

TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF SATURDAY 03/11/2018

FOR: EVENTS OF FRIDAY 02/11/2018

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	22,900	21:30	02/11/2018
GENERATION CAPABILITY	7573.6	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5488.1	-do-	-do-
PEAK GENERATION	4887.5	-do-	-do-
LOWEST GENERATION	3295.8	04:00	02/11/2018
8-HOURLY DURATION PEAK	3681.7	0100-0800	-do-
	4026.7	0900-1600	-do-
	4887.5	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	347	New Haven T/S	04:00
LOWEST VOLTAGE FOR THE DAY	293	Sakete T/S	19:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.77	03:16
LOWEST FREQUENCY	50.08	10:15

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 20th Sept, 2018		No. of days since last total collapse: 42												
Date of last partial collapse: 12th April, 2018		No. of days since last partial collapse: 201												
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	3	--	2	2	1	4	22
	Partial	1	--	--	1	1	3	4	4	3	2	--	1	20
2011	Total	--	--	--	--	4	3	1	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	1	4	2	22
	Partial	--		--	--	--	--	--	--	2				2
2014	Total	2			2	0	3	1	0	0	1	0	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	0	1	0	6
	Partial	--	--	1	0	2	0		0	0	1	0	0	4
2016	Total	--	--	2	3	6	5	0	0	1	1	2	2	22
	Partial	--	--	1	0	1	3	1	0	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	3			9
2018	Total	5	1	0	0	0	1	1		2				10
	Partial	0	0	0	1	0				0				1

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

STATION	TURBINE	PEAK GEN. (MW)	OFF-PEAK GEN.(MW)			
1	KAINJI	HYDRO	391	357		
2	JEBBA	HYDRO	466	444		
3	SHIRORO	HYDRO	585	210		
4	EGBIN ST2 - 5	STEAM	454	279		
5	SAPELE	STEAM	50	50		
6	DELTA	GAS	517	360		
7	AFAM IV-V	GAS	66	52		
8	GEREGU GAS	GAS	136	67		
9	OMOTOSHO GAS	GAS	68.8	0		
10	OLORUNSOGO GAS	GAS	166	166.9		
11	GEREGU NIPP	GAS	0	0		
12	SAPELE NIPP	GAS	171.8	101.2		
13	ALAOJI NIPP	GAS	110.7	51.8		
14	OLORUNSOGO NIPP	GAS	106	76.2		
15	OMOTOSHO NIPP	GAS	103.8	76.4		
16	ODUKPANI NIPP	GAS	0	0		
17	IHOVBOR NIPP	GAS	201.2	140.1		
18	OKPAI	GAS	191	178		
19	AFAM VI	GAS	130	104		
20	IBOM POWER	GAS	71.4	0		
21	ASCO	GAS	0	0		
22	A.E.S	GAS	0	0		
23	OMOKU	GAS	56.5	51.5		
24	TRANS AMADI	GAS	41	37.9		
25	RIVERS IPP	(GAS)	130	90		
26	AZURA - EDO IPP	(GAS)	402	225		
27	EGBIN ST6	(GAS)	110	110		
28	PARAS ENERGY	(GAS)	68.6	67.8		
29	GBARAIN NIPP	GAS	93.7	0		
TOTAL			4887.5	3295.8		
1.6 ENERGY GENERATED/ENERGY SENT OUT:						
STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT		
		MWH	MWH/H	MWH	MWH/H	
1	KAINJI	HYDRO	9533.00	397.21	9516.80	396.53
2	JEBBA	HYDRO	10849.00	452.04	10823.76	450.99
3	SHIRORO	HYDRO	9662.00	402.58	9634.42	401.43
4	EGBIN ST2 - 5	STEAM	6965.00	290.21	6761.30	281.72
5	SAPELE	STEAM	1067.20	44.47	1026.40	42.77
6	DELTA	GAS	9815.01	408.96	9668.70	402.86
7	AFAM IV-V	GAS	1448.00	60.33	1442.17	60.09
8	GEREGU GAS	GAS	2492.90	103.87	2471.94	103.00
9	OMOTOSHO GAS	GAS	739.00	30.79	723.10	30.13
10	OLORUNSOGO GAS	GAS	3995.94	166.50	3965.67	165.24
11	GEREGU NIPP	GAS	0.00	0.00	0.00	0.00
12	SAPELE NIPP	GAS	3686.90	153.62	3667.40	152.81
13	ALAOJI NIPP	GAS	1841.56	76.73	1841.51	76.73
14	OLORUNSOGO NIPP	GAS	2223.10	92.63	2174.10	90.59
15	OMOTOSHO NIPP	GAS	2186.70	91.11	2165.90	90.25
16	ODUKPANI NIPP	GAS	0.00	0.00	0.00	0.00
17	IHOVBOR NIPP	GAS	4166.31	173.60	4139.72	172.49
18	OKPAI	GAS	4337.00	180.71	4216.80	175.70
19	AFAM VI	GAS	2750.98	114.62	2659.96	110.83
20	IBOM	GAS	1576.84	65.70	1568.00	65.33
21	ASCO	GAS	0.00	0.00	0.00	0.00
22	AZURA - EDO IPP	GAS	6987.05	291.13	6962.40	290.10
23	A.E.S	GAS	0.00	0.00	0.00	0.00
24	OMOKU	GAS	1281.80	53.41	1248.26	52.01
25	TRANS AMADI	GAS	912.60	38.03	890.40	37.10
26	RIVERS IPP	GAS	2684.40	111.85	2663.28	110.97
27	EGBIN ST6	STEAM	2951.00	122.96	2785.60	116.07
28	PARAS ENERGY	GAS	1634.50	68.10	1626.00	67.75
29	GBARAIN NIPP	GAS	419.30	17.47	410.00	17.08
TOTAL			96,207.09	4,008.63	95,053.59	3,960.57

