

TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF FRIDAY 02/11/2018

FOR: EVENTS OF THURSDAY 01/11/2018

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	01/11/2018
GENERATION CAPABILITY	7463.6	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5168.6	-do-	-do-
PEAK GENERATION	4666.1	-do-	-do-
LOWEST GENERATION	3269.8	04:00	01/11/2018
8-HOURLY DURATION PEAK	3832.6	0100-0800	-do-
	3995.5	0900-1600	-do-
	4666.1	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	344	Sapele T/S	03:00
LOWEST VOLTAGE FOR THE DAY	297	Sakete T/S	19:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.81	17:06
LOWEST FREQUENCY	50.13	10:20

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 20th Sept, 2018		No. of days since last total collapse: 41												
Date of last partial collapse: 12th April, 2018		No. of days since last partial collapse: 200												
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	392	372		
2	JEBBA	HYDRO	470	429		
3	SHIRORO	HYDRO	578	315		
4	EGBIN ST2 - 5	STEAM	411	226		
5	SAPELE	STEAM	50	50		
6	DELTA	GAS	514	364		
7	AFAM IV-V	GAS	58	54		
8	GEREGU GAS	GAS	133	0		
9	OMOTOSHO GAS	GAS	0	0		
10	OLORUNSOGO GAS	GAS	207.2	212.9		
11	GEREGU NIPP	GAS	0	0		
12	SAPELE NIPP	GAS	168.9	105.4		
13	ALAOJI NIPP	GAS	108.6	80.3		
14	OLORUNSOGO NIPP	GAS	106.1	160.6		
15	OMOTOSHO NIPP	GAS	102.3	0		
16	ODUKPANI NIPP	GAS	0	0		
17	IHOVBOR NIPP	GAS	219.1	150.1		
18	OKPAI	GAS	194	176		
19	AFAM VI	GAS	120	105		
20	IBOM POWER	GAS	0	0		
21	ASCO	GAS	0	0		
22	A.E.S	GAS	0	0		
23	OMOKU	GAS	57.3	36.5		
24	TRANS AMADI	GAS	36	37.6		
25	RIVERS IPP	(GAS)	147	90		
26	AZURA - EDO IPP	(GAS)	335	225		
27	EGBIN ST6	(GAS)	190	11		
28	PARAS ENERGY	(GAS)	68.6	69.4		
29	GBARAIN NIPP	GAS	0	0		
TOTAL			4666.1	3269.8		
1.6 ENERGY GENERATED/ENERGY SENT OUT:						
STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT		
		MWH	MWH/H	MWH	MWH/H	
1	KAINJI	HYDRO	9548.00	397.83	9531.30	397.14
2	JEBBA	HYDRO	10014.00	417.25	9989.20	416.22
3	SHIRORO	HYDRO	11313.00	471.38	11285.64	470.24
4	EGBIN ST2 - 5	STEAM	7389.00	307.88	7195.00	299.79
5	SAPELE	STEAM	1076.70	44.86	1045.90	43.58
6	DELTA	GAS	10632.79	443.03	10549.30	439.55
7	AFAM IV-V	GAS	1376.00	57.33	1371.33	57.14
8	GEREGU GAS	GAS	2198.20	91.59	2178.66	90.78
9	OMOTOSHO GAS	GAS	0.00	0.00	0.00	0.00
10	OLORUNSOGO GAS	GAS	4330.72	180.45	4298.87	179.12
11	GEREGU NIPP	GAS	0.00	0.00	0.00	0.00
12	SAPELE NIPP	GAS	3842.20	160.09	3822.40	159.27
13	ALAOJI NIPP	GAS	2064.00	86.00	2036.77	84.87
14	OLORUNSOGO NIPP	GAS	2920.80	121.70	2871.50	119.65
15	OMOTOSHO NIPP	GAS	462.00	19.25	456.70	19.03
16	ODUKPANI NIPP	GAS	0.00	0.00	0.00	0.00
17	IHOVBOR NIPP	GAS	4381.07	182.54	4358.77	181.62
18	OKPAI	GAS	4876.00	203.17	4755.40	198.14
19	AFAM VI	GAS	2763.52	115.15	2672.14	111.34
20	IBOM	GAS	0.00	0.00	0.00	0.00
21	ASCO	GAS	0.00	0.00	0.00	0.00
22	AZURA - EDO IPP	GAS	5900.50	245.85	5881.40	245.06
23	A.E.S	GAS	0.00	0.00	0.00	0.00
24	OMOKU	GAS	1249.80	52.08	1212.66	50.53
25	TRANS AMADI	GAS	882.00	36.75	840.20	35.01
26	RIVERS IPP	GAS	2704.30	112.68	2698.52	112.44
27	EGBIN ST6	STEAM	3540.00	147.50	3351.60	139.65
28	PARAS ENERGY	GAS	1632.30	68.01	1624.10	67.67
29	GBARAIN NIPP	GAS	0.00	0.00	0.00	0.00
TOTAL			95,096.90	3,962.37	94,027.36	3,917.81

