

TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF WEDNESDAY 09/01/2019

FOR: EVENTS OF TUESDAY 08/01/2019

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	23,020	22:00	08/01/2019
GENERATION CAPABILITY	7084.2	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	6834.2	-do-	-do-
PEAK GENERATION	4748.3	-do-	-do-
LOWEST GENERATION	3786.4	04:00	08/01/2019
8-HOURLY DURATION PEAK	4214.1	0100-0800	-do-
	4267	0900-1600	-do-
	4748.3	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	348	Birin-Kebbi T/S	12:00
LOWEST VOLTAGE FOR THE DAY	292	Sakete T/S	24:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.34	09:01
LOWEST FREQUENCY	49.875	08:29

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 3rd Jan., 2019		No. of days since last total collapse: 06												
Date of last partial collapse: 12th April, 2018		No. of days since last partial collapse: 271												
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	3	3	--	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	--	1	--	11
	Partial	0	0	0	1	0	0	--	0	--	--	--	--	1
2019	Total	1	--	--	--	--	--	--	--	--	--	--	--	1
	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	425	402
2 JEBBA	HYDRO	460	275
3 SHIRORO	HYDRO	297	120
4 EGBIN ST2 - 5	STEAM	110	112
5 SAPELE	STEAM	0	0
6 DELTA	GAS	375	303
7 AFAM IV-V	GAS	0	0
8 GEREGU GAS	GAS	411	346
9 OMOTOSHO GAS	GAS	135	135.8
10 OLORUNSOGO GAS	GAS	190.7	169.8
11 GEREGU NIPP	GAS	266	212
12 SAPELE NIPP	GAS	96.8	94.6
13 ALAOJI NIPP	GAS	0	0
14 OLORUNSOGO NIPP	GAS	0	0
15 OMOTOSHO NIPP	GAS	112	107.3
16 ODUKPANI NIPP	GAS	99.1	187.1
17 IHOVBOR NIPP	GAS	102.3	113.1
18 OKPAI	GAS	265	229
19 AFAM VI	GAS	281	138
20 IBOM POWER	GAS	103.5	103
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	60.5	61.7
24 TRANS AMADI	GAS	40.5	16.3
25 RIVERS IPP	(GAS)	160	105
26 AZURA - EDO IPP	(GAS)	432	225
27 EGBIN ST6	(GAS)	161	166
28 PARAS ENERGY	(GAS)	68.8	65.6
29 GBARAIN NIPP	GAS	96.1	99.1
TOTAL		4748.3	3786.4

1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED MWH	AV ENERGY GENERATED MWH/H	ENERGY SENT OUT MWH	AV ENERGY SENT OUT MWH/H
1 KAINJI	HYDRO	9551.00	397.96	9535.80	397.33
2 JEBBA	HYDRO	7852.00	327.17	7834.08	326.42
3 SHIRORO	HYDRO	5238.00	218.25	5208.86	217.04
4 EGBIN ST2 - 5	STEAM	6665.00	277.71	6321.80	263.41
5 SAPELE	STEAM	0.00	0.00	0.00	0.00
6 DELTA	GAS	7725.70	321.90	7514.60	313.11
7 AFAM IV-V	GAS	0.00	0.00	0.00	0.00
8 GEREGU GAS	GAS	9049.60	377.07	9018.34	375.76
9 OMOTOSHO GAS	GAS	3181.00	132.54	3158.10	131.59
10 OLORUNSOGO GAS	GAS	4360.76	181.70	4332.61	180.53
11 GEREGU NIPP	GAS	5659.12	235.80	5640.10	235.00
12 SAPELE NIPP	GAS	2352.16	98.01	2334.23	97.26
13 ALAOJI NIPP	GAS	124.00	5.17	102.10	4.25
14 OLORUNSOGO NIPP	GAS	0.00	0.00	0.00	0.00
15 OMOTOSHO NIPP	GAS	2601.60	108.40	2566.50	106.94
16 ODUKPANI NIPP	GAS	3369.24	140.39	3341.04	139.21
17 IHOVBOR NIPP	GAS	2370.00	98.75	2350.90	97.95
18 OKPAI	GAS	6718.00	279.92	6589.80	274.58
19 AFAM VI	GAS	4121.22	171.72	3884.00	161.83
20 IBOM	GAS	2297.45	95.73	2289.00	95.38
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 AZURA - EDO IPP	GAS	8233.50	343.06	8206.25	341.93
23 A.E.S	GAS	0.00	0.00	0.00	0.00
24 OMOKU	GAS	1490.60	62.11	1455.92	60.66
25 TRANS AMADI	GAS	554.10	23.09	540.30	22.51
26 RIVERS IPP	GAS	2964.10	123.50	2954.40	123.10
27 EGBIN ST6	STEAM	0.00	0.00	0.00	0.00
28 PARAS ENERGY	GAS	1601.60	66.73	1594.80	66.45
29 GBARAIN NIPP	GAS	2353.50	98.06	2342.20	97.59
TOTAL		100,433.25	4,184.72	99,115.73	4,129.82