1.7A GENERATION POSITION AT 06:00HRS OF SATURDAY 03/11/2018

	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) AT 50.33Hz.	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	8	1G5, 6, 11 & 12 4	440	420	1G5, 6, 11 & 12 4	420	393	1G7 - Out on stator winding failure. 1G8 - Out due to oil leakage on governor runner head. 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	6	2G2 - 5 4	380	380	2G2 - 5 4	375	375	2G1 - Out on maintenance. 2G6 - Out due to burnt generator winding and AVR. Available units on bar.
	SHIRORO HYDRO	4	411G1 - 4 4	600	600	411G1 - 4 4	600	300	411G1 - 3 - Generation reduced due to low load demand by the Discos.
	EGBIN STEAM	5	ST2, 4 & 5 3	660	600	ST2, 4 & 5 3	500	338	ST1 - Out due to undisclosed fault since 04/09/2018. ST3 - Out on high vibration since 19th June 2017. Generation reduced due to low load demand by the Discos.
	SAPELE (STEAM)	6	ST2 1	120	60	ST2 1	60	40	ST1 & 3 - Tripped on low drum level. ST4 & 5 - Awaiting major overhaul. ST6 - Tripped on gas control valve not following reference point. Generation reduced due to low load demand by the Discos.
	DELTA (GAS)	18	GT7, 9 - 13, 15, 16 & 19 & 20 10	540	540	GT7, 9 - 13, 15, 16 & 19 9	435	425	GT2 - Tripped on transformer differential lockout. GT3 & 5 - Out due to generator winding fault. GT4 - Out on loss of excitation. GT6, 8 & 14 - Out on major overhaul. GT17 - Tripped on bearing vibration more than maximum. GT18 - Out due to generator lockout problem. GT20 - Out due to low load demand by the Discos.
	AFAM IV & V (GAS)	8	GT18 1	120	120	GT18 1	65	65	GT1 - 12 - De-commissioned and scrapped. GT13,14 & 16 - Out on blade failure. GT17 - Out due to technical issue. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 1	145	145	GT11 1	145	129	GT12 & 13 - Tripped on natural gas valve position.
	OMOTOSHO GAS	8	GT1 - 8 8	336	304	GT6 & 8 2	76	69.8	GT1 - 5 & 7- Out due to low load demand by the Discos. Generation reduced due to low load demand by the Discos
	OLORUNSOGO GAS	8	0 0	0	0	0 0	0	0	GT1 - 8 - Out on maintenance.
NIPP	GEREGU NIPP	3	GT22 & 23 2	290	290	0 0	0	0	GT21 - Out on maintenance. GT22 & 23 - Out due to gas constraint.
	SAPELE NIPP	4	GT1 - 4 4	450	450	GT1 & 3 2	225	139.8	GT2 - Out due to low load demand by the Discos. GT3 - Generation reduced due to air inlet filter problem. GT4 - Out due to gas constraint.
