

TRANSMISSION COMPANY OF NIGERIA

To: Head (ISO), TCN - Abuja
From: General Manager, NCC, Osogbo

DAILY OPERATIONAL REPORT OF SATURDAY 10/03/2018

FOR: EVENTS OF FRIDAY 09/03/2018

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	22,230	21:00	09/03/2018
GENERATION CAPABILITY	7187.3	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	4868.3	-do-	-do-
PEAK GENERATION	4335.5	-do-	-do-
LOWEST GENERATION	3811.7	18:00	09/03/2018
8-HOURLY DURATION PEAK	4229.1	0100-0800	-do-
	4185.4	0900-1600	-do-
	4335.5	1700-2400	-do-
PEAK GENERATION TO DATE	5222.3	21:00	18/12/2017
MAXIMUM AVAILABLE CAPACITY TO DATE	7652.6	06:00	14/04/2014
MAXIMUM ENERGY GENERATED (MWH) TO DATE	109,372.01	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	345	Katampe T/S	18:00
LOWEST VOLTAGE FOR THE DAY	298	Kaduna T/S	12:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.570	18:08
LOWEST FREQUENCY	49.910	13:45

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 1st Feb., 2018		No. of days since last total collapse: 35											
Date of last partial collapse: 17 th Oct., 2017		No. of days since last partial collapse: 136											
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
2010	Total	--	3	1	--	3	3	--	2	2	1	4	22
	Partial	1	--	--	1	1	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	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	0	3	1	0	0	1	0	9
	Partial	--	0	0	1	0	0	0	0	0	2	1	4
2015	Total	1	0	1	0	2	0	1	0	0	1	0	6
	Partial	--	--	1	0	2	0	--	0	0	1	0	4
2016	Total	--	--	2	3	6	5	0	0	1	2	2	22
	Partial	--	--	1	0	1	3	1	0	0	0	0	6
2017	Total	5	3	0	3	1	1	0	0	1	1	--	15
	Partial	1	0	1	0	0	0	1	0	3	--	--	6
2018	Total	5	1	--	--	--	--	--	--	--	--	--	6
	Partial	--	--	--	--	--	--	--	--	--	--	--	0

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

STATION	TURBINE	PEAK GEN. (MW)	OFF-PEAK GEN.(MW)
1 KAINJI	HYDRO	289	316
2 JEBBA	HYDRO	357	282
3 SHIRORO	HYDRO	0	0
4 EGBIN ST2 - 5	STEAM	385	384
5 SAPELE	STEAM	52	47
6 DELTA	GAS	581	489
7 AFAM IV.V	GAS	62	61
8 GEREGU GAS	GAS	138	85
9 OMOTOSHO GAS	GAS	143.5	138.2
10 OLORUNSOGO GAS	GAS	133.1	133.8
11 GEREGU NIPP	GAS	130	129
12 SAPELE NIPP	GAS	206.7	141.8
13 ALAQJI NIPP	GAS	0	0
14 OLORUNSOGO NIPP	GAS	0	0
15 OMOTOSHO NIPP	GAS	113.9	89.5
16 ODUKPANI NIPP	GAS	297.6	241.3
17 IHOBOR NIPP	GAS	107.6	75.1
18 OKPAI	GAS	326	252
19 AFAM VI	GAS	426	424
20 IBOM POWER	GAS	95.1	83
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	41.7
23 OMOKU	GAS	43.3	0
24 TRANS AMADI	GAS	141.8	223
25 RIVERS IPP	(GAS)	85	85
26 AZURA - EDO IPP	(GAS)	0	0
27 EGBIN ST6	(GAS)	150	150
28 PARAS ENERGY	(GAS)	71	69.4
29 GBARAIN NIPP	GAS	100.9	71.6
TOTAL		4335.5	3811.7