1.7A GENERATION POSITION AT 06:00HRS OF WEDNESDAY 09/01/2019

	STATIONS	NO OF UNITS INSTALLED	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 50.20Hz.	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	8	1G5, 6, 11 & 12 4	440	440	1G5, 6, 11 & 12 4	440	413	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	461	2G1, 4 & 5 3	280	280	2G2 & 3 - Out due to low load demand by the Discos. 2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G1, 2 & 4 3	450	450	411G2 & 4 2	300	207	411G1 - Shut down on water management. 411G2 - Generation reduced due to low load demand by the Discos. 411G3 - Out on annual maintenance.
	EGBIN STEAM	6	ST4 & 6 2	440	273	ST4 & 6 2	273	273	ST1 - Out due to the unit transformer problem. ST2 - Out due to middle burner level problem. ST3 - Out on high vibration since 19th June 2017. ST4 - Generation limited due to turbine valve problem. ST5 - Tripped due to loss of lower burner and tube leakage. ST6 - Generation limited due to a burner problem.
	SAPELE (STEAM)	6	0 0	0	0	0 0	0	0	ST1 & 3 - Tripped on low water drum level. ST2 - Tripped on high vibration. ST4 & 5 - Awaiting major overhaul. ST6 - Tripped on gas control valve not following reference point.
	DELTA (GAS)	18	GT6, 7, 9 - 13, 16, 19 & 20 10	450	445	GT6, 7, 9 - 13, 16 & 20 9	321	321	GT2 - Tripped on transformer differential lockout. GT3 & 5 - Out on generator winding fault. GT4 - Out on loss of excitation. GT8 & 14 - Out on major overhaul. GT15 - Out due to cooling fan trouble. GT17 - Tripped on bearing vibration more than maximum. GT18 - Out due to generator lockout problem. GT19 - Out due to low load demand by the Discos.
	AFAM IV & V (GAS)	8	GT18 1	70	44	0 0	0	0	GT11 - 12 - De-commissioned and scrapped. GT13, 14 & 16 - Out on blade failure. GT17 - Out due to oil leakage on the bearing compartment. GT18 - Out due to low load demand by the Discos. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT11 - 13 3	435	401	Available units on bar.
	OMOTOSHO GAS	8	GT1, 4, 6, 7 & 8 5	210	190	GT1, 6, 7 & 8 4	137.2	137.2	GT2, 3 & 5 - Out due to gas constraint. GT4 - Out due to low load demand by the Discos.
	OLORUNSOGO GAS	8	GT1, 3, 4, 5, 7 & 8 6	252	199.5	GT1, 3, 4, 5, 7 & 8 6	199.5	199.5	GT2 & 6 - Out due to gas constraint.
NIPP	GEREGU NIPP	3	GT21 & 23 2	290	290	GT21 & 23 2	290	226	GT22 - Out on maintenance.
	SAPELE NIPP	4	GT1 1	112.5	112.5	GT1 1	112.5	94.1	GT2 - Out due to 125V D.C battery ground alarm. GT3 - Out due to low gas pressure. GT4 - Out due to high air filter differential pressure.
	ALAOJI NIPP GAS	4	0 0	0	0	0 0	0	0	GT1 - 2 - Out due to high air inlet differential pressure. GT3 - Shut down due to lack of spare part. GT4 - Tripped on over voltage lockout relay trip.
	OLORUNSOGO NIPP	6	0 0	0	0	0 0	0	0	GT1 - 3 - Shut down due to low gas pressure. GT4 - Out due to ignition failure and control relay failure alarm. ST13 & ST23 - Out on maintenance.
	OMOTOSHO NIPP GAS	4	GT4 1	125	120	GT4 1	120	109.3	GT1, 2 & 3 - Out due to gas constraint.
	ODUKPANI NIPP	5	GT4 & 5 2	225	225	GT4 1	112.5	98.9	GT1 - Out on fault. GT2 & 3 - Tripped on low gas pressure. GT5 - Out due to low load demand by the Discos.
	IHOVBOR NIPP	4	GT4 1	112.5	112.5	GT4 1	112.5	98.8	GT1 - Out due to gas station maintenance. GT2 - Tripped on main transformer oil temperature 2nd phase trip alarm. GT3 - Tripped on high vibration. GT4 -On manual adjustment to frequency.
	GBARAIN NIPP GAS	1	GT2 1	112.5	112.5	GT2 1	112.5	96.1	GT2 - On manual adjustment to frequency.
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	450	370	GT11, 12 & ST18 3	370	231	GT12 - Generation reduced due to low load demand by the Discos. ST18 - Generation limited due to boiler problem.
	AZURA - EDO	3	GT11 - 13 3	461	461	GT11 - 13 3	461	353	GT11 - Generation reduced due to low load demand by the Discos.
	AFAM VI GAS/STEAM	4	GT12, 13 & ST10 3	500	500	GT13 1	150	142	GT11 - Out on type C inspection. GT12 & ST10 - Out due to low load demand by the Discos.
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	82.3	GT1 & 2 - Out due to fire outbreak on the control panel. GT3 - 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, 3 & 5 3	75	61.4	GT1, 3 & 5 3	61.4	61.4	GT2 - Tripped on high vibration. GT4 - Out on major overhaul. GT6 - Out on maintenance.
	TRANS-AMADI	4	GT1 & 2 2	50	42.4	GT1 & 2 2	42.4	42.4	GT3 - Out on fault. GT4 - Out due to gas constraint.
	RIVERS	1	GT 1	160	160	GT 1	160	120	GT1 - Generation reduced due to low load demand by the Discos.
	SUB TOTAL	141	63	6010.5	5619.8	54	4605.5	3987	Frequency = 50.20Hz.

