

TRANSMISSION COMPANY OF NIGERIA

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

From: Director (NCC), Osogbo

DAILY OPERATIONAL REPORT SUNDAY 19/03/2017

FOR: EVENTS OF SATURDAY 18/03/2017

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	17,720	24:00	18/03/2017
GENERATION CAPABILITY	6917	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	4432.7	-do-	-do-
PEAK GENERATION	4329.4	-do-	-do-
LOWEST GENERATION	3871.4	16:00	18/03/2017
8-HOURLY DURATION PEAK	4113.9	0000-0800	-do-
	4034.3	0900-1600	-do-
	4329.4	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	350	Omotosho T/S	04:00
LOWEST VOLTAGE FOR THE DAY	300	Gombe T/S	01:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	51.44	10:58
LOWEST FREQUENCY	48.98	03:35

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 22 nd Feb, 2017		No. of days since last total collapse: 24												
Date of last partial collapse: 16 th March, 2017		No. of days since last partial collapse: 03												
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	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	1	2	1	--	13
	Partial	--	1	1	--	--	--	--	1	--	1	2	--	6
2012	Total	--	--	2	1	5	2	1	--	2	2	1	1	16
	Partial	--	--	2	3	--	--	--	1	--	1	1	1	8
2013	Total	--	1	2	2	3	4	1	1	1	4	2	2	22
	Partial	--	--	--	--	--	--	--	2	--	--	--	--	2
2014	Total	2	--	--	2	--	3	1	--	1	--	--	--	9
	Partial	--	--	--	--	1	--	--	--	--	2	1	4	4
2015	Total	1	--	1	--	2	--	1	--	--	1	--	--	6
	Partial	--	--	1	--	2	--	--	--	1	--	--	--	4
2016	Total	--	--	2	3	6	5	--	1	1	2	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	404	405
2 JEBBA	HYDRO	367	345
3 SHIRORO	HYDRO	300	300
4 EGBIN ST2 - 5	STEAM	216	212
5 SAPELE	STEAM	0	0
6 DELTA	GAS	305	305
7 AFAM IV-V	GAS	0	0
8 GEREGU GAS	GAS	288	200
9 OMOTOSHO GAS	GAS	205.7	201.8
10 OLORUNSOGO GAS	GAS	173.5	129.2
11 GEREGU NIPP	GAS	140	107
12 SAPELE NIPP	GAS	222.3	97.2
13 ALAOJI NIPP	GAS	114.1	111.4
14 OLORUNSOGO NIPP	GAS	0	0
15 OMOTOSHO NIPP	GAS	175.5	184.2
16 ODUKPANI NIPP	GAS	219.5	110.4
17 IHOVBOR NIPP	GAS	108.7	104.9
18 OKPAI	GAS	430	411
19 AFAM VI	GAS	108	108
20 IBOM POWER	GAS	104.8	107.3
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	53.3	52.2
24 TRANS AMADI	GAS	0	0
25 RIVERS IPP	(GAS)	0	0
26 EGBIN ST6	STEAM	217	208
27 PARAS ENERGY	GAS	65.1	65.8
28 GBARAIN NIPP	GAS	111.9	106
TOTAL		4329.4	3871.4

1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	9,711.00	404.63	9,693.00	403.88
2 JEBBA	HYDRO	8,640.00	360.00	8,628.76	359.53
3 SHIRORO	HYDRO	6,741.00	280.88	6,712.44	279.69
4 EGBIN ST2 - 5	STEAM	4,918.00	204.92	4,569.60	190.40
5 SAPELE	STEAM	-	0.00	-	0.00
6 DELTA	GAS	7,180.64	299.19	7,018.50	292.44
7 AFAM IV-V	GAS	-	0.00	-	0.00
8 GEREGU GAS	GAS	6,418.80	267.45	6,391.17	266.30
9 OMOTOSHO GAS	GAS	4,453.00	185.54	4,418.90	184.12
10 OLORUNSOGO GAS	GAS	3,507.25	146.14	3,478.32	144.93
11 GEREGU NIPP	GAS	2,989.13	124.55	2,975.61	123.98
12 SAPELE NIPP	GAS	1,477.37	61.56	1,461.32	60.89
13 ALAOJI NIPP	GAS	2,666.50	111.10	2,645.30	110.22
14 OLORUNSOGO NIPP	GAS	-	0.00	-	0.00
15 OMOTOSHO NIPP	GAS	4,830.00	201.25	4,797.20	199.88
16 ODUKPANI NIPP	GAS	3,808.08	158.67	3,775.78	157.32
17 IHOVBOR NIPP	GAS	2,560.00	106.67	2,537.64	105.74
18 OKPAI	GAS	10,115.00	421.46	9,937.90	414.08
19 AFAM VI	GAS	2,635.94	109.83	2,539.48	105.81
20 IBOM	GAS	2,377.64	99.07	2,368.00	98.67
21 ASCO	GAS	-	0.00	-	0.00
22 A.E.S	GAS	-	0.00	-	0.00
23 OMOKU	GAS	1,318.90	54.95	1,289.01	53.71
24 TRANS AMADI	GAS	-	0.00	-	0.00
25 RIVERS IPP	GAS	-	0.00	-	0.00
26 EGBIN ST6	STEAM	4,912.00	204.67	4,687.60	195.32
27 PARAS ENERGY	GAS	1,583.50	65.98	1,576.70	65.70
28 GBARAIN NIPP	GAS	2,622.90	109.29	2,601.40	108.39
TOTAL		95,466.65	3,977.78	94,103.63	3,920.98