	ALAOJI NIPP GAS	4	GT1 & 2 2	240	240	GT2 1	120	70.9	GT1 - Out due to low load demand by the Discos. GT2 - Generation reduced due to low load demand by the Discos. GT3 - Shut down due to lack of spare part. GT4 - Tripped on over voltage lockout relay trip.
	OLORUNSOGO NIPP	6	GT1 & 2 2	250	240	GT2 1	120	76.2	GT1 - Out due to low load demand by the Discos. GT3 - Out on maintenance. GT4 - Out due to ignition failure and control relay failure alarm. ST13 & ST23 - Out on maintenance. Generation reduced due to low load demand by the Discos.
	OMOTOSHO NIPP GAS	4	GT1, 2 & 4 3	375	360	GT1 1	120	99.5	GT2 & 4 - Out due to low load demand by the Discos. GT3 - Out on lube oil leakage.
	ODUKPANI NIPP	5	0 0	0	0	0 0	0	0	GT1 & 2 - Out on fault. GT3 & 5 - Out due to gas leakage. GT4 - Tripped on main transformer neutral O/C and HV protection.
	IHOVBOR NIPP	4	GT1, 2 & 4 3	337.5	337.5	GT1 & 4 2	225	143.2	GT1 & 4 - Generation reduced due to low load demand by the Discos. GT2 - Out due to low load demand by the Discos. GT3 - Tripped on high vibration.
	GBARAIN NIPP GAS	1	GT2 1	115	112.5	GT2 1	112.5	88.7	Generation reduced due to low load demand by the Discos.
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	370	370	GT11, 12 & ST18 3	290	193	GT11 - Generation reduced due to gas constraint. ST18 - Generation reduced due to boiler problem.
	AZURA - EDO	3	GT11 - 13 3	461	461	GT11 - 13 3	461	225	GT11- 13 - Generation reduced due to low load demand by the Discos.
	AFAM VI GAS/STEAM	4	GT11 - 13 & ST10 4	650	640	GT11 1	150	125	GT12 - Out due to low load demand by the Discos. GT13 & ST10 - Out due to gas constraint.
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	65.2	GT1 & 2 - Out due to fire outbreak on the control panel. Generation reduced due to low load demand by the Discos
	AES	9	0 0	0	0	0 0	0	0	Out of production since 27/09/2014.
	ASCO	2	0 0	0	0	0 0	0	0	ST1 - Shut down due to leakage in the furnace.
	OMOKU GAS	6	GT1, 2 & 5 3	75	70	GT1, 2 & 5 3	60	56.3	GT3 - Tripped on over speed. GT4 - Out on major overhaul. GT6 - Out on maintenance. Available units on bar.
	TRANS-AMADI	4	GT1, 2 & 4 3	75	60	GT1 & 4 2	40.9	40.9	GT2 - Out due to low gas pressure. GT3 - Out on fault.
	RIVERS	1	GT1 1	160	160	GT1 1	160	80	Generation reduced due to low load demand by the Discos.
	SUB TOTAL	140	71	7304.5	7075	51	4875.4	3538.5	Frequency = 50.33Hz.

