

TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF FRIDAY 09/03/2018

FOR: EVENTS OF THURSDAY 08/03/2018

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	22,230	23:00	08/03/2018
GENERATION CAPABILITY	7301.9	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5342.9	-do-	-do-
PEAK GENERATION	4294.3	-do-	-do-
LOWEST GENERATION	3463.2	12:00	08/03/2018
8-HOURLY DURATION PEAK	4276	01:00-08:00	-do-
	3967.5	09:00-16:00	-do-
	4294.3	17:00-24:00	-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	00:00-24:00	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	354	Omotosho T/S	10:00
LOWEST VOLTAGE FOR THE DAY	300	Gombe & Yola T/S	11:00 & 14:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.576	07:53
LOWEST FREQUENCY	49.543	11:03

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 1st Feb., 2018		No. of days since last total collapse: 34											
Date of last partial collapse: 17 th Oct., 2017		No. of days since last partial collapse: 135											
Highest No of days ever attained in-between total collapses:		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	1	--	--	1	1	3	4	4	3	2	--	1	20
Partial	--	--	--	--	4	3	1	1	1	2	1	--	13
2011													
Total	--	1	1	--	--	--	--	--	--	1	2	--	6
Partial	--	--	2	1	5	2	1	--	--	2	2	1	16
2012													
Total	--	--	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	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	1	0	0	6
2017													
Total	5	3	0	3	0	1	0	0	1	0	0	0	15
Partial	1	0	1	0	0	0	1	0	3	3			9
2018													
Total	5	1											6
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	345	241
2 JEBBA	HYDRO	351	357
3 SHIRORO	HYDRO	0	0
4 EGBIN ST2 - 5	STEAM	393	421
5 SAPELE	STEAM	46	45
6 DELTA	GAS	464	407
7 AFAM IV-V	GAS	62	62
8 GEREGU GAS	GAS	70	130
9 OMOTOSHO GAS	GAS	139.8	134.2
10 OLORUNSOGO GAS	GAS	139.3	155.1
11 GEREGU NIPP	GAS	120	130
12 SAPELE NIPP	GAS	184.1	183.7
13 ALAQJI NIPP	GAS	0	0
14 OLORUNSOGO NIPP	GAS	0	0
15 OMOTOSHO NIPP	GAS	102.9	98.1
16 ODUKPANI NIPP	GAS	316.3	202.9
17 IHOVBOR NIPP	GAS	102.3	88
18 OKPAI	GAS	296	252
19 AFAM VI	GAS	563	0
20 IBOM POWER	GAS	84.7	79.5
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	74.8	57.8
24 TRANS AMADI	GAS	42.4	43.5
25 RIVERS IPP	(GAS)	85	88
26 AZURA - EDO IPP	(GAS)	0	0
27 EGBIN ST6	(GAS)	150	150
28 PARAS ENERGY	(GAS)	71	70.2
29 GBARAIN NIPP	GAS	91.2	90.2
TOTAL		4294.3	3463.2