GENERATION POSITION AT 06:00HRS OF SUNDAY 19/03/2017

	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	404	404	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	369	369	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	173	173	ST1 - Tripped on generator CB trouble. ST2 - Not on spinning reserve due to Egin G/S management decision and its generation limited to 173MW 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, 18 & 19 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. GT18 & 19 - Not on spinning reserve due to Delta G/S management decision. GT1 8 - Tripped on inlet guide vane trouble. 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	GT12 & 13 2	295	291	GT11 - Out on synchrocheck relay fault at 330kV switchyard. GT12 & 13 - On frequency response.
	OMOTOSHO GAS	GT1 - 8 8	336	304	GT2-4 & 6 - 8 6	228	213.1	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	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	151	150	GT21 & 23 - Out due to gas constraints. GT22 - On frequency response.
	SAPELE NIPP	GT2 & 4 2	225	225	GT2 & 4 2	220.2	220.2	GT1 - Out on undisclosed fault. GT3 - Out on bearing lift pump trouble.
	ALAOJI NIPP GAS	GT1, 2 & 4 3	375	360	GT4 1	115.6	115.6	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	0 0	0	0	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	161.3	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	226.6	226.6	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	109.6	109.6	GT2 & 3 - Out on fault. GT4 - On maintenance.
IPP	OKPAI GAS/STEAM	GT11,12 & ST18 3	470	470	GT11, 12 & ST18 3	432	432	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	90.3	90.3	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	54.3	54.3	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	6705.9	6525.3	50	4124	4016.4	Frequency = 51.03Hz.

1.7B **GENERATION POSITION AT 06:00HRS OF SUNDAY 19/03/2017 FOR UNITS ON BILATERAL AGREEMENT**

EGBIN	ST6	220	220	ST6	126	126	Available unit on bar.
	1			1			
PARAS ENERGY	GT2 - 9	72	72	GT3 - 9	65.8	65.8	GT2 - On standby.
	8			7			
SUB TOTAL	9	292	292	8	191.8	191.8	
GRAND TOTAL	79	6997.9	6817.3	58	4,315.80	4,208.20	Frequency = 51.03Hz.

1.7C **BILATERAL AGREEMENT UNITS DISPATCH - SATURDAY 18/03/2017**

FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	REMARK	
120MW EGBIN ST6 GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY					
OGBA	U-STEEL	ON	NIL	24	
	PTCEXPRESS	12	1100hrs	18	Planned Outage
	SANKYO	ON	NIL	7	Tripped on E/F
	FEEDER 8	11	1900hrs	24	
IKORODU	PULK IT	ON	NIL	24	
	INDUSTRIAL	18	1700hrs	21	Planned Outage
	SPINTEX	5	0100hrs	21	Urgent Outage
	DANGOTE	6	0100hrs	24	
	LAND CRAFT	22	NIL	24	
ALAUUSA	TR4 -15MVA	4.1	0200hrs	22	Tripped on O/C
	TR5 -15MVA	4.2	2000hrs	24	
	ALAUUSA	7.2	2200hrs	23	L/S
MLAND	PTC (MARYLAND)	15	1000hrs	24	
TOTAL LOAD		104.5			

