

TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF TUESDAY 09/10/2018

FOR: EVENTS OF MONDAY 08/10/2018

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	22,780	21:45	08/10/2018
GENERATION CAPABILITY	7790.8	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5031.5	-do-	-do-
PEAK GENERATION	4467.0	-do-	-do-
LOWEST GENERATION	2690.5	04:00	08/10/2018
8-HOURLY DURATION PEAK	3252.5	0100-0800	-do-
	3615.9	0900-1600	-do-
	4467	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	357	Ikot-Ekpene T/S	02:00
LOWEST VOLTAGE FOR THE DAY	296	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	02:37
LOWEST FREQUENCY	50.18	05:37

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 20th Sept, 2018		No. of days since last total collapse: 18											
Date of last partial collapse: 12th April, 2018		No. of days since last partial collapse: 177											
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	--	2	2	1	4	22
	Partial	1	--	--	1	1	3	4	4	3	2	--	20
2011	Total	--	--	--	--	4	3	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	4	2	22
	Partial	--		--	--	--	--	--	2				2
2014	Total	2			2	0	3	1	0	0	1	0	9
	Partial			0	0	1	0	0	0	0	2	1	4
2015	Total	1	0	1	0	2	0	1	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	2	2	22
	Partial	--	--	1	0	1	3	1	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	348	307
2 JEBBA	HYDRO	426	369
3 SHIRORO	HYDRO	445	396
4 EGBIN ST2 - 5	STEAM	553	332
5 SAPELE	STEAM	48	47
6 DELTA	GAS	484	244
7 AFAM IV-V	GAS	45	0
8 GEREGU GAS	GAS	106	50
9 OMOTOSHO GAS	GAS	102.5	104.6
10 OLORUNSOGO GAS	GAS	122.4	104
11 GEREGU NIPP	GAS	0	0
12 SAPELE NIPP	GAS	84.5	68.3
13 ALAOJI NIPP	GAS	82	0
14 OLORUNSOGO NIPP	GAS	110.3	0
15 OMOTOSHO NIPP	GAS	98	0
16 ODUKPANI NIPP	GAS	0	0
17 IHOVBOR NIPP	GAS	94.3	0
18 OKPAI	GAS	270	176
19 AFAM VI	GAS	124	101
20 IBOM POWER	GAS	80.5	0
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	55.1	51.3
24 TRANS AMADI	GAS	64.5	37.5
25 RIVERS IPP	(GAS)	155	50
26 AZURA - EDO IPP	(GAS)	250	75
27 EGBIN ST6	(GAS)	171	110
28 PARAS ENERGY	(GAS)	67.8	67.8
29 GBARAIN NIPP	GAS	80.1	0
TOTAL		4467	2690.5

1.6 ENERGY GENERATED/ENERGY SENT OUT:					
STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	9592.00	399.67	9576.30	399.01
2 JEBBA	HYDRO	9816.00	409.00	9790.20	407.93
3 SHIRORO	HYDRO	10286.00	428.58	10271.61	427.98
4 EGBIN ST2 - 5	STEAM	8925.00	371.88	8420.90	350.87
5 SAPELE	STEAM	1058.30	44.10	1001.20	41.72
6 DELTA	GAS	9759.01	406.63	9544.50	397.69
7 AFAM IV-V	GAS	349.00	14.54	343.53	14.31
8 GEREGU GAS	GAS	1994.90	83.12	1974.54	82.27
9 OMOTOSHO GAS	GAS	2241.00	93.38	2219.30	92.47
10 OLORUNSOGO GAS	GAS	2556.76	106.53	2535.46	105.64
11 GEREGU NIPP	GAS	0.00	0.00	0.00	0.00
12 SAPELE NIPP	GAS	2262.40	94.27	2244.54	93.52
13 ALAOJI NIPP	GAS	1059.50	44.15	1057.35	44.06
14 OLORUNSOGO NIPP	GAS	1268.10	52.84	1233.90	51.41
15 OMOTOSHO NIPP	GAS	1272.00	53.00	1259.40	52.48
16 ODUKPANI NIPP	GAS	0.00	0.00	0.00	0.00
17 IHOVBOR NIPP	GAS	1576.37	65.68	1560.28	65.01
18 OKPAI	GAS	4758.00	198.25	4634.50	193.10
19 AFAM VI	GAS	2731.03	113.79	2632.26	109.68
20 IBOM	GAS	2089.71	87.07	2081.00	86.71
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 AZURA - EDO IPP	GAS	2942.15	122.59	2927.40	121.98
23 A.E.S	GAS	0.00	0.00	0.00	0.00
24 OMOKU	GAS	1332.30	55.51	1298.81	54.12
25 TRANS AMADI	GAS	1269.20	52.88	1240.10	51.67
26 RIVERS IPP	GAS	2403.20	100.13	2392.80	99.70
27 EGBIN ST6	STEAM	3092.00	128.83	2925.20	121.88
28 PARAS ENERGY	GAS	1644.50	68.52	1640.10	68.34
29 GBARAIN NIPP	GAS	665.60	27.73	655.00	27.29
TOTAL		86,944.03	3,622.67	85,460.18	3,560.84