1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	8300.00	345.83	8282.90	345.12
2 JEBBA	HYDRO	8235.00	343.13	8207.24	341.97
3 SHIRORO	HYDRO	0.00	0.00	0.00	0.00
4 EGBIN ST2 - 5	STEAM	9192.00	383.00	8662.80	360.95
5 SAPELE	STEAM	1024.70	42.70	1024.70	42.70
6 DELTA	GAS	11335.14	472.30	11203.60	466.82
7 AFAM IV.V	GAS	1486.00	61.92	1481.75	61.74
8 GEREGU GAS	GAS	2419.60	100.82	2398.00	99.92
9 OMOTOSHO GAS	GAS	3281.00	136.71	3256.00	135.67
10 OLORUNSOGO GAS	GAS	3244.22	135.18	3213.57	133.90
11 GEREGU NIPP	GAS	3019.12	125.80	3004.82	125.20
12 SAPELE NIPP	GAS	4298.36	179.10	4273.33	178.06
13 ALAQJI NIPP	GAS	0.00	0.00	0.00	0.00
14 OLORUNSOGO NIPP	GAS	0.00	0.00	0.00	0.00
15 OMOTOSHO NIPP	GAS	2503.80	104.33	2481.20	103.38
16 ODUKPANI NIPP	GAS	6956.80	289.87	6919.90	288.33
17 IHOBOR NIPP	GAS	2430.00	101.25	2411.80	100.49
18 OKPAI	GAS	7266.00	302.75	7108.80	296.20
19 AFAM VI	GAS	10852.90	452.20	10603.50	441.81
20 IBOM	GAS	2005.91	83.58	1997.00	83.21
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 AZURA - EDO IPP	GAS	0.00	0.00	0.00	0.00
23 A.E.S	GAS	0.00	0.00	0.00	0.00
24 OMOKU	GAS	1117.10	46.55	1076.67	44.94
25 TRANS AMADI	GAS	838.20	34.93	812.80	33.87
26 RIVERS IPP	GAS	2038.30	84.93	2032.87	84.70
27 EGBIN ST6	STEAM	3551.00	147.96	3359.70	139.99
28 PARAS ENERGY	GAS	1687.40	70.31	1679.60	69.98
29 GBARAIN NIPP	GAS	2186.00	91.08	2170.30	90.43
TOTAL		99,268.55	4,136.19	97,664.85	4,069.37