1.7A GENERATION POSITION AT 06:00HRS OF FRIDAY 02/11/2018

	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 50.52Hz.	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	8	1G5, 6, 11 & 12 4	440	420	1G5, 6, 11 & 12 4	420	374	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	2G1 - 5 5	475	453	2G1 - 5 5	453	453	2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G1 - 4 4	600	600	411G1 - 4 4	600	410	411G2 & 3 - Generation reduced due to low load demand by the Discos.
	EGBIN STEAM	5	ST2 & 5 2	400	400	ST2 & 5 2	400	278	ST1 - Out due to undisclosed fault since 04/09/2018. ST3 - Out on high vibration since 19th June 2017. ST4 - Out on maintenance. Generation reduced due to low load demand by the Discos.
	SAPELE (STEAM)	6	ST2 1	120	60	ST2 1	50	50	ST1 & 3 - Tripped on low drum level. ST4 & 5 - Awaiting major overhaul. ST6 - Tripped on gas control valve not following reference point.
	DELTA (GAS)	18	GT7, 9 - 13, 15, 16 & 19 & 20 10	540	540	GT7, 9 - 13, 15, 16 & 19 9	435	420	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. GT16 - Out due to faulty bus CB. 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	60	60	GT1 - 12 - De-commissioned and scrapped. GT13,14 & 16 - Out on blade failure. GT17 - Out due to gas pipe line maintenance work. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 1	145	145	GT11 1	145	80	GT12 & 13 - Tripped on natural gas valve position. Generation reduced due to low load demand by the Discos.
	OMOTOSHO GAS	8	GT1 - 8 8	336	304	0 0	0	0	GT1 - 8 - Out due to maintenance work at gas station.
	OLORUNSOGO GAS	8	GT1 - 8 8	336	304	GT2, 4 - 8 6	228	167.2	GT1 & 3 - Out due to low load demand by the Discos. Generation reduced due to low load demand by the Discos.
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	107.7	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	69.9	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	71.8	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	86.3	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	150.7	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	0 0	0	0	GT2 - Out due to gas constraint.
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	370	370	GT11, 12 & ST18 3	290	177	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	109	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	30.6	GT1 & 2 - Out due to fire outbreak on the control panel. GT3 - Still loading up.
	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	54.5	54.5	GT3 - Tripped on over speed. GT4 - Out on major overhaul. GT6 - Out on maintenance.
	TRANS-AMADI	4	GT1 & 2 2	50	40	GT1 & 2 2	40	38.4	GT3 - Out on fault. GT4 - Out due to gas leakage.
	RIVERS	1	GT1 1	160	160	GT1 1	160	90	Generation reduced due to low load demand by the Discos.
	SUB TOTAL	140	78	7450.5	7232	54	4871.5	3503.1	Frequency = 50.52Hz.