1.7B GENERATION POSITION AT 06:00HRS OF SATURDAY 03/11/2018 FOR UNITS ON BILATERAL AGREEMENT

EGBIN	1	ST6	220	169	ST6	169	169	Available unit on bar.
		1			1			
PARAS ENERGY	8	GT2 - 9	70	68.6	GT2 - 9	68.6	68.6	Available units on bar.
		8			8			
SUB TOTAL	9	9	290	237.6	9	237.6	237.6	
GRAND TOTAL	149	80	7594.5	7312.6	60	5,113.00	3,776.10	Frequency = 50.33Hz

1.7C BILATERAL AGREEMENT UNITS DISPATCH - FRIDAY 02/11/2018.								
EGBIN ST6 5MW GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY								
	FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HRS IN SERVICE	TOTAL (MWH)	REMARK
OGBA	U-STEEL	ON	0100HRS			24		NIL
	PTCEXPRESS	ON	0100HRS			24		NIL
	SANKYO	ON	0100HRS			24		NIL
	FEEDER 8	15	1100HRS			24		NIL
IKORODU	PULK IT	1	0100HRS			24		NIL
	INDUSTRIAL	8	0800HRS			24		NIL
	SPINTEX	5	0200HRS			24		NIL
	DANGOTE	ON	0100HRS			24		NIL
	LAND CRAFT	16	0200HRS			24		NIL
ALAUSA	TR4 15MVA	7.2	1100HRS			24		NIL
	TR5 -15MVA	5.5	0900HRS			24		NIL
	ALAUSA	16.7	1400HRS			24		NIL
M/LAND	PTC (MARYLAND)	19	0800HRS			23		FORCED, T2 60MVA SECONDARY CB
	TOTAL LOAD							

BILATERAL AGREEMENT LOAD DISPATCH 60MW PARAS ENERGY GENERATION TO CEB OF FRIDAY 02/11/2018							
FEEDER	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK
Ikeja West/Sakete 330kV line	69.4	21:00	66.2	12:00	24	1627.2	Nil

BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI LOAD DISPATCH TO THE FOLLOWING COMPANIES OF: FRIDAY 02/11/2018									
COMPANY NAME	VOLTAGE LEVEL	CONTRACTUAL LOAD (MW)	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK
INNER GALAXY	132kV line 2	0	ON	ON	ON	ON	ON	ON	ON
KAM STEEL		15.0	5	19:00	0.5	01:00	24	45	SUPPLY NOT INTERRUPTED
ASAKA CEMENT		0.0	0.3	12:00	0.1	17:00	13	2.5	SUPPLY NOT INTERRUPTED
XING 1	33kV feeder	0.0	1.2	20:00	0.6	01:00	10	8.1	SUPPLY NOT INTERRUPTED
XING 2		0.0	2	23:00	0.5	18:00	14	8.1	SUPPLY NOT INTERRUPTED
KAM INTEGRATED		15.0	4.2	9:36	1.3	15:00	24	56.4	SUPPLY NOT INTERRUPTED
OLAM FLOUR MILLS		3.0	2.2	12:00	0.8	19:00	24	35.9	SUPPLY NOT INTERRUPTED
LORDSMITH		0	0.5	10:00	0.4	04:00	24	11.6	SUPPLY NOT INTERRUPTED

1.8 HYDROLOGICAL DATA: SATURDAY 03/11/2018

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	141.7	103.20	381.90
TAIL WATER ELEVATION (METERS)	105.25	74.9	270.8
GROSS OPERATING HEAD (METERS)	36.45	28.30	111.10
AVERAGE TURBINE DISCHARGE (M3/SEC)	1191.00	1734.00	432.00
AVERAGE SPILLAGE (M3/SEC)	315.00	3.35	0.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1506.00	1737.35	432.00
COMPUTED INFLOW (M3/SEC)	1506.00	1803.00	235.00
STORAGE DIFFERENTIAL	0.00	65.65	-197
MAXIMUM LEVEL FOR SPILLAGE COMMENCEMENT	141.73	103	382.50
MINIMUM LEVEL BELOW WHICH NO GENERATION	130	99	355.00

1.9 MAXIMUM/ALLOCATED LOAD/MINIMUM LOADS FOR ABUJA AND LAGOS AS AT FRIDAY 02/11/2018

	MAXIMUM LOAD (MW)	TIME (HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD (MW)	TIME (HRS)
ABUJA	535.5	11:00	538.31	384.2	17:00
EKO					
IKEJA	584.8	22:00	807.15	410.7	16:00

