

TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF THURSDAY 06/12/2018

FOR: EVENTS OF WEDNESDAY 05/12/2018

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	23,000	20:15	05/12/2018
GENERATION CAPABILITY	4888.9	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	4815.9	-do-	-do-
PEAK GENERATION	4705.0	-do-	-do-
LOWEST GENERATION	3165.5	11:00	05/12/2018
8-HOURLY DURATION PEAK	4295.1	0100-0800	-do-
	4253	0900-1600	-do-
	4654.8	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	353	New Haven T/S	11:00
LOWEST VOLTAGE FOR THE DAY	300	Yola, Gombe & Kumbotso	06:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	51.17	10:57
LOWEST FREQUENCY	49.66	19:15

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 20th Sept, 2018		No. of days since last total collapse: 76													
Date of last partial collapse: 12th April, 2018		No. of days since last partial collapse: 237													
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	398	141
2 JEBBA	HYDRO	444	141
3 SHIRORO	HYDRO	445	165
4 EGBIN ST2 - 5	STEAM	368	367
5 SAPELE	STEAM	50	50
6 DELTA	GAS	487	397
7 AFAM IV-V	GAS	0	0
8 GEREGU GAS	GAS	376	205
9 OMOTOSHO GAS	GAS	135.7	133.3
10 OLORUNSOGO GAS	GAS	203	168.8
11 GEREGU NIPP	GAS	121	75
12 SAPELE NIPP	GAS	95.9	0
13 ALAOJI NIPP	GAS	0	0
14 OLORUNSOGO NIPP	GAS	0	0
15 OMOTOSHO NIPP	GAS	110.4	80.1
16 ODUKPANI NIPP	GAS	337.2	311.4
17 IHOVBOR NIPP	GAS	0	0
18 OKPAI	GAS	157	156
19 AFAM VI	GAS	0	0
20 IBOM POWER	GAS	107.9	70.2
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	80.2	78.4
24 TRANS AMADI	GAS	60.6	32.9
25 RIVERS IPP	(GAS)	0	0
26 AZURA - EDO IPP	(GAS)	450	375
27 EGBIN ST6	(GAS)	111	110
28 PARAS ENERGY	(GAS)	69.4	67
29 GBARAIN NIPP	GAS	97.7	41.4
TOTAL		4705	3165.5

1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED	AV.ENERGY GENERATED	ENERGY SENT OUT	AV. ENERGY SENT OUT
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	9389.00	391.21	9373.50	390.56
2 JEBBA	HYDRO	8730.00	363.75	8710.72	362.95
3 SHIRORO	HYDRO	8326.00	346.92	8294.68	345.61
4 EGBIN ST2 - 5	STEAM	8789.00	366.21	8266.50	344.44
5 SAPELE	STEAM	1092.10	45.50	1036.00	43.17
6 DELTA	GAS	11193.40	466.39	10993.30	458.05
7 AFAM IV-V	GAS		0.00		0.00
8 GEREGU GAS	GAS	7324.60	305.19	7295.43	303.98
9 OMOTOSHO GAS	GAS	3249.00	135.38	3225.10	134.38
10 OLORUNSOGO GAS	GAS	4501.12	187.55	4469.76	186.24
11 GEREGU NIPP	GAS	2821.63	117.57	2808.61	117.03
12 SAPELE NIPP	GAS	495.95	20.66	482.06	20.09
13 ALAOJI NIPP	GAS		0.00		0.00
14 OLORUNSOGO NIPP	GAS		0.00		0.00
15 OMOTOSHO NIPP	GAS	2346.90	97.79	2319.10	96.63
16 ODUKPANI NIPP	GAS	7718.18	321.59	7678.48	319.94
17 IHOVBOR NIPP	GAS		0.00		0.00
18 OKPAI	GAS	3663.00	152.63	3583.60	149.32
19 AFAM VI	GAS		0.00		0.00
20 IBOM	GAS	2310.45	96.27	2302.00	95.92
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 AZURA - EDO IPP	GAS	8920.05	371.67	8891.90	370.50
23 A.E.S	GAS	0.00	0.00	0.00	0.00
24 OMOKU	GAS	1889.10	78.71	1841.51	76.73
25 TRANS AMADI	GAS	1113.70	46.40	1086.60	45.28
26 RIVERS IPP	GAS		0.00		0.00
27 EGBIN ST6	STEAM	2607.00	108.63	2471.20	102.97
28 PARAS ENERGY	GAS	1646.80	68.62	1639.20	68.30
29 GBARAIN NIPP	GAS	1218.00	50.75	1208.80	50.37
TOTAL		99,344.98	4,139.37	97,978.05	4,082.42