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

FEEDER	MAX	TIME	HOURS IN SERVICE	REMARK
SAKATE/IKEJA WEST 330KV LINE	65.8	01:00	24	Nil

1.8 HYDROLOGICAL DATA: SUNDAY 19/03/2017

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	140.27	102.04	365.11
TAIL WATER ELEVATION (METERS)	104.26	74.2	270.5
GROSS OPERATING HEAD (METERS)	36.01	27.84	94.61
AVERAGE TURBINE DISCHARGE (M3/SEC)	1262	1444	329
AVERAGE SPILLAGE (M3/SEC)	96	0	0
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1358	1444	329
COMPUTED INFLOW (M3/SEC)	426	1351	0
STORAGE DIFFERENTIAL	-932	-93	-329
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 SATURDAY 18/03/2017

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

2.0 GAS POSITION: SUNDAY 19/03/2017

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	173		1100		404	696
DELTA (GAS)	305		765		305	460
OMOTOSHO GAS	213.1		336.8		228	108.8
OMOTOSHO NIPP	161.3		500		240	260
OLORUNSOGO (GAS)	181		336		190	146
OLORUNSOGO NIPP	0		750		0	750
SAPELE NIPP	220.2		500		220.2	279.8
SAPELE STEAM	0		720		0	720
AFAM IV-V	0		300		0	300
AFAM VI	108		650		108	542
GEREGU GAS	291		435		295	140
GEREGU NIPP	150		435		151	284
OKPAI (GAS/STEAM)	432		480		432	48
ALAOJI NIPP	115.6		504		115.5	388.5
IHOVBOR NIPP	109.6		450		109.6	340.4
IBOM	90.3		198		90.3	107.7
ODUKPANI NIPP	226.6		625		226.6	398.4
TOTAL	2776.7		9084.8		3115.2	5969.6

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 SUNDAY 19/03/2017 = 40MW. FREQUENCY 51.03Hz.

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		0	
		GT4		20	
TOTAL (MW)			295	40	40

4.0 UNUTILIZED GENERATION CAPABILITY

The unutilized generation capability for Saturday 18/03/2017 as at 0600Hrs was = 2172MW.

S/NO	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNUTILIZED GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO GAS CONSTRAINTS:					
				0	2172
			0	0	
1	Geregu NIPP GT21 & 23	290	0	290	
2	Olorunsogo NIPP GT1 -3	360	0	360	
3	Omotosho NIPP GT1	120	0	120	
4	Egbin ST2, 3 & 5	173	0	173	
5	Delta GT4, 6 -13,16 & 19	305	0	305	
6	Olorunsogo Gas GT7 & 8	76	0	76	
7	Omotosho Gas GT5	38	0	38	
8	Alaoji NIPP GT1 & 2	240	0	240	
9	Odukpani NIPP GT1	120	0	120	
10	Afam VI GTs 11, 12 & ST10	450	0	450	
			0	0	
4.2 DUE TO LINE CONSTRAINTS					
				0	0
				0	
				0	
				0	
4.3 DUE TO HIGH FREQUENCY OCCASIONED BY LOSS OF DISCOS' FEEDERS					
				0	0
			0	0	
			0	0	
				0	
				0	
				0	
4.4 DUE TO WATER MANAGEMENT					
			0	0	0
				0	
Total					2172

IT IS ENVISAGED WITH IMPROVED PLANT AVAILABILITY AND RELIEF FROM EXISTING POWER SYSTEM NETWORK RELATED CONSTRAINTS, ADDITIONAL 15911.89MMSCF OF GAS (EQUIVALENT TO 5969.6MW) WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.

5.0 OUTAGES:

5 (A) FORCED OUTAGES (GENERATION):-

- 1 19:21 through 24:00Hrs, Odukpani NIPP GT2 tripped due to high exhaust temperature. LHR = 112MW.

5 (B) FORCED OUTAGES TRANSMISSION

- 1 06:05 – 07:29Hrs, Akure T/S 60MVA 132/33kV transformer T3A secondary CB tripped without relay indication. LHR = 9MW.
- 2 09:00 - 18:42Hrs, Ayede T/S 100MVA 132/33kV transformer T1 primary CB tripped on differential relay. LHR = 40MW.
- 3 16:31 - 16:41Hrs, Adiator/Calabar 132kV line 2 tripped at Adiator T/S on E/F. LHR = 11MW.
- 4 21:21 - 21:33Hrs, New Have/Nkalagu 132kV line 1 tripped at New Haven T/S on instantaneous O/C 3-Phases, E/F and lockout trip relay. LHR = 9.6MW.