1.7A GENERATION POSITION AT 06:00HRS TUESDAY 09/10/2018

	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 50.48Hz.	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	8	1G5, 6, 11 & 12 4	440	420	1G5, 6, 11 & 12 4	420	358	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	450	2G1- 5 5	450	411	2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G2 - 4 3	450	450	411G2 - 4 3	450	445	411G1 - Out due to technical problem.
	EGBIN STEAM	5	ST2, 4 & 5 3	660	553	ST2, 4 & 5 3	553	386	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	50	ST2 1	50	50	ST1 - Shut down due to alarm on inlet gas guide control trouble. ST4 & 5 - Awaiting major overhaul. ST6 - Out on gas control valve not following reference point.
	DELTA (GAS)	18	GT9 - 13, 15, 16 & 18 - 20 10	625	610	GT9 - 13, 16 & 20 7	310	303	GT3 & 5 - Out due to generator winding fault. GT4 - Out on loss of excitation. GT6, 8 & 14 - Out on major overhaul. GT7 - Out on fault. GT15, 18 & 19 - Out due to low load demand by the Discos. GT17 - Tripped on bearing vibration more than maximum.
	AFAM IV & V (GAS)	8	GT17 1	80	65	0 0	0	0	GT1 - 12 - De-commissioned and scrapped. GT13,14 & 16 - Out on blade failure. GT17 - Out due to low demand by the Discos. GT17 - Out due to low load demand by the Discos. GT18 - Out on maintenance. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 & 13 2	290	290	GT13 1	145	90	GT11 - Out due to gas constraint. GT12 - Tripped on natural gas valve position. GT13 - Generation reduced due to low load demand by the Discos.
	OMOTOSHO GAS	8	GT1 - 8 8	336	304	GT2, 6 & 7 3	114	101.8	GT1, 3 - 5 & 8 - Out due to low load demand by the Discos.
	OLORUNSOGO GAS	8	GT1 - 8 8	336	304	GT2, 4, 6 & 7 4	152	117.2	GT1, 3, 5 & 8 - 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 1	112.5	79.6	GT2 & 3 - Out due to low load demand by the Discos. GT4 - Out due to gas constraint.
	ALAOJI NIPP GAS	4	GT1 & 2 2	250	240	0 0	0	0	GT1 & 2 - Out 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 - 3 3	375	360	GT1 1	120	111	GT2 & 3 - Out due to low load demand by the Discos. GT4 - Out due to ignition failure and control relay failure alarm. ST13 & ST23 - Out on maintenance.
	OMOTOSHO NIPP GAS	4	GT1, 2 & 4 3	375	360	GT2 1	120	98.8	GT1, 3 & 4 - Out due to low load demand by the Discos.
	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 1	112.5	100.1	GT1 - On manual adjustment to frequency. GT2 & 4 - 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 low load demand by Discos.
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	370	370	GT11, 12 & ST18 3	348	273	ST18 - Generation reduced due to boiler problem.
	AZURA - EDO	3	GT11 - 13 3	461	461	GT13 1	153	125	GT11 & 12 - Out due to low load demand by the Discos.
	AFAM VI GAS/STEAM	4	GT11 - 13 & ST10 4	650	640	GT11 1	150	117	GT12 & 13 - Out due to low load demand by the Discos. ST10 - Out due to gas constraint.
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	60.3	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	60	GT1, 2 & 5 3	57.6	57.6	GT3 - Tripped on over speed. GT4 - Awaiting major overhaul. GT6 Out on maintenance.
	TRANS-AMADI	4	GT 1, 2 & 4 3	75	60	GT1,2 & 4 3	61.7	61.7	GT3 - Out on fault.
	RIVERS	1	GT1 1	160	160	GT1 1	160	90	GT1 - Generation reduced due to low load demand by the Discos.
	SUB TOTAL	140	81	7910.5	7512	48	4154.3	3436.1	Frequency = 50.48Hz.