1.7A GENERATION POSITION AT 06:00HRS OF THURSDAY 06/12/2018

	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 50.31Hz.	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	8	1G5, 6, 11 & 12 4	440	423	1G5, 6, 11 & 12 4	423	420	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	476	445	2G1 - 5 5	445	432	2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G1, 2 & 4 3	450	450	411G1, 2 & 4 3	450	344	411G2 - Generation reduced due to water management. 411G3 - Out on fault.
	EGBIN STEAM	6	ST2, 4, 5 & 6 4	880	476	ST2, 4, 5 & 6 4	476	476	ST1 - Out due to undisclosed fault since 04/09/2018. ST3 - Out on high vibration since 19th June 2017. Available units on bar.
	SAPELE (STEAM)	6	ST2 1	120	50	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, 11 - 13, 15, 16 & 19 9	435	430	GT7, 9 - 13, 15, 16 & 19 9	430	409	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 on maintenance.
	AFAM IV & V (GAS)	8	0 0	0	0	0 0	0	0	GT11 - 12 - De-commissioned and scrapped. GT13,14 & 16 - Out on blade failure. GT17 - Out due to gas constraint. GT18 - Out due to maintenance. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT11 - 13 3	435	337	GT11 & 12 - Generation reduced due to low load demand by the Discos. GT13 - Generation reduced due to inlet gas valve controller problem.
	OMOTOSHO GAS	8	GT1, 4, 6 & 7 4	152	140.8	GT1, 4, 6 & 7 4	140.8	140.8	GT2, 3, 5 & 8 - Out due to gas constraint. Available units on bar.
	OLORUNSOGO GAS	8	GT1 & 4 - 8 6	228	208.5	GT1 & 4 - 8 6	208.5	208.5	GT2 & 3 - Out due to gas constraint. Available units on bar.
NIPP	GEREGU NIPP	3	GT22 1	145	145	GT22 1	145	125	GT21 - Out on maintenance. GT23 - Out due to gas constraint.
	SAPELE NIPP	4	GT3 1	112.5	112.5	GT3 1	112.5	103.1	GT1 - Out due to low gas pressure. GT2 - Out on maintenance. GT4 - Out due to high air filter differential pressure.
	ALAOJI NIPP GAS	4	0 0	0	0	0 0	0	0	GT1 - Out on maintenance. GT2 - Out due to low gas 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 & 2 - Shut down due to low gas pressure. GT3 - Out due to maintenance. GT4 - Out due to ignition failure and control relay failure alarm. ST13 & ST23 - Out on maintenance.
	OMOTOSHO NIPP GAS	4	GT2 1	125	120	GT2 1	120	101.8	GT1, 3 & 4 - Out due to gas constraint.
	ODUKPANI NIPP	5	GT3 - 5 3	360	353	GT3 - 5 3	353	350.7	GT1 - Out on fault. GT2 - Out due to gas leakage. Available units on bar.
	IHOVBOR NIPP	4	0 0	0	0	0 0	0	0	GT1, 2 & 4 - Out due to gas station maintenance. GT3 - Tripped on high vibration.
	GBARAIN NIPP GAS	1	GT2 1	112.5	112.5	GT2 1	112.5	106.7	Available unit on bar.
IPP	OKPAI GAS/STEAM	3	GT12 1	162	162	GT12 1	162	162	GT11 & ST18 - Out due to gas leakage. Available unit on bar.
	AZURA - EDO	3	GT11 - 13 3	461	461	GT11 - 13 3	461	333	GT11 - Generation reduced due to low load demand by the Discos.
	AFAM VI GAS/STEAM	4	0 0	0	0	0 0	0	0	GT11 - Out on type C inspection. GT12, 13 & ST10 - Out due to maintenance at gas station.
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	83.6	GT1 & 2 - Out due to fire outbreak on the control panel.
	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, 3 & 5 4	100	82.9	GT1, 2, 3 & 5 4	82.9	82.9	GT4 - Out on major overhaul. GT6 - Out on maintenance.
	TRANS-AMADI	4	GT1, 2 & 4 3	75	62.6	GT1, 2 & 4 3	62.6	62.6	GT3 - Out on fault. Available units on bar.
	RIVERS	1	0 0	0	0	0 0	0	0	GT1 - Out due to gas constraint
	SUB TOTAL	141	58	5384	4784.8	58	4784.8	4328.7	Frequency = 50.31Hz.