1.7A GENERATION POSITION AT 06:00HRS OF SATURDAY 10/03/2018

	STATIONS	NO OF INSTALLED UNITS	AVAILABLE UNITS	INSTALLED CAPACITY OF AVAILABLE UNITS(MW)	GENERATION CAPABILITY OF AVAILABLE UNITS(MW)	UNITS ON BAR	CAPABILITY OF UNITS ON BAR (MW)	GENERATION AT 06:00HRS (MW)	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	7	1G5, 6, 11 & 12 4	440	440	1G5, 6, 11 & 12 4	440	240	1G5 & 6 - Generation reduced on frequency management. 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. 1G11 & 12 - Generation reduced due to low head water elevation.
	JEBBA HYDRO	6	2G1, 2, 4 & 5 4	380	380	2G1, 4 & 5 3	285	247	2G2 - Shut down on frequency management. 2G3 - Out on maintenance. 2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	0	0	0	0	0	0	The station is out due to turbine pit flooding.
	EGBIN STEAM	5	ST1, 2, 4 & 5 4	880	600	ST1, 2 & 4 3	450	393	ST1 - Generation reduced on observation after maintenance. ST2 & 4 - Generation reduced due to gas constraint. ST3 - Tripped on high vibration. GT5 - Shut down due to gas constraint.
	SAPELE (STEAM)	1	0	0	0	0	0	0	ST1 - Tripped on low drum level. ST2 - Tripped on cooling water failure. ST3 - Out on stator winding problem. ST4 & 5 - Awaiting major overhaul. ST6 - Tripped on gas control valve not following reference point.
	DELTA (GAS)	18	GT4, 7, 9 - 13, 15, 16 & 18 - 20 12	655	655	GT7, 9 - 13, 15, 16 18 - 20 11	635	536	GT3 & 5 - Out due to generator winding fault. GT4 - Out due to gas constraint. GT6 & 14 - Out on major overhaul. GT17 - Out on excitation trouble.
	AFAM IV & V (GAS)	8	GT18 1	75	63	GT18 1	63	63	GT1 - 12 - De-commissioned and scrapped. GT13-16 - Out on blade failure. GT17 - Out on fault. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT12 1	145	124	GT11 & 13 - Shut down due to gas constraint.
	OMOTOSHO GAS	8	GT1 - 8 8	336	304	GT1, 2, 6 & 8 4	152	144.8	GT3, 4, 5 & 7 - Out due to gas constraint.
	OLORUNSOGO GAS	8	GT1 - 8 8	336	304	GT4 - 6 & 8 4	152	114.2	GT1-3 & 7 - Shut down due to low gas pressure. Generation reduced due to gas constraints.
NIPP	GEREGU NIPP	3	GT22 & 23 2	290	290	GT23 1	145	141	GT21 - Out on maintenance. GT22 - Out due to gas constraint.
	SAPELE NIPP	4	GT1 & 3 2	230	230	GT1 & 3 2	225	162.7	GT2 - Out due to high air inlet differential pressure. GT4 - Tripped on fire protection alarm.
	ALAOJI NIPP GAS	4	GT1, 2 & 4 3	375	360	0 0	0	0	GT1, 2 & 4 - Tripped due to low gas pressure. GT3 - Shut down due to generator air inlet filter trouble.
	OLORUNSOGO NIPP	6	GT1 - 3 3	375	360	0 0	0	0	GT1 - 3 - Out due to gas constraint. GT4 - Out on ignition failure and control relay failure alarm. ST13 & ST23 - Out on maintenance.
	OMOTOSHO NIPP GAS	4	GT1, 2 & 4 3	375	360	GT2 1	120	94.2	GT1 & 4 - Out due to gas constraint. GT3 - Shut down due to oil leakage on the unit.
	ODUKPANI NIPP	5	GT3, 4 & 5 3	360	345	GT3, 4 & 5 3	345	255.6	GT1 - Shut down due to fire alarm that refused to cancel. GT2 - Out due to motor starting problem. GT5 - Generation reduced due to gas constraint.
	IHOVBOR NIPP	4	GT1 - 3 3	345	330	GT3 1	110	107.4	GT1 & 2 - Out due to gas constraint. GT4 - Out on maintenance.
	GBARAIN NIPP GAS	1	GT2 1	112.5	112.5	GT2 1	112.5	89.4	Available unit on bar.
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	375	375	GT11, 12 & ST18 3	358	209	GT11 & 12 - Generation reduced due to gas constraint. ST18 - Generation reduced due to broken spray water valve of boiler #12. Generation reduced due to frequency management.
	AZURA - EDO	0	0	0	0	0	0	0	GT11 - Undergoing commissioning tests. GT12 & 13 - Awaiting commissioning.
	AFAM VI GAS/STEAM	4	GT11 - 13 & ST10 4	650	650	GT11 - 13 & ST10 4	650	541	GT13 & ST10 - Generation reduced on Afam management decision.
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	75.1	GT1 & 2 - Out on fault. GT3 - Generation reduced due to line constraint.
	AES	0	0	0	0	0	0	0	Out of production since 27/09/2014.
	ASCO	0	0	0	0	0	0	0	GT1 - Shut down due to leakage in the furnace.
	OMOKU GAS	6	GT1, 2, 5 & 6 4	100	80	GT1, 5 & 6 3	60	43.8	GT2 - Shut down due to low gas pressure. GT3 - Out due to gas leakage. GT4 - Awaiting major overhaul.
	TRANS-AMADI	4	GT1 & 2 2	50	44	GT1 & 2 2	44	44	GT3 - Out on fault. GT4 - Tripped on stator differential.
	RIVERS	1	GT1 1	180	160	GT1 1	120	85	Generation reduced due to gas constraint.
	SUB TOTAL	120	79	7469.5	6992.5	54	4726.5	3710.2	Frequency = 50.45Hz.

1.7B GENERATION POSITION AT 06:00HRS OF SATURDAY 10/03/2018 FOR UNITS ON BILATERAL AGREEMENT

EGBIN	1	ST6		ST6		150	150	Available unit on bar.
		1	220	150	1			
PARAS ENERGY	8	GT2-9		GT2-9		70.2	70.2	Available units on bar.
		8	70.2	70.2	8			
SUB TOTAL	9	9	290.2	220.2	9	220.2	220.2	
GRAND TOTAL	129	88	7759.7	7212.7	63	4,946.70	3,930.40	Frequency = 50.45Hz.