1.7B GENERATION POSITION AT 06:00HRS OF TUESDAY 09/10/2018 FOR UNITS ON BILATERAL AGREEMENT

EGBIN	1	ST6 1	220	164	ST6 1	164	164	Available unit on bar.
PARAS ENERGY	8	GT2 - 9 8	67.8	67.8	GT2 - 9 8	67.8	67.8	Available units on bar.
SUB TOTAL	9	9	287.8	231.8	9	231.8	231.8	
GRAND TOTAL	149	90	8198.3	7743.8	57	4,386.10	3,667.90	Frequency = 50.48Hz

1.7C		BILATERAL AGREEMENT UNITS DISPATCH - MONDAY 08/10/2018.							
		EGBIN ST6 120MW 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	1400			11		FEEDER TRIPPED ON INST. OC AND INST.EF	
	PTCEXPRESS	ON	1400			11		FEEDER TRIPPED ON INST. OC AND INST.EF	
	SANKYO	1	1100			24		NIL	
	FEEDER 8	14	2100			24		NIL	
IKORODU	PULK IT	2	0900			24		NIL	
	INDUSTRIAL	9	0100			24		NIL	
	SPINTEX	5	2200			24		NIL	
	DANGOTE	ON	0100			24		NIL	
	LAND CRAFT	29	0600			24		NIL	
ALAUSA	TR4 15MVA	7.4	11:00			18		planned outage	
	TR5 -15MVA	5.5	11:00			18		planned outage	
	ALAUSA	11.5	20:00			7		tripped and planned outage	
M/LAND	PTC (MARYLAND)	19	2100			24		NIL	
	TOTAL LOAD	103.4							

BILATERAL AGREEMENT LOAD DISPATCH 60MW PARAS ENERGY GENERATION TO CEB OF MONDAY 08/10/2018							
FEEDER	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK
Ikeja West/Sakete 330kV line	69.4	10:00	67	08:00	24	1642	Nil.

BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI LOAD DISPATCH TO THE FOLLOWING COMPANIES OF: MONDAY 08/10/2018									
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 SOAK
KAM STEEL		15.0	0.2	01:00	0.1	10:00	24	4.5	SUPPLY NOT INTERRUPTED
ASAKA CEMENT		0.0	7.7	01:00	4.2	10:00	24	161.5	SUPPLY NOT INTERRUPTED
XING 1	33kV feeder	0.0	18.9	03:00	0.6	09:00	24	127.2	SUPPLY NOT INTERRUPTED
XING 2		0.0	28.8	04:00	0.9	21:00	24	182.75	SUPPLY NOT INTERRUPTED
KAM INTEGRATED		15.0	4.9	15:00	1.7	22:00	24	70	SUPPLY NOT INTERRUPTED
OLAM FLOUR MILLS		3.0	2.1	24:00	0.4	08:00	24	19.8	SUPPLY NOT INTERRUPTED
LORDSMITH		0	0.3	05:00	0.3	05:00	5	1.5	O/C & E/F

1.8 HYDROLOGICAL DATA: TUESDAY 09/10/2018

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	141.15	103.03	382.67
TAIL WATER ELEVATION (METERS)	105.25	75.4	273.5
GROSS OPERATING HEAD (METERS)	35.90	27.63	109.17
AVERAGE TURBINE DISCHARGE (M3/SEC)	1248.00	169.00	441.00
AVERAGE SPILLAGE (M3/SEC)	482.00	881.00	1785.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1730.00	1050.00	2226.00
COMPUTED INFLOW (M3/SEC)	1262.00	2560.00	2052.00
STORAGE DIFFERENTIAL	-468.00	1510	-174
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 MONDAY 08/10/2018