5 (C) PLANNED OUTAGES:-

- 1 09:13 – 13:34Hrs, Benin/Onitsha 330kV line 1 (cct B1T) CB was taken out to enable maintenance crew carry out annual preventive maintenance on the CB & associated equipments at both Onitsha and Benin T/S. No load loss as Benin/Onitsha 330kV line 2 (cct B2T) was in service.
- 2 10:02 - 13:35Hrs, Kaduna T/S 150MVA 330/132/33kV transformer T3 was taken out of service to carry out annual preventive maintenance on the transformer. LHR = 52MW.
- 3 10:20 - 16:52Hrs, Afam VI T/S 330kV Bus bar 1 CB ADA60 GS 200 was taken out to carry out annual preventive maintenance on the CB associated equipments. No load loss as 330kV Bus bar 2 was in service.
- 4 11:34 – 13:50Hrs, Delta/Effurun 132kV line was taken out for maintenance crew to carry out annual preventive maintenance on the CB & associated equipments. LHR = 33MW.

5(D) URGENT OUTAGES:

- 1 02:05 – 14:15Hrs, Aja T/S 60MVA 132/33kV transformer T2 was taken out on emergency due to melted secondary breaker Red phase conductor. LHR = 36MW. Maintenance crew replaced the Red phase conductor.
- 2 03:33 – 04:39Hrs, Odukpani GT3 breaker was opened on emergency due to transducer signal trouble over flux. LHR = 98.2MW.
- 3 10:20 - 19:48Hrs, Odukpani GT3 was shut down to enable maintenance crew tighten a sensor attached to the unit megawatt transduce. LHR = 108MW.

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

5 (E) EMERGENCY OUTAGES:-

The under mentioned lines were opened on frequency control:-

- 1 19:39 - 19:57Hrs, Akangba/Ojo 132kV line 2. LHR = 27MW. Frequency was 48.81Hz.
- 2 20:40 - 20:57Hrs, Akangba/tire 132kV line 1. LHR = 28MW. Frequency was 48.96Hz.

5 (F) AUTOMATIC UNDER FREQUENCY OPERATION:

- 1 00:42 - 01:08Hrs, 03:48 - 04:05Hrs, 05:33 - 06:18Hrs, 16:44 - 16:56Hrs, 19:38 - 19:44Hrs, 20:39 - 20:45Hrs, & 21:08 - 21:22Hrs, Akangba T/S 60MVA 132/33kV transformer 10T1A sec breaker. LHR = 10MW, 14MW, 15MW, 17MW, 10MW, 10MW & 18MW respectively.
- 2 01:10 – 01:38Hrs, 03:34 – 05:30Hrs, 05:53 – 06:03Hrs, 10:48 - 52Hrs, & 11:15 - 11:25Hrs, Shagamu/Ijebu-Ode 132kV line CB. LHR = 18MW, 14MW, 10MW, 12MW & 10MW respectively.

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 was reported in .

10 INTERNATIONAL LINES:-

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

Maximum load - 230MW at 21:00Hrs.

Minimum load - 175MW at 08:00Hrs.

B BIRNIN KEBBI/NAMEY 132KV LINE

Maximum load - 75MW at 20:00Hrs

Minimum load - 40MW at 08:00Hrs

C KATSINA/GAZAQUA/MARADI 132KV LINE

Maximum load - 41MW at 21:00Hrs.

Minimum load - 29MW at 17:00Hrs.

11 MISCELLANEOUS:-

- 1 06:29Hrs, Afam VI P/S GT11 was tied to swap it with GT13
- 2 06:49Hrs, Afam GT13 was shut down due to gas constraints. LHR =
- 3 12:20Hrs, Sapele NIPP GT2 was tied. The unit tripped on 52L & 52G trip.
- 4 16:30Hrs, Olorunsogo Gas GT3 was tied. The unit was out on high frequency.
- 5 19:07Hrs, Sapele NIPP GT4 was tied. The unit tripped on 52L & 52G trip.
- 6 20:17Hrs, Odukpani NIPP GT1 was tied. The unit has been out on gas constraints.

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**

STATIONS	TOTAL NO OF STATIONS	NO OF RTU INSTALLED	NO OF RTU WORKING
POWER STATIONS	23	8	4
330kV	36	18	12
132kV	111	103	19

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/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.

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.

12(D) **LAGOS REGION**

- 1 Egbin/Aja 330kV line 2 (cct N4J) - faulty breaker at Aja T/S.
- 2 132kV Akangba/Ire 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/Ire 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, Uguwaji, 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.

ENUGU REGION:

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

- e AGM (S/O) - 08066067487, CUG: 09021765320
- f Coordinator (S/O) - 08037868916, 08054353904, 08028332125, CUG Airtel 08129458481.
- g SYSTEM OPERATIONS WEB SITE: www.nigeriasystemoperator.org