1.7C BILATERAL AGREEMENT UNITS DISPATCH - FRIDAY 09/03/2018

FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)		REMARK
Egbin ST6 120MW GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY				

	FEEDER	MAX	TIME	HOURS IN SERVICE	REMARK
OGBA	U-STEEL	1	0900HRS	23	OUTAGE ON 132KV CIRCUIT
	PTCEXPRESS	12	1500HRS	23	OUTAGE ON 132KV CIRCUIT
	SANKYO	OUT	0100HRS	0	TRIP ON FAULT.O/C & E/F
	FEEDER 8	15	0900HRS	23	OUTAGE ON 132KV CIRCUIT
IKORODU	PULK IT	4	0800HRS	24	NIL
	INDUSTRIAL	25	0600HRS	24	NIL
	SPINTEX	7	2100HRS	16	14-60MVA WAS OPENED ON PLANNED OUTAGE TO ARREST OIL LEAKAGE.
	DANGOTE	1	0500HRS	20	OPENED FOR SAFE WORKING SPACE TO CLEAR FAULT ON OWUTU 33KV FEEDER.
	LAND CRAFT	40	2400HRS	24	NIL
ALAJUSA	TR4 15MVA	8.3	1300HRS	24	NIL
	TR5 -15MVA	6.9	1400HRS	24	NIL
	ALAUJA	16.2	0900HRS	24	NIL
MILAND	PTC (MARYLAND)	19	1500HRS	21	FAULT & LOST OF SUPPLY
	TOTAL LOAD	155.4			

BILATERAL AGREEMENT LOAD DISPATCH
60MW PARAS ENERGY GENERATION TO CEB

FEEDER	MAX	TIME	HOURS IN SERVICE	REMARK
Ikeja West/Sakete 330KV line	71	06:00	24	Nil

1.8 HYDROLOGICAL DATA: SATURDAY 10/03/2018

	KAINJI	JEBBA	SHRORO
HEAD WATER ELEVATION (METERS)	139.34	101.4	370.91
TAIL WATER ELEVATION (METERS)	103.6	74.10	268.60
GROSS OPERATING HEAD (METERS)	35.74	27.33	102.31
AVERAGE TURBINE DISCHARGE (M3/SEC)	1081.00	1402.00	0.00
AVERAGE SPILLAGE (M3/SEC)	0.00	0.00	0.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1081	1402	0
COMPUTED INFLOW (M3/SEC)	28.00	1101.00	0.00
STORAGE DIFFERENTIAL	-1053.00	-301	0
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 FRIDAY 09/03/2018

DISCO	MAXIMUM LOAD(MW)	TIME(HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD(MW)	TIME(HRS)
ABUJA					
EKO					
IKEJA					

2.0 GAS POSITION: SATURDAY 10/03/2018

STATION	SIGNED ACQ Annual Contracted Quantity MMSCF/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	383	1100		600	500
DELTA (GAS)	502	915		635	280
OMOTOSHO GAS	142.2	336.8		162	184.8
OMOTOSHO NIPP	107.2	500		120	380
OLORUNSOGO (GAS)	138.8	336		152	184
OLORUNSOGO NIPP	0	750		0	750
SAPLE NIPP	188.1	500		230	270
SAPLE STEAM	46	720		0	720
AFAM IV-V	63	300		63	237
AFAM VI	429	650		650	0
GEREGU GAS	70	435		145	290
GEREGU NIPP	120	435		145	290
IKPAI (GAS/STEAM)	311	480		358	122
ALAOJI NIPP	0	504		0	504
IHOVBOR NIPP	107.3	450		110	340
IBOM	83.8	198		115	83
ODUKPANI NIPP	319.7	625		345	280
TOTAL	3011.1	9234.80		3820	5414.8

1 MMSCF IS EQUIVALENT TO 3.79MW

3.0 SPINNING RESERVE FOR : FRIDAY 09/03/2018

	(MW)	TIME	FREQUENCY
Maximum (MW)			
Minimum (MW)			
AVERAGE (MW)			

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF SATURDAY 10/03/2018 = 0MW. FREQUENCY 50.45Hz.