1.7B GENERATION POSITION AT 06:00HRS OF WEDNESDAY 09/01/2019 FOR UNITS ON BILATERAL AGREEMENT											
PARAS ENERGY	8	GT2 - 9		70	68.8	GT2 - 9		68.8	68.8	Available units on bar.	
		8				8					
SUB TOTAL		8	8		70	68.8	8		68.8	68.8	
GRAND TOTAL		149	71		6080.5	5688.6	62		4,674.30	4,055.80	Frequency = 50.20Hz

1.7C BILATERAL AGREEMENT UNITS DISPATCH - TUESDAY 08/01/2019										
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			
U-STEEL	ON	0100HRS			22		OUT ON PLANNED OUTAGE			
PTCEXPRESS	ON	0100HRS			22		OUT ON PLANNED OUTAGE			
SANKYO	2	2300HRS			24		NIL			
FEEDER 8	16	1300HRS			24		NIL			
BILATERAL AGREEMENT LOAD DISPATCH										
60MW PARAS ENERGY GENERATION TO CEB OF TUESDAY 08/01/2019										
FEEDER	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK			
Ikeja West/Sakete 330kV line	68.8	15:00	64	10:00	24	1601.6	NIL			
BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI LOAD DISPATCH TO THE FOLLOWING COMPANIES OF: TUESDAY 08/01/2019										
COMPANY NAME	VOLTAG E LEVEL	CON-TRAC-TUAL LOAD (MW)	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK	
PULK IT		3	0600HRS			24			NIL	
INDUSTRIAL		9	0800HRS			24			NIL	
SPINTEX		13	2300HRS			24			NIL	
DANGOTE		3	1100HRS			24			NIL	
LAND CRAFT		41	2400HRS			24			NIL	
TR4 15MVA		6.4	1900HRS			24			DUE TO L/S	
TR5 -15MVA		7.4	1400HRS			24			NIL	
ALAUUSA		14.7	0800HRS			24			NIL	
PTC (MARYLAND)		18	1900HRS			24			NIL	
TOTAL LOAD										