	MAXIMUM LOAD (MW)	TIME (HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD (MW)	TIME (HRS)
ABUJA	492.7	17:00	544.74	255.4	04:00
EKO	0.0	0	592.36	0	0
IKEJA	594.2	22:00	671.4	286.4	04:00

2.0 GAS POSITION: TUESDAY 09/10/2018

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	439	1100		507	593
DELTA (GAS)	452	915		303	612
OMOTOSHO GAS	139.7	336.8		114	222.8
OMOTOSHO NIPP	0	500		120	380
OLORUNSOGO (GAS)	116.9	336		152	184
OLORUNSOGO NIPP	111.6	750		0	750
SAPELE NIPP	73.9	500		112.5	387.5
SAPELE STEAM	35	720		50	670
AFAM IV-V	0	300		0	300
AFAM VI	107	650		150	500
GEREGU GAS	120	435		145	290
GEREGU NIPP	0	435		0	435
OKPAI (GAS/STEAM)	227	480		370	110
ALAOJI NIPP	0	504		0	504
IHOVBOR NIPP	73.5	450		112.5	337.5
IBOM	62.2	198		113	85
ODUKPANI NIPP	0	625		0	625
TOTAL	1957.8	9234.80		2249	6985.8

1 MMSCF IS EQUIVALENT TO 3.75MW

3.0 SPINNING RESERVE FOR: MONDAY 08/10/2018

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

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF TUESDAY 09/10/2018 = 0MW. FREQUENCY 50.48Hz.

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 Tuesday 09/10/2018 as at 0600Hrs was = 3675MW.

6	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNAVAILABLE GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO GAS CONSTRAINTS:					
1	Geregu Gas GT11 & 12	290	0	290	892.5
2	Afam VI ST10	200	0	200	
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 1862.88MMSCF OF GAS (EQUIVALENT TO 6985.8MW) WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.					
4.2 DUE TO LINE CONSTRAINTS					
		0	0	0	0
		0	0	0	0
		0	0	0	0
4.3 DUE TO LOW LOAD DEMAND BY THE DISCOS					
1	Ihovbor GT2 & 4	225	0	225	2662.8
2	Azura Edo GT11 & 12	306	0	306	
3	Egbin ST2, 4 & 5	553	445	108	
4	Rivers IPP GT1	160	90	70	
5	Delta GT15, 18 & 19	315	0	315	
6	Alaoji NIPP GT1 & 2	240	0	240	
7	Omotosho NIPP GT1 & 4	240	0	240	
8	Olorunsogo NIPP GT1 & 3	240	0	240	
9	Omotosho Gas GT1, 3 - 5 & 8	190	106.6	83.4	
10	Olorunsogo Gas GT1- 8	304	106.1	197.9	
12	Afam VI GT12 & 13	300	0	300	
13	Sapele NIPP GT2 & 3	225	0	225	
14	Gbaran GT2	112.5	0	112.5	
15	Afam IV GT17	65	0	65	
16	IBOM POWER GT3	115	60.3	54.7	
			0	0	
			0	0	
4.1 DUE TO WATER MANAGEMENT:					
Grand Total					3675

5.0 OUTAGES:

5 (A) FORCED OUTAGES (GENERATION):

- 1 05:34 - 06:49Hrs, Geregu gas GT12 tripped on natural gas valve position. LHR = 50MW
- 2 21:28 through 24:00Hrs, Afam IV GT17 tripped on loss of excitation. Load loss = 45MW

5(B) FORCED OUTAGES (TRANSMISSION):

- 1 05:20 - 05:55Hrs, Benin/Omosho 330kV line (cct B5M) CBs tripped at both ends on the following relay indications:
At Benin T/S: ABB relay: Trip-trip, trip-TRL1, PHS-STFWL, PE, ZM1-trip, EFC-CS, Auto reclosure in progress, DEF-Block, fuse VTSZ, ZM2 & ZM3-start, ZCIP-CSL1, TOC-STL1, HS-TRL1, fault loop = L1-N, distance = 20.6km.
Auxiliary: MVAJ K86A
Ohmega relay: Zone 1 trip phase A.
At Omotosho T/S: PSL 601: RTIP (A, B & C)
PSL 602: RTIP (A) zero sequence zone 1 trip, phase A trip, phase A grounded, distance = 45.8km,
Auxiliary relay: Tripping A, B & C stages 1 & 2. No load loss as ccts M5W, H1W & B6N were in service.