1.7B GENERATION POSITION AT 06:00HRS OF FRIDAY 02/11/2018 FOR UNITS ON BILATERAL AGREEMENT

EGBIN	1	ST6	220	110	ST6	110	110	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	178.6	9	178.6	178.6	
GRAND TOTAL	149	87	7740.5	7410.6	63	5,050.10	3,681.70	Frequency = 50.52Hz

1.7C BILATERAL AGREEMENT UNITS DISPATCH - THURSDAY 01/11/2018.								
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	18	1400HRS			24		NIL
IKORODU	PULK IT	3	0800HRS			24		NIL
	INDUSTRIAL	9	0800HRS			24		NIL
	SPINTEX	5	0100HRS			24		NIL
	DANGOTE	ON	0100HRS			24		NIL
	LAND CRAFT	18	0100HRS			24		NIL
ALAUSA	TR4 15MVA	7.5	1200HRS			24		NIL
	TR5 -15MVA	5.1	0900HRS			24		NIL
	ALAUSA	17.9	1200HRS			24		NIL
M/LAND	PTC (MARYLAND)	19	1200HRS			24		NIL
	TOTAL LOAD							

BILATERAL AGREEMENT LOAD DISPATCH 60MW PARAS ENERGY GENERATION TO CEB OF THURSDAY 01/11/2018							
FEEDER	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK
Ikeja West/Sakete 330kV line	69.4	04:00	51	18:00	24	1611	Nil

BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI LOAD DISPATCH TO THE FOLLOWING COMPANIES OF: THURSDAY 01/11/2018									
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	44	01:00	20	09:00	9	302	ON
KAM STEEL		15.0	0.5	19:00	0.2	12:00	24	6.8	SUPPLY NOT INTERRUPTED
ASAKA CEMENT		0.0	9.7	07:00	6.3	23:00	24	222.1	SUPPLY NOT INTERRUPTED
XING 1	33kV feeder	0.0	1.8	13:00	0.6	20:00	9	8.5	SUPPLY NOT INTERRUPTED
XING 2		0.0	2.15	16:00	0.5	21:00	10	11.75	SUPPLY NOT INTERRUPTED
KAM INTEGRATED		15.0	4.5	11:00	1.6	03:00	24	73	SUPPLY NOT INTERRUPTED
OLAM FLOUR MILLS		3.0	2.4	22:00	0.4	06:00	24	28.9	SUPPLY NOT INTERRUPTED
LORDSMITH		0	0.5	01:00	0.3	02:00	24	9.9	SUPPLY NOT INTERRUPTED

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF FRIDAY 02/11/2018 = 0MW. FREQUENCY 50.52Hz.

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	Omotosho NIPP	GT1	40	0	0
		GT2		0	
		GT3		0	
		GT4		0	
TOTAL (MW)			295	0	0

1.8 HYDROLOGICAL DATA: FRIDAY 02/11/2018

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	141.7	103.18	381.95
TAIL WATER ELEVATION (METERS)	105.2	74.1	270.8
GROSS OPERATING HEAD (METERS)	36.50	29.08	111.15
AVERAGE TURBINE DISCHARGE (M3/SEC)	1197.00	1600.00	495.00
AVERAGE SPILLAGE (M3/SEC)	404.00	0.47	0.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1601.00	1600.47	495.00
COMPUTED INFLOW (M3/SEC)	1734.00	1843.00	298.00
STORAGE DIFFERENTIAL	133.00	242.53	-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 THURSDAY 01/11/2018

	MAXIMUM LOAD (MW)	TIME (HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD (MW)	TIME (HRS)
ABUJA	544.7	22:00	549.35	367.9	04:00
EKO	466.7	24:00	625.47	332.9	08:00
IKEJA	605.9	22:00	716.55	414.5	05:00

2.0 GAS POSITION: FRIDAY 02/11/2018

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		400	700
DELTA (GAS)	430	915		435	480
OMOTOSHO GAS	0	336.8		0	336.8
OMOTOSHO NIPP	0	500		120	380
OLORUNSOGO (GAS)	185.2	336		228	108
OLORUNSOGO NIPP	151.9	750		120	630
SAPELE NIPP	112.9	500		225	275
SAPELE STEAM	50	720		50	670
AFAM IV-V	63	300		60	240
AFAM VI	117	650		150	500
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		2683	6214.3