2.0 GAS POSITION: SATURDAY 03/11/2018

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	226	1100		500	600
DELTA (GAS)	430	915		435	480
OMOTOSHO GAS	0	336.8		76	260.8
OMOTOSHO NIPP	0	500		120	380
OLORUNSOGO (GAS)	185.2	336		0	336
OLORUNSOGO NIPP	151.9	750		120	630
SAPELE NIPP	112.9	500		225	275
SAPELE STEAM	50	720		60	660
AFAM IV-V	63	300		60	240
AFAM VI	117	650		65	585
GEREGU GAS	122	435		145	290
GEREGU NIPP	0	435		0	435
OKPAI (GAS/STEAM)	229	480		290	190
ALAOJI NIPP	79.9	504		120	384
IHOVBOR NIPP	150.1	112.5		225	-112.5
IBOM	0	198		115	83
ODUKPANI NIPP	0	625		0	625
TOTAL	1917	8897.30		2556	6341.3

1 MMSCF IS EQUIVALENT TO 3.75MW

3.0 SPINNING RESERVE FOR : FRIDAY 02/11/018

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

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF SATURDAY 03/11/2018 = 0MW. FREQUENCY 50.33Hz.

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

4.0 UNAVAILABLE GENERATION CAPABILITY

The unavailable generation capability for Friday 02/11/2018 as at 0600Hrs was = 3113MW.

S/N	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNAVAILABLE GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO GAS CONSTRAINTS:					
1	Okpai GT11	145	20	125	867.5
2	Afam VI GT13 & ST10	340	0	340	
3	Geregu NIPP GT22 & 23	290	0	290	
4	Sapele NIPP GT4	112.5	0	112.5	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
IT IS ENVISAGED WITH IMPROVED PLANT AVAILABILITY AND RELIEF FROM EXISTING POWER SYSTEM NETWORK RELATED CONSTRAINTS, ADDITIONAL 1691.01MMSCF OF GAS (EQUIVALENT TO 6341.3MW 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 LOW LOAD DEMAND BY THE DISCOS					
1	Ihovbor GT1, 2 & 4	337.5	143.2	194.3	2245.5
2	Azura-Edo GT11 - 13	461	225	236	
3	Ibom GT3	115	65.2	49.8	
4	Shiroro 411G1 - 3	450	150	300	
5	Delta GT20	110	0	110	
6	Alaoji NIPP GT1 & 2	240	70.9	169.1	
7	Afam VI GT12	150	0	150	
8	Olorunsogo NIPP GT1 & 2	240	76.2	163.8	
9	Egbin ST2, 4 & 5	500	338	162	
10	Omosho NIPP GT2 & 4	240	0	240	
11	Gbarain NIPP GT2	112.5	88.7	23.8	
12	Sapele NIPP GT2	112.5	0	112.5	
13	Rivers GT1	160	80	80	
14	Omosho Gas GT1 - 8	304	69.8	234.2	
15	Sapele Steam ST2	60	40	20	
				0	
4.1 DUE TO WATER MANAGEMENT:					
					0
Grand Total					3113

5.0 OUTAGES:

5 (A) FORCED OUTAGES (GENERATION):

- 1 15:25 – 15:55Hrs, Shiroro P/S 411G3 tripped on governor system problem. LHR = 144MW

5(B) FORCED OUTAGES (TRANSMISSION):

- 1 04:00 - 04:37Hrs, Onitsha T/S 90MVA 330/132/33kV transformer 9T1 secondary CB tripped on O/C stage 1. LHR = 24.9MW
- 2 12:35 – 12:57Hrs, Akangba/Ojo 132kV line 2 CB tripped at Akangba T/S on O/C stage 2, fault location = 20.2km. LHR = 9MW
- 3 19:24 – 19:34Hrs, Kumbotso/Dakata 132kV line CB tripped at Kumbotso T/S on O/C Red phase. LHR = 55MW

5 (C) PLANNED OUTAGES:-

- 1 09:10 - 14:06Hrs, Alaoji/Afam 132kV line 1 was taken out to enable maintenance crew carry out annual preventive maintenance on the CB at Afam T/S. No load loss as the line was on soak.
- 2 10:18 - 13:08Hrs, Osogbo T/S 150MVA 330/132/33kV transformer 4T6 was taken out to treat hotspot on the secondary Red phase conductor clamp. Load loss = 29.5MW
- 3 12:31 - 13:22Hrs, Alagbon T/S 60MVA 132/33kV Mobitra primary CB was taken out to replace burnt bolts and nuts on the primary Yellow and Blue phase bushings. Load loss = 9MW