1.8 HYDROLOGICAL DATA: WEDNESDAY 09/01/2019

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	141.39	102.50	376.76
TAIL WATER ELEVATION (METERS)	104.52	74.3	270.5
GROSS OPERATING HEAD (METERS)	36.87	28.20	106.26
AVERAGE TURBINE DISCHARGE (M3/SEC)	1180.00	1276.00	238.00
AVERAGE SPILLAGE (M3/SEC)	200.00	0.00	0.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1380.00	1276.00	238.00
COMPUTED INFLOW (M3/SEC)	1380.00	1426.00	39.00
STORAGE DIFFERENTIAL	0.00	150.00	-199
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 TUESDAY 08/01/2019

	MAXIMUM LOAD (MW)	TIME (HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD (MW)	TIME (HRS)
ABUJA	566.2	22:00	523.73	343.9	07:00
EKO	474.5	01:00	553.13	354.1	09:00
IKEJA	579.7	07:00	617.91	443.4	21:00

2.0 GAS POSITION: WEDNESDAY 09/01/2019

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	282	1100		273	87
DELTA (GAS)	416	915		321	594
OMOTOSHO GAS	134	336.8		137.2	199.6
OMOTOSHO NIPP	114.7	500		120	380
OLORUNSOGO (GAS)	172.6	336		199.5	136.5
OLORUNSOGO NIPP	0	750		0	750
SAPELE NIPP	0	500		112.5	387.5
SAPELE STEAM	0	720		0	720
AFAM IV-V	50	300		0	300
AFAM VI	134	650		150	500
GEREGU GAS	270	435		435	0
GEREGU NIPP	181	435		290	145
OKPAI (GAS/STEAM)	216	480		370	110
ALAOJI NIPP	0	504		0	504
IHOV/BOR NIPP	100.1	337.5		112.5	225
IBOM	97.8	198		115	83
ODUKPANI NIPP		625		112.5	512.5
TOTAL	2168.2	9122.30		2748.2	6374.1

1 MMSCF IS EQUIVALENT TO 3.75MW

3.0 SPINNING RESERVE FOR : TUESDAY 08/01/2019

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

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF WEDNESDAY 09/01/2019 = 0MW FREQUENCY 50.20Hz.

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

4.0 UNAVAILABLE GENERATION CAPABILITY

The unavailable generation capability for Wednesday 09/01/2019 as at 0600Hrs was = 1328.2MW.

S/N	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNAVAILABLE GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO LINE CONSTRAINTS					
			0	0	0
			0	0	
			0	0	
			0	0	
4.2 DUE TO LOW LOAD DEMAND BY THE DISCOS					
1	Okpai GT12	145	50	95	1178.2
2	Jebba 2G2 & 3	180	0	180	
3	Afam VI GT12 & ST10	350	0	350	
4	Azura-Edo GT11	153	75	78	
5	Omotosho GT4	38	0	38	
6	Shiroro 411G2	150	60	90	
7	Afam IV GT18	50	0	50	
8	Rivers GT1	160	120	40	
9	Odukpani GT5	112.5	0	112.5	
10	Delta GT19	100	0	100	
11	Ibom Power GT3	115	82.3	32.7	
				0	
				0	
4.3 DUE TO WATER MANAGEMENT:					
1	Shiroro 411G1	150	0	150	150
Grand Total					1328.2

5.0 **OUTAGES:**

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

- 1 04:38 through 24:00Hrs, Trans-Amadi GT4 tripped due to low gas pressure. LHR = 16.3MW

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

- 1 14:28 – 14:34Hrs, Osogbo T/S 150MVA 330/132kV transformer 4T1 secondary CB protecting Osogbo/Akure 132kV line tripped on MVAJ relay 86T tripping, Micom relay: O/C Yellow & Blue phases. LHR = 64MW
- 2 18:45 – 19:14Hrs, Ayede T/S 150MVA 330/132/33kV transformer T2B primary & secondary CBs tripped on O/C & E/F protection. LHR = 117MW