1 MMSCF IS EQUIVALENT TO 3.75MW

3.0 SPINNING RESERVE FOR : THURSDAY 01/11/018

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

4.0 UNAVAILABLE GENERATION CAPABILITY

The unavailable generation capability for Friday 02/11/2018 as at 0600Hrs was = 2994.1MW.					
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	1284
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	
5	Omotosho Gas GT1 - 8	304	0	304	
6	Gbarain GT2	112.5	0	112.5	
			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 1657.14MMSCF OF GAS (EQUIVALENT TO 6214.3MW WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.					
4.2 DUE TO LINE CONSTRAINTS					
				0	0
				0	
				0	
				0	
				0	
4.3 DUE TO LOW LOAD DEMAND BY THE DISCOS					
1	Ihovbor GT1, 2 & 4	337.5	150.7	186.8	1710.1
2	Azura-Edo GT11 - 13	461	225	236	
3	Olorunsogo Gas GT1 - 8	304	167	137	
4	Shiroro 411G2 & 3	300	110	190	
5	Delta GT20	110	0	110	
6	Alaoji NIPP GT1 & 2	240	69.9	170.1	
7	Afam VI GT12	150	0	150	
8	Olorunsogo NIPP GT1 & 2	240	71.8	168.2	
9	Egbin ST2 & 5	400	278	122	
10	Omoosho NIPP GT2 & 4	240	0	240	
				0	
				0	
				0	
				0	
				0	
4.1 DUE TO WATER MANAGEMENT:					
					0
Grand Total					2994.1

5.0 OUTAGES:

5 (A) FORCED OUTAGES (GENERATION):

- 1 01:55 - 05:27Hrs, Geregu Gas GT11 tripped due to the tripping of Benin/Ajaokuta 330kV line 2 (cct B12J). LHR = 98MW.
- 2 10:18 - 21:21Hrs, Jebba 2G3 tripped on emergency shut down. LHR = 90MW.

5(B) FORCED OUTAGES (TRANSMISSION):

- 1 01:55 - 03:30Hrs, Benin/Ajaokuta 330kV line 2 (cct B12J) CB tripped at Ajaokuta T/S on Bus bar zone trip. LHR = 90MW.
- 2 01:55 - 03:30Hrs, Ajaokuta/Lokoja 330kV line 2 (cct J2L) CB tripped at Ajaokuta T/S on Bus bar zone trip. LHR = 105MW.
- 3 08:54 - 09:02Hrs Birnin Kebbi/Sokoto 132kV line CB tripped at Birnin Kebbi T/S on O/C & 86 lockout. LHR = 58MW.
- 4 10:20 - 10:38Hrs, Osogbo/Ilesha/Ife 132kV line CB tripped at Osogbo T/S on BBC relay: short circuit Blue Phase and E/F. LHR = 33MW.
- 5 15:01 - 15:43Hrs, Benin/Delta 132kV line CBs tripped at both ends on the following relay indications:
At Benin T/S:
 O/C Red phases, zone 2, period = 22ms, fault location = 102.4km
At Delta T/S:
 Under impedance Red phase O/C trip, O/C Red phase. LHR = 2MW
- 6 15:01 - 15:31Hrs, Delta/Oghara 132kV line CB tripped at Delta T/S on back up trip. LHR = 34.4MW
- 7 15:02 - 15:53Hrs, Afiesere T/S 30MVA 132/33kV transformer T1 secondary CB tripped on instantaneous fault type 79. No load loss as the transformer was on soak.
- 8 19:02 - 19:20Hrs, Uyo T/S 60MVA 132/33kV transformer T2 secondary CB tripped on SBEF. LHR = 8MW
- 9 22:15 - 22:27Hrs, Alaoji/Owerri 132kV line 2 CB tripped at Alaoji T/S on Siemens relay: E/F trip i.e> Yellow phase.
- 10 22:15 - 22:28Hrs, Owerri/Ahoada 132kV line 1 CB at Owerri T/S on DEF. LHR = 57.8MW

5 (C) PLANNED OUTAGES:-

- 1 11:35 - 19:30Hrs, Abeokuta T/S 60MVA 132/33kV transformer T2 was taken out to carry out commissioning test on the fire protection scheme of the transformer. Load loss = 13.8MW

