ilupeju 132kV lines 1 & 2 - 8 spans.
- 7 Akangba/Ikire 132kV lines 1 & 2 - 1 span.
- 8 Ikeja West/Agbara 132kV lines 1 & 2 - 61 spans.
- 9 Ikeja West/Otta 132kV lines 1 & 2- 17 spans.

SHIRORO REGION

- 1 Jebba T/S 330kV Osogbo lines 1 & 2 and Ganmo line - 9 spans
- 2 Minna T/S 132kV Bida line - 32 spans
- 3 Apo T/S 132kV Keffi line - 36 spans
- 4 Shiroro T/S 330kV Jebba line 2 - 28 spans

12 (G) UNAVAILABLE SYNCHROSCOPES :

- 1 Benin , Ikeja West, Onitsha, Egbin, Ugwuaji, Osogbo, Kaduna, Jos, Gwagwalada & Alaoji T/S.

FOR MORE INFORMATION: NCC Telephone Lines -

- PAX 09/300, 309, 303 & 305.
- NCC GSM - 08074888524, 08069379367, 08023572651 & 08051401331. CUG Nos. 08129458488, 08129458489, 08129929806; 08036665323.
- PLS - 622
- GM (NCC)-08033711297, 08054911239, CUG Airtel No. 08129458479.
- AGM (S/O) - 08066067487, CUG: 09021765320
- Coordinator (S/O) - 08037868916, 08054353904, 08028332125, CUG Airtel 08129458481.
- SYSTEM OPERATIONS WEB SITE: www.nigeriasystemoperator.org