S/N	POWER STATION	UNIT ON SPINNING RESERVE	CONTRACTED RESERVE	ACTUAL RESERVE (MW)	TOTAL (MW)
1	Egbin	ST2	100	0	0
		ST4		0	
		ST6		0	
		ST6		0	
2	Delta	GT16	40	0	0
		GT17	40	0	
3	Olorunsogo NIPP	GT1	40	0	0
		GT2		0	
		GT3		382.5	
		GT4		0	
4	Geregu NIPP	GT22	35	0	0
		GT1	0		
5	Omotosho NIPP	GT2	40	0	0
		GT3		0	
		GT3		0	
		GT4		0	
TOTAL (MW)			295	0	0

4.0 UNUTILIZED GENERATION CAPABILITY

The unutilized generation capability for Saturday 10/03/2018 as at 0600Hrs was = 2363MW.

S/NO	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNUTILIZED GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO GAS CONSTRAINTS:					
1	Omotosho NIPP GT1 & 4	240	0	240	2190.1
2	Ihobor GT1 & 2	225	0	225	
3	Alaoji NIPP GT1, 2 & 3	360	0	360	
4	Olorunsogo Gas GT1 - 8	304	114.2	189.8	
5	Olorunsogo NIPP GT1 - 3	360	0	360	
6	Omotosho Gas GT3, 4, 5 & 7	152	0	152	
7	Odukpani GT5	115	78.9	36.1	
8	Geregu Gas GT11 & 12	290	0	290	
9	Rivers GT1	160	85	75	
10	Egbin ST 2, 4 & 5	450	393	57	
11	Ikpa GT11 & 12	300	151	149	
12	Delta GT4	20	0	20	
13	Omoku GT1, 2, 5 & 6	80	43.8	36.2	
IT IS ENVISAGED WITH IMPROVED PLANT AVAILABILITY AND RELIEF FROM EXISTING POWER SYSTEM NETWORK RELATED CONSTRAINTS, ADDITIONAL 1443.95MMSCF OF GAS (EQUIVALENT TO 5414.8MW) WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.					
4.2 DUE TO LINE CONSTRAINTS					
1	Ibom Power GT3	115	75.1	39.9	39.9
4.3 DUE TO FREQUENCY MANAGEMENT OCCASIONED BY DISCOS' LOAD DEMAND					
1	Kainji 1GS & 6	240	107	133	133
4.4 DUE TO WATER MANAGEMENT					
					0
Grand Total					2363

5.0 **OUTAGES:**

5 (A) **FORCED OUTAGES (GENERATION):-** NIL

5 (B) **FORCED OUTAGES (TRANSMISSION):-**

- 1 10:01 through 24:00Hrs, Osogbo T/S 75MX 330kV Reactor 4R1 tripped on trip relay 86T.
- 2 11:23 – 13:45Hrs, Akangba/Isolo 132kV line 2 CB tripped at Akangba T/S without relay indication. LHR = 38.3MW.
- 3 11:23 - 13:45Hrs, Isolo T/S 60MVA 132/33kV transformer T2 primary & secondary CBs tripped on SBEF. LHR = 20.2MW
- 4 11:23 – 13:52Hrs, Isolo T/S 60MVA 132/33kV transformer T1 primary & secondary CBs tripped on SBEF. LHR = 17.3MW.
- 5 11:23 – 13:58Hrs, Isolo T/S 45MVA 132/33kV transformer T3 primary & secondary CBs tripped on SBEF. LHR = 3.5MW.
- 6 19:01 – 19:11Hrs, Jebba/Osogbo 330kV line 1 (cct J1H) CBs tripped at both ends on the following relay indications:
At Jebba T/S: Micom relay – Trip DIT, Auxiliary 85X.
At Osogbo T/S: Ohmega relay- zone 1, Phase C, Earth, distance = 3.65km, 86T/2. No load loss as ccts J2H, J3G & H3G were in service.
- 7 19:18 – 19:53Hrs, Osogbo/Ikeja West 330kV line (cct H1W) CBs tripped at both ends on the following relay indications:
At Osogbo T/S: Siprotec relay – Relay trip, Blue Phase, zone 1 trip, E/F, O/C PU, distance = 14.4km.
Ohmega relay – zone 1, Phase C, Earth 86T/2, distance = 14.37km.
At Ikeja West T/S: Siprotec relay – General trip, DPH, Blue Phase fault, ZCOM trip, distance – 239.8km.
Micom relay – started Phase C-N, E/F, stared IN >1, fault location = 271.4km. No load interruption as ccts H2A, R2A & R1W were in service.
- 8 19:56 – 20:19Hrs, Osogbo/Akure/Ado Ekiti 132kV line CB tripped at Osogbo T/S on O/C Red & Blue Phases. LHR = 21MW.