5(D) URGENT OUTAGES:-

- 1 14:24 - 14:53Hrs, Delta/Oghara 132kV line was taken out to build up low SF6 gas pressure of line GCB to normal at Delta T/S. No load loss as the line was on soak.
- 2 20:17 through 24:00Hrs, Trans-Amadi GT2 was shut down due to gas constraint. Load loss = 12MW

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

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 D3T & J2H

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

6 WEATHER REPORT:- Rainfall reported at Ikeja-West & Osogbo.

7 INTERNATIONAL LINES:-

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

Maximum load - 289MW at 19:00Hrs.
 Minimum load - 127MW at 10:00Hrs.

B BIRNIN KEBBI/NIAMEY 132KV LINE

Maximum load - 106MW at 14:00Hrs.
 Minimum load - 88MW at 07:00Hrs.

C KATSINA/GAZAQUA/MARADI 132KV LINE

Maximum load - 39.4MW at 21:00Hrs.
 Minimum load - 25.7MW at 04:00Hrs.

8 MISCELLANEOUS:-

- 1 00:24Hrs, Afam VI GT12 was shut down due to low load demand by the Discos. Load loss = 110MW.
- 2 00:27 - 10:40Hrs, Delta GT19 was shut down due to low load demand by the Discos. Load loss = 94MW.

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

12(A) UNAVAILABLE TRANSFORMERS/REACTORS:

SHIRORO REGION:

- Birin 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.

BAUCHI REGION:

- Gombe T/S -30MX Reactor R2A.

ENUGU REGION:

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

LAGOS REGION:

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

PORT HARCOURT REGION

- Ikot-Ekpene T/S: No reactor installed.

12 (B) UNAVAILABLE BREAKERS/ISOLATORS

LAGOS REGION:

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

BENIN REGION:

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

ENUGU REGION:

- New Haven/Yandev 132kV line CB - Faulty Red phase CB pole. Protection is transferred to the bus coupler CB.
- 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.
- 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.
- Oturkpo/Yandev 132kV By pass isolator - Canibalized to repair the line isolator.
- New Haven/Nkalagu 132kV line 2 ground switch - Canibalized Red phase female contact and canibalized Yellow phase male contact.

SHIRORO REGION

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

- 08:15Hrs, Olorunsogo NIPP GT1 was shut down due to low load demand by the Discos. Load loss = 74.7MW.
- 10:20Hrs, Olorunsogo Gas GT1 was shut down to reduce the load flow on 330kV Olorunsogo/Ikeja West 330kV line (cct R1W). LHR = 26.5MW.
- 11:58Hrs, Shiroro G/S increased generation by 100MW to improve system frequency.

- 16:02Hrs, Agbor T/S 60MVA 132/33kV transformer T2 was restored. The transformer was out on fault.

- 18:02Hrs, Trans-Amadi GT4 was tied. The unit was out due to gas constraint.

- 18:28Hrs, Shiroro G/S increased generation by 100MW to improve system frequency.
- 19:00Hrs, Omotosho NIPP GT1 was tied. The unit was out due to gas pipeline maintenance.
- 23:11Hrs, Geregu gas reduced generation by 40MW due to low load demand by the Discos.
- 23:14Hrs, Rivers IPP reduced generation by 57MW due to low load demand by the Discos.
- 23:15Hrs, Olorunsogo gas reduced generation by 48MW due to low load demand by the Discos.
- 23:21Hrs, Olorunsogo NIPP reduced generation by 37MW due to low load demand by the Discos.
- 23:52Hrs, Shiroro G/S reduced generation by 100MW due to low load demand by the Discos.
- 23:54HRS, Ihovbor NIPP reduced generation by 40MW due to low load demand by the Discos.

**** 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) 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(E) UNAVAILABLE SKYWIRES

LAGOS REGION

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

SHIRORO REGION

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

ABUJA REGION

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

12 (F) UNAVAILABLE SYNCHROSCOPES :

- Ikeja West, Onitsha, Egbin, Uguwaji, 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) - 08036744641.
- AGM (S/O) - 08056002757, CUG: 08129458475