1.7B **GENERATION POSITION AT 06:00HRS OF THURSDAY 06/12/2018 FOR UNITS ON BILATERAL AGREEMENT**

PARAS ENERGY	8	GT2 - 9 8	70	67.8	GT2 - 9 8	67.8	67.8	Available units on bar.
SUB TOTAL	8	8	70	67.8	8	67.8	67.8	
GRAND TOTAL	149	66	5454	4852.6	66	4,852.60	4,396.50	Frequency = 50.31Hz

1.7C BILATERAL AGREEMENT UNITS DISPATCH - WEDNESDAY 05/12/2018								
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			20		FEEDER 2 33KV TRIPPED ON INST. OC, INST EF AND EF
	PTCEXPRESS	ON	0100HRS			20		FEEDER 2 33KV TRIPPED ON INST. OC, INST EF AND EF
	SANKYO	ON	0100HRS			24		NIL
	FEEDER 8	16	1700HRS			24		NIL
IKORODU	PULK IT	3	1700HRS			24		NIL
	INDUSTRIAL	10	0800HRS			24		NIL
	SPINTEX	8	2200HRS			23		TR4 SEC.TRIPPED,CAUSED BY AGBOWA 33KV FEEDER
	DANGOTE	2	0100HRS			24		NIL
	LAND CRAFT	40	2100HRS			24		NIL
ALAUSA	TR4 15MVA	8.7	1100HRS			24		LOAD SHEDDING
	TR5 -15MVA	6.9	1200HRS			24		NIL
	ALAUSA	17.5	0900HRS			24		NIL
M/LAND	PTC (MARYLAND)	20	1200HRS			24		NIL
	TOTAL LOAD	113.2						

BILATERAL AGREEMENT LOAD DISPATCH 60MW PARAS ENERGY GENERATION TO CEB OF WEDNESDAY 05/12/2018							
FEEDER	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK
Ikeja West/Sakete 330kV line	69.4	05:00	61.5	18:00	24	1570.8	NIL.

BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI LOAD DISPATCH TO THE FOLLOWING COMPANIES OF: WEDNESDAY 05/12/2018									
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	56	10:00	26	07:00	24	918	SUPPLY NOT INTERRUPTED
KAM STEEL		25.0	0.5	15:00	0.1	07:00	24	4.9	SUPPLY NOT INTERRUPTED
ASHAKA CEMENT		0	10.3	17:00	2.7	12:00	23	182.0	SUPPLY NOT INTERRUPTED
XING 1	33kV feeder	0	19.8	16:00	9	08:00	24	379.3	SUPPLY NOT INTERRUPTED
XING 2		0	27	15:00	15.6	08:00	24	559	SUPPLY NOT INTERRUPTED
KAM INTEGRATED		15	4.7	12:00	1.8	07:00	24	69	SUPPLY NOT INTERRUPTED
OLAM FLOUR MILLS		3	2	20:00	0.1	06:00	24	29.7	SUPPLY NOT INTERRUPTED
LORDSMITH		3	0.6	09:00	0.5	01:00	24	13.1	SUPPLY NOT INTERRUPTED

1.8 HYDROLOGICAL DATA: THURSDAY 06/12/2018

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	141.5	102.02	379.40
TAIL WATER ELEVATION (METERS)	104.3	74.6	271.0
GROSS OPERATING HEAD (METERS)	37.20	27.42	108.40
AVERAGE TURBINE DISCHARGE (M3/SEC)	1167.00	1491.00	368.00
AVERAGE SPILLAGE (M3/SEC)	444.00	0.00	0.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1611.00	1491.00	368.00
COMPUTED INFLOW (M3/SEC)	1611.00	1676.00	0.00
STORAGE DIFFERENTIAL	0.00	185	-368
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 WEDNESDAY 05/12/2018

		TIME (HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD (MW)	TIME (HRS)
ABUJA	510.8	21:00	428.91	350.5	07:00
EKO	481.9	24:00	510.26	265	16:00
IKEJA	556.7	08:00	559.44	415.9	16:00

2.0 GAS POSITION: THURSDAY 06/12/2018

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	457	1100		476	624
DELTA (GAS)	453	915		430	485
OMOTOSHO GAS	135.2	336.8		140.8	196
OMOTOSHO NIPP	96.3	500		120	380
OLORUNSOGO (GAS)	203.6	336		208.5	127.5
OLORUNSOGO NIPP	0	750		0	750
SAPELE NIPP	0	500		0	500
SAPELE STEAM	50	720		50	670
AFAM IV-V	0	300		0	300
AFAM VI	0	650		0	650
GEREGU GAS	360	435		435	0
GEREGU NIPP	127	435		145	290
OKPAI (GAS/STEAM)	151	480		162	318
ALAOJI NIPP	0	504		0	504
IHOVBOR NIPP	94.8	337.5		0	337.5
IBOM	93.8	198		115	83
ODUKPANI NIPP	0	625		350.7	274.3
TOTAL	2221.7	9122.30		2633	6489.3

1 MMSCF IS EQUIVALENT TO 3.75MW

3.0 SPINNING RESERVE FOR : WEDNESDAY 05/12/2018

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

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF THURSDAY 06/12/2018 = 0MW. FREQUENCY 50.31Hz.