5 (C) **PLANNED OUTAGES:-**

- 1 07:32 - 16:55Hrs, Hold OFF Tag (OF 12) placed on Jebba/Shiroro 330kV line 2 (cct J7R) for continuation of optic fibre job.
- 2 08:50 - 15:13Hrs, Hold OFF Tag (OF 12) placed on Benin/Egbin 330kV line & Benin/Omotosho 330kV line (ccts B6N & B5M) to enable live line crew continue replacement of corroded insulators on the lines.
- 3 10:42 - 17:24Hrs, Ife/Ondo 132kV line was taken out to enable maintenance crew cut over grown trees between towers #76-77, 87-90, 134-137 & 138-139. Load loss = 2MW

5(D) **URGENT OUTAGES:**

- 1 00:28 - 00:49Hrs & 05:40 - 06:30Hrs, Akangba/Ojo 132kV line 2 was opened to check load flow on cct M5W. Load loss = 35MW & 39MW respectively
- 2 03:16 through 24:00Hrs, Afam VI GT13 was shut down due to high load on cct T4A 394MW. Load loss = 108MW
- 3 04:49 through 24:00Hrs, Omoku GT2 was shut down due to low gas pressure. Load loss = 20.7MW
- 4 05:40 – 06:12Hrs, Akangba/tire 132kV line 2 was taken out due to high load on cct M5W. Load loss = 23MW
- 5 10:41 - 19:54Hrs, Trans-Amadi GT1 was shut down as the unit flagged on digital generator protection relay module. Load loss = 21.1MW
- 6 10:53 – 18:35Hrs, Egbin T/S 60MVA 132/33kV transformer T4 was taken out to enable for LMD and MBH contractor seal oil leakage on the transformer. Load loss = 28MW.
- 7 11:16 – 14:51Hrs, Mando T/S 60MVA 132/33kV transformer T2 was taken out to seal oil leakage on the transformer. No load loss as the transformer was on soak.
- 8 11:35 – 12:59Hrs, Uyo T/S 60MVA 132/33kV transformer T2 was taken out as additional apparatus for safe working space to allow crane off load materials in the switchyard. Load loss = 10MW
- 9 19:40 through 24:00Hrs, Kainji P/S 1G5 was shut down due to arching on excitation carbon brush. Load loss = 101MW.

9 **GENERATOR MERIT ORDER BASED ON SYSTEM RESPONSE AND GRID RELIABILITY**

GROUP 1 - HYDRO UNITS (LEAST COST) ON FREE GOVERNOR CONTROL AND ANCILLARY SERVICE .

GROUP 2A - UNITS FROM ODUKPANI, AZURA, SHELL AFAM VI AGIP OKPAI, OLORUNSOGO POWER PLC AND OMOTOSHO POWER PLC.

GROUP 2B - OTHER GENERATOR UNITS IDENTIFIED TO BE ON FREE GOVERNOR CONTROL.

GROUP 3 - OTHER UNITS IDENTIFIED TO BE OFFERING REGULATORY RESERVE.

GROUP 4 - OTHER UNITS OFFERING SPINNING RESERVE (THE POWER PLANTS CONTACTED FOR THE ANCILLARY SERVICE)

GROUP 5 - ALL PLANTS DISPATCHED SUBJECT TO TRANSMISSION CONSTRAINT (NOT YET IDENTIFIED).

GROUP 6 - ALL PLANTS PROVIDING VOLTAGE SUPPORT ABOVE STATUTORY LIMIT (NOT YET IDENTIFIED).

GROUP 7 - ALL OTHER PLANTS.

5 (E) **EMERGENCY OUTAGES:-** NIL

5 (F) **AUTOMATIC UNDER FREQUENCY OPERATION:-** NIL

5 (G) **330KV LINES THAT ARE OUT ON VOLTAGE CONTROL:-** ccts A1S & K3U.

5 (H) **330KV LINES THAT ARE OUT ON BREAKER PROBLEM:-** NIL

5 (I) **330KV LINES THAT ARE OUT ON PLANNED OUTAGE:-** NIL

5 (J) **330KV LINES THAT ARE OUT ON LINE FAULT:-** ccts S5B & U1A.