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

- 1 09:30 through 24:00Hrs, Gombe T/S 150MVA 330/132/33kV transformer T1A was taken out of service for annual preventive maintenance. Load loss = 68MW
- 2 09:56 - 11:22Hrs, Omotosho phase II 165MVA 15/330kV main generator transformer #4 was taken out of service to carry out inspection maintenance on the auxiliary transformer circuit. No load was interrupted as the transformer was on soak.
- 3 11:00 - 12:43Hrs, Omotosho phase II 165MVA 15/330kV main generator transformer #1 was taken out of service to carry out inspection maintenance on the auxiliary transformer circuit. No load was interrupted as the transformer was on soak.
- 4 13:05 – 16:35Hrs, Ajaokuta T/S 162MVA 330/132kV transformer T2 was taken out to allow maintenance crew replace defective Red phase primary lightning arrester. Load loss = 20MW
- 5 16:00 – 17:32Hrs, Osogbo T/S 30MVA 132/33kV transformer 4T5 was taken out to allow Discos reconnect jumper conductor of Ede/Water Works 33kV feeder to its line CB after the mechanism problem on the CB has been rectified. Load loss = 0.1MW

5 (D) **URGENT OUTAGES:-**

- 1 01:42 through 24:00Hrs, Alaoji NIPP GT2 was shut down due to high air inlet differential pressure. Load loss = 77MW
- 2 05:50 - 11:10Hrs, Delta GT20 was shut down due to high air inlet differential pressure. The load was transferred to GT19

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 ODUKPAI, 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).

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

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

5 (G) **330KV LINES THAT ARE OUT ON VOLTAGE CONTROL:-** ccts 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, D2K, K3U & K4U

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

6 **WEATHER REPORT:-** NIL

7 **INTERNATIONAL LINES:-**

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

Maximum load - 298MW at 20:00Hrs.
Minimum load - 233MW at 08:00Hrs.

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

Maximum load - 87.0MW at 20:00Hrs.
Minimum load - 44.0MW at 03:00Hrs.

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

Maximum load - 35.9MW at 20:00Hrs.
Minimum load - 18MW at 17:00Hrs.

8 **MISCELLANEOUS:-**

- 1 01:03 - 05:41Hrs, Jebba 2G3 was shut down due to low load demand by the Discos. Load loss = 88MW
- 2 00:17Hrs, Afam IV GT18 was shut down due to low load demand by the Discos. Load loss = 50MW
- 3 05:46Hrs, Delta GT19 was tied to swap with GT20
- 4 07:49 - 16:39Hrs, Jebba 2G3 was shut down due to low load demand by the Discos. Load loss = 83MW
- 5 09:20Hrs, Odukpani NIPP GT5 was shut down due to low load demand by the Discos. Load loss = 98MW
- 6 11:43Hrs, Trans-Amadi GT2 was tied. Th unit was out due to low gas pressure.
- 7 15:56Hrs, Ikot-Ekpene/Ugwuaji 330kV line (cct K3U) was restored after the low SF6 gas pressure level of the CB was refilled to normal. The line was out on fault.

10 COMMUNICATION MEDIA

STATIONS	NO INSTALLED	NO. WORKING
PLC/PAX	38	34
OPTIC FIBRE	13	12
PLS	14	4

11 SCADA RTU STATUS

STATIONS	NO. INSTALLED	NO OF RTU DISTURBED	NO OF RTU WORKING
POWER STATIONS	8	5	3
330kV	19	5	14
132kV	102	74	28

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
- 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.

8 16:04 through 24:00Hrs, Trial reclosure of 330kV Ikot-Ekpene/Ugwuaji line 4 (cct K4U) failed on Red phase ground zone 1, location = 124km.

9 17:25Hrs, Omotosho NIPP GT4 was tied to swap with GT2.

10 17:47Hrs, Omotosho NIPP GT2 was shut down. The load was transferred to GT4.

11 19:19Hrs, Jebba 2G2 was tied. The unit was out due to low load demand by the Discos.

12 19:45Hrs, Afam VI GT12 was tied. The unit was out due to low load demand by the Discos.

13 23:32Hrs, Jebba 2G2 was shut down due to low load demand by the Discos. Load loss = 86MW

**** **THE SCADA COVERAGE OF ONLY LIMITED AREAS IS NOT GOOD FOR THE SMOOTH OPERATION OF THE GRID.**

**** **LACK OF REACTOR AND UNRELIABLE STATION SERVICE SUPPLY AT IKOT-EKPENE T/S ARE HINDERING SMOOTH OPERATION.**

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, Ugwuaji, Jos, Gwagwalada & Alaaji 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