5(D) URGENT OUTAGES:-

- 1 13:26 – 15:40Hrs, Akangba/Ojo 132kV line 1 was taken out to carry out maintenance on spring charging motor of the line CB at Akangba T/S. Load loss = 20MW
- 2 14:31 – 14:40Hrs, Akangba/Ojo 132kV line 2 was taken out to carry out maintenance on malfunctioning isolator at Amuwo T/S. Load loss = 20MW
- 3 15:27 – 15:41Hrs, Akangba/Ojo line 2 was taken out to allow Amuwo T/S transfer its load to Akangba/Ojo line 1. Load loss = 34MW

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 GENERATING 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 CONTRACTED 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).

10 COMMUNICATION MEDIA

STATIONS	NO INSTALLED	NO. WORKING
PLC/PAX	37	28
OPTIC FIBRE	13	10
PLS	14	4

11 SCADA RTU STATUS

STATIONS	NO. INSTALLED	NO OF RTU DISTURBED	NO OF RTU WORKING
POWER STATIONS	8	7	1
330kV	19	11	8
132kV	102	92	10

5 (E) EMERGENCY OUTAGES:- NIL.

5 (F) AUTOMATIC UNDER FREQUENCY OPERATION:-

5 (G) 330KV LINES THAT ARE OUT ON VOLTAGE CONTROL:- ccts K4U, L7G, A1S & U1A.

5 (H) 330KV LINES THAT ARE OUT ON BREAKER PROBLEM:- cct A1K.

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

5 (J) 330KV LINES THAT ARE OUT ON LINE FAULT:- ccts R2A, D3T & J2H

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

6 WEATHER REPORT:- Rainfall reported at Akangba, Onitsha, Ikeja-West, New Haven

7 INTERNATIONAL LINES:-

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

Maximum load - 295MW at 17:00Hrs.

Minimum load - 243MW at 08:00Hrs.

B BIRNIN KEBBI/NIAMEY 132KV LINE

Maximum load - 107MW at 24:00Hrs.

Minimum load - 86MW at 07:00Hrs.

C KATSINA/GAZAOUA/MARADI 132KV LINE

Maximum load - 35.6MW at 21:00Hrs.

Minimum load - 26MW at 08:00Hrs.

8 MISCELLANEOUS:-

- 1 00:42 - 18:47Hrs, Delta GT20 was shut down due to low load demand by the Discos. Load loss = 96MW

- 2 05:39Hrs, Ibom Power GT3 was tied. The unit was out on maintenance.

- 3 11:17Hrs, Omotosho Gas GT6 was tied. The unit was out due to maintenance work at the gas station.

- 4 17:10Hrs, Omotosho Gas GT8 was tied. The unit was out due to maintenance work at gas station.

- 5 18:32Hrs, Afam IV GT17 was tied. The unit was out on maintenance.

- 6 18:45Hrs, Gbarain NIPP GT2 was tied. The unit was due to low gas pressure.

- 7 18:48 through 24:00Hrs, Afam IV GT17 was shut down due to technical issue. No load loss as the unit could not load up.

**** 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(A) UNAVAILABLE TRANSFORMERS/REACTORS:

SHIRORO REGION:

- 1 Birnin Kebbi 75MX Reactor R1.

ABUJA REGION

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

KADUNA REGION:

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

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 reactor installed.

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

BENIN REGION:

- 1 Omotosho T/S 330kV, 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.
- 5 New Haven/Nkalagu 132kV line 2 ground switch - Canibalized Red phase female contact and canibalized Yellow phase male contact.

SHIRORO REGION

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

12(D) UNAVAILABLE CAPACITOR BANK:

- 1 (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(E) UNAVAILABLE SKYWIRES

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/Itire 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 (F) UNAVAILABLE SYNCHROSCOPES :

- 1 Ikeja West, Onitsha, Egbin, Uguwaji, 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