5 (K) **330KV LINES THAT ARE ON SOAK:-** ccts N4J, A2K & F1K.

6 **WEATHER REPORT:-** Rainfall was reported in Benin, Osogbo, Lokoja, Ayede & Omotosho.

7 **INTERNATIONAL LINES:-**

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

Maximum load - 284MW at 23:00Hrs.
Minimum load - 205MW at 11:00Hrs.

B **BIRNIN KEBBI/NAMEY 132KV LINE**

Maximum load - 104MW at 16:00Hrs.
Minimum load - 79MW at 08:00Hrs.

C **KATSINA/GAZAQUA/MARADI 132KV LINE**

Maximum load - 39.0MW at 22:00Hrs.
Minimum load - 25.0MW at 04:00Hrs.

11 (A) COMMUNICATION MEDIA

STATIONS	NO INSTALLED	NO. WORKING
PLC/PAX	37	33
OPTIC FIBRE	13	10
PLS	14	5

11 (B) SCADA RTU STATUS

STATIONS	NO. INSTALLED	NO OF RTU DISTURBED	NO OF RTU WORKING
POWER STATIONS	8	6	2
330kV	19	7	12
132kV	102	76	26

12(A) UNAVAILABLE TRANSFORMERS/REACTORS:

SHIRORO REGION:

- Birnin Kebbi 75MX Reactor R1.

ABUJA REGION

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

KADUNA REGION:

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

8 MISCELLANEOUS:-

- 02:30Hrs, Egbin P/S reduced generation by 10MW due to low gas pressure
- 13:37Hrs, Ota T/S Newly installed 60MVA 132/33kV transformer T4 was energized on soak.
- 15:06Hrs, Ota T/S Newly installed 60MVA 132/33kV transformer T4 was taken out. No load loss as the transformer was on soak.
- 16:48Hrs, New Haven T/S 60MVA 132/33kV transformer T3 was restored. The transformer was out on fault.
- 19:28Hrs, Delta GT16 was tied. The unit was out due to gas constraint.
- LACK OF REACTOR AND UNRELIABLE STATION SERVICE SUPPLY AT IKOT-EKPENE T/S ARE HINDERING SMOOTH OPERATION.**
- THE SCADA COVERAGE OF ONLY LIMITED AREAS IS NOT GOOD FOR THE SMOOTH OPERATION OF THE GRID.**

12(D) LAGOS REGION

- Agbara/Ojo 132kV line 1 on soak from Agbara end.

12(E) UNAVAILABLE CAPACITOR BANK:

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

BAUCHI REGION:

- 1 Gombe T/S -30MX Reactor R2A.

ENUGU REGION:

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

LAGOS REGION:

- 1 Oke-Aro T/S 75MX Reactor R1.

PORT HARCOURT REGION

- 1 Ikot-Ekpene T/S: No available reactor.

12 (B) UNAVAILABLE BREAKERS/ISOLATORS

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.
- 7 Omotosho/Ikeja West 330kV line CB at Ikeja West T/S.

BENIN REGION:

- 1 Omotosho 330kV T/S, 2nd series 330kV CB #3322 out due to control circuit problem.

ENUGU REGION:

- 1 New Haven/Yandev 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/Yandev 132kV By pass isolator - Canibalized to repair the line isolator.

SHIRORO REGION

- 1 Jebba T/S 75MX reactor 2R2 CB - exploded.

PORT HARCOURT REGION

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

12 (F) LINES WITH MISSING SKY WIRE

LAGOS REGION

- 1 Omotosho/Ikeja West line (M5W) and Egbin/Ikeja West line 3 (N6W) - 21 spans.
- 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/Iire 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 Shiroro T/S 330kV Jebba line 2 - 28 spans

ABUJA REGION

- 1 Apo T/S 132kV Keffi line - 36 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 -

- a PAX 09/300, 309, 303 & 305.
- b NCC GSM - 08074888524, 08069379367, 08023572651 & 08051401331. CUG Nos. 08129458488, 08129458489, 08129929806; 08036665323.
- c PLS - 622
- d GM (NCC) - 08036744641.
- e AGM (S/O) - 08056002757, CUG: 08129458475