5 (C) PLANNED OUTAGES:- NIL

5(D) URGENT OUTAGES:-

- 1 10:29 - 12:22Hrs, Rivers IPP GT1 was shut down due to gas constraint. Load loss = 120MW.
- 2 10:56 – 13:38Hrs, Omotosho 150MVA 330/132/33kV Auto-transformer T1 primary CB #3313 was taken out to build up low SF6 gas pressure to normal on the Blue phase. No load loss as CB #3312 was in service.
- 3 18:50 – 20:23Hrs, Egbin/Ikeja-West 330kV line (cct N6W) CB was taken out to build up low SF6 gas pressure to normal at Ikeja-West. No load loss as ccts N3J, N7K, N8K & K7W were 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 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.

5 (E) EMERGENCY OUTAGES:- NIL

5 (F) AUTOMATIC UNDER FREQUENCY OPERATION:- NIL

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

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

5 (J) 330KV LINES THAT ARE OUT ON LINE FAULT:- cct J2H.

5 (K) 330KV LINES THAT ARE ON SOAK:- ccts F1K, B3D & N4J

6 WEATHER REPORT:- Rainfall reported at Benin, Osogbo,

7 INTERNATIONAL LINES:-

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

Maximum load - 239MW at 21:00Hrs.
Minimum load - 160MW at 05:00Hrs.

B BIRNIN KEBBI/NIAMEY 132KV LINE

Maximum load - 107MW at 12:00Hrs.
Minimum load - 83MW at 07:00Hrs.

C KATSINA/GAZAOUA/MARADI 132KV LINE

Maximum load - 39MW at 20:00Hrs.
Minimum load - 24MW at 07:00Hrs.

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	5	3
330kV	19	7	12
132kV	102	83	19

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 available reactor.

12 (B) UNAVAILABLE BREAKERS/ISOLATORS

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.

8 MISCELLANEOUS:-

- 1 00:18 -18:46Hrs, Azura-Edo GT13 was shut down due to low load demand by the Discos. Load loss = 75MW
 - 2 00:33 - 10:27Hrs, Omotosho NIPP GT2 was shut down due to low load demand by the Discos. Load loss = 91.2MW
 - 3 02:52 through 24:00Hrs, Ihovbor NIPP GT4 was shut down due to low load demand by the Discos. Load loss = 89.6MW
 - 4 08:35Hrs, Omotosho gas GT8 was tied to swap with GT7.
 - 5 08:40Hrs, Omotosho gas GT7 was shut down. No load loss as 32MW was transferred to GT8.
 - 6 10:23Hrs, Ihovbor NIPP GT1 was tied. The unit was out due to low load demand by the Discos.
 - 7 10:27Hrs, Omotosho NIPP GT2 was tied. The unit was out due to low load demand by the Discos.
 - 8 10:48Hrs, Alaoji NIPP GT2 was tied. The unit was out on low load demand by the Discos.
 - 9 11:25Hrs, Olorunsogo NIPP GT1 was tied. The unit was out on low load demand by the Discos.
 - 10 12:03Hrs, Mando T/S 75MX 330kV shunt Reactor 3R3 was switched out of service for voltage control. V/P = 317/322kV
 - 11 12:03Hrs, Kaduna T/S 75MX 330kV shunt Reactor R1 was switched off on voltage control. V/P = 317/322kV
 - 12 13:34Hrs, Afam IV GT17 was tied. The unit was out due to low load demand by the Discos.
 - 13 15:32Hrs, Gbarain GT2 was tied. The unit was out due to low load demand by the Discos.
 - 14 18:57Hrs, Delta P/S GT20 was tied. The unit was out due to low load demand by the Discos.
 - 15 20:36Hrs, Delta Gas GT18 was tied. The unit was out 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:

- 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, Egbín, Uguwaji, Jos, Gwagwalada & Alaoji 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.

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