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

4.0 UNAVAILABLE GENERATION CAPABILITY

The unavailable generation capability for Thursday 06/12/2018 as at 0600Hrs was = 208MW.

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	Geregu Gas GT11 & 12	290	250	40	118
2	Azura-Edo GT11	153	75	78	
			0	0	
			0	0	
4.3 DUE TO WATER MANAGEMENT:					
1	Shiroro 411G2	150	60	90	90
					0
Grand Total					208

5.0 OUTAGES:

5 (A) FORCED OUTAGES (GENERATION):

- 10:54 - 11:58Hrs, Jebba 2G3 tripped due to system surge as a result of the tripping of ccts R1M & R2M. LHR = 85MW
- 11:56 - 13:36Hrs, Geregu gas GT12 tripped due to low gas pressure. LHR = 60MW

5 (B) FORCED OUTAGES (TRANSMISSION):

- 09:06 - 09:49Hrs, Benin/Delta 132kV line CB tripped at both ends on the following relay indications:
At Benin T/S:
NARI relay: Distance protection, O/C Red and Yellow phases, zone 1, period = 233ms, fault location = 66.2km.
At Delta T/S:
Main protection, O/C Red phase and backup E/F. LHR = 28.8MW
- 10:54 - 11:18Hrs, Shiroro/Mando 330kV line 1 (cct R1M) CB tripped at Shiroro P/S on
ABB relay: Trip PHS-STFWL1, PHS STRLE, PHS-STFWL2 zone 2 trip, fuse VTS2 MVA J21K 86ABC. LHR = 238.7MW
- 10:54 - 11:23Hrs, Shiroro/Mando 330kV line 2 (cct R2M) CB tripped at Shiroro P/S on
ABB relay: Trip-PHS-STFWL1, PHSWL2, PHS-STFWL2, zone 1 trip, DEF trip fuse VTSE, MVA J21K 86ABC. LHR = 264.8MW
- 10:54 - 12:31Hrs, Makurdi/Jos 330kV line 2 (cct A2S) CB tripped at Jos T/S without relay indication. LHR = 182MW
- 10:54 - 11:14Hrs, Makurdi T/S 150MVA 330/132/34.5kV transformer T02 primary and secondary CBs tripped on interposing relay 3 phases. LHR = 48MW.
- 13:51 - 14:28Hrs, 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, Red & Blue phases, zone 1 trip phase fault, O/C, PU time = 95ms, trip time = 37ms, distance = 177.7km.
Ohmega relay: Zone 1 phases A & C, aided trip, distance = 187.90km, 86A/2, 86B/2
Auxiliary relay: 85 X 2 and 86T.
At Ikeja-West T/S:
Siemens relay: General trip, RPH fault, BPH fault, zone 1 trip ZCom trip, 2L pickup CAG, PU time = 110ms, trip time = 20ms, distance = 52.8km.
Micom relay: General trip, R-PH fault, YPH fault, BPH fault, distance = 21 trip carrier send. No load loss as ccts R1W, R2A & H2A were in service.

5 (C) PLANNED OUTAGES:-

- 10:33 - 19:28Hrs, Jebba 2G2 was shut down to carry out annual preventive maintenance on the unit. Load loss = 82MW
- 10:39 - 19:25Hrs, Jebba 2G1 was shut down to carry out annual preventive maintenance on the unit. Load loss = 84MW

5 (D) URGENT OUTAGES:-

- 09:54 - 12:33Hrs, Oke-Aro/Ikeja-West 330kV line 2 (cct K8W) was taken out to top up low oil level of the line CT to normal at Ikeja-West T/S. No load loss as cct K7W was in service.

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.

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 - 292MW at 21:00Hrs.

Minimum load - 223MW at 08:00Hrs.

B BIRNIN KEBBI/NIAMEY 132KV LINE

Maximum load - 98MW at 19:00Hrs.

Minimum load - 59MW at 05:00Hrs.

C KATSINA/GAZAOUA/MARADI 132KV LINE

Maximum load - 28.5MW at 20:00Hrs.

Minimum load - 11.7MW at 12:00Hrs.

8 MISCELLANEOUS:-

1 05:37Hrs, Kainji 1G6 was tied. The unit was out on fault.

2 11:10 - 12:31Hrs, Makurdi/Jos 330kV line 2 (cct A2S) was taken out due to high voltage at Makurdi T/S as the breaker at Jos T/S could not close. V/P = 352/337kV.

3 16:51Hrs, Trans-Amadi GT2 was tied. The unit was out due to gas constraint.

4 17:19Hrs, Sapele NIPP GT3 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.

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	32
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	5	3
330kV	19	6	13
132kV	102	84	18

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/SOLATORS

LAGOS REGION:

- 1 Akangba T/S. 132kV Bus Coupler CB - Serious Air leakage.(Undergoing repair)
- 1 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, Ugwuaji, 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