1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	7910.00	329.58	7893.00	328.88
2 JEBBA	HYDRO	7860.00	327.50	7832.64	326.36
3 SHIRORO	HYDRO		0.00		0.00
4 EGBIN ST2 - 5	STEAM	10335.00	430.63	9731.50	405.48
5 SAPELE	STEAM	964.40	40.18	964.40	40.18
6 DELTA	GAS	9904.17	412.67	9707.00	404.46
7 AFAM IV-V	GAS	1487.00	61.96	1482.82	61.78
8 GEREGU GAS	GAS	2388.40	98.68	2347.14	97.80
9 OMOTOSHO GAS	GAS	3276.00	136.50	3251.20	135.47
10 OLORUNSOGO GAS	GAS	3656.68	152.36	3625.71	151.07
11 GEREGU NIPP	GAS	2986.88	124.45	2972.45	123.85
12 SAPELE NIPP	GAS	4447.98	185.33	4423.05	184.29
13 ALAQJI NIPP	GAS	0.00	0.00	0.00	0.00
14 OLORUNSOGO NIPP	GAS	0.00	0.00	0.00	0.00
15 OMOTOSHO NIPP	GAS	2444.60	101.86	2422.60	100.94
16 ODUKPANI NIPP	GAS	6017.74	250.74	5981.84	249.24
17 IHOVBOR NIPP	GAS	2410.00	100.42	2391.80	99.66
18 OKPAI	GAS	6329.00	263.71	6172.60	257.19
19 AFAM VI	GAS	9134.40	380.60	8897.90	370.75
20 IBOM	GAS	2089.79	87.07	2081.00	86.71
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 AZURA - EDO IPP	GAS	0.00	0.00	0.00	0.00
23 A.E.S	GAS	0.00	0.00	0.00	0.00
24 OMOKU	GAS	1748.50	72.85	1715.40	71.48
25 TRANS AMADI	GAS	1030.30	42.93	1002.90	41.79
26 RIVERS IPP	GAS	1833.60	76.40	1827.69	76.15
27 EGBIN ST6	STEAM	3160.00	131.67	2984.80	124.37
28 PARAS ENERGY	GAS	1691.10	70.46	1682.30	70.10
29 GBARAIN NIPP	GAS	2203.00	91.79	2187.10	91.13
TOTAL		95,288.54	3,970.36	93,578.64	3,899.11

1.7A GENERATION POSITION AT 06:00HRS OF FRIDAY 09/03/2018

	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)	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	7	1G5, 6, 11 & 12 4	440	440	1G5, 6, 11 & 12 4	440	383	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. 1G11 - Generation reduced due to low head water elevation.
	JEBBA HYDRO	6	2G1, 2, 4 & 5 4	380	380	2G1, 2, 4 & 5 4	380	352	2G3 - Out on maintenance. 2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	0 0	0	0	0 0	0	0	The station is out due to turbine pit flooding.
	EGBIN STEAM	5	ST1, 2, 4 & 5 4	880	640	ST1, 2 & 4 3	480	383	ST1 - Generation reduced on observation after maintenance. ST2 & 4 - Generation reduced due to gas constraint. ST3 - Tripped on high vibration. GT5 - Shut down due to gas constraint.
	SAPELE (STEAM)	1	ST2 1	120	46	ST2 1	46	46	ST1 - Tripped on low drum level. ST3 - Out on stator winding problem. ST4 & 5 - Awaiting major overhaul. ST6 - Tripped on gas control valve not following reference point.
	DELTA (GAS)	18	GT4, 7, 9 - 13, 15, 16 & 18 - 20 12	655	655	GT7, 9 - 13, 15, 18 - 20 10	535	502	GT3 & 5 - Out due to generator winding fault. GT4 & 16 - Out due to gas constraint. GT6 & 14 - Out on major overhaul. GT17 - Out on excitation trouble.
	AFAM IV & V (GAS)	8	GT18 1	75	63	GT18 1	63	63	GT1 - 12 - De-commissioned and scrapped. GT13 - 16 - Out on blade failure. GT17 - Out on fault. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT12 1	145	70	GT11 & 13 - Shut down due to gas constraint. Generation reduced due to gas constraint.
	OMOTOSHO GAS	8	GT1 - 8 8	336	304	GT1, 2, 6 & 8 4	152	142.2	GT3, 4, 5 & 7 - Out due to gas constraint.
	OLORUNSOGO GAS	8	GT1 - 8 8	336	304	GT4, 5, 6 & 8 4	152	138.8	GT1-3 & 7 - Shut down due to low gas pressure. Generation reduced due to gas constraints.
NIPP	GEREGU NIPP	3	GT22 & 23 2	290	290	GT23 1	145	120	GT21 - Out on maintenance. GT22 - Out due to gas constraint.
	SAPELE NIPP	4	GT1 & 3 2	230	230	GT1 & 3 2	225	188.1	GT2 - Out due to high air inlet differential pressure. GT4 - Tripped on fire protection alarm.
	ALAOJI NIPP GAS	4	GT1, 2 & 4 3	375	360	0 0	0	0	GT1, 2 & 4 - Tripped due to low gas pressure. GT3 - Shut down due to generator air inlet filter trouble.
	OLORUNSOGO NIPP	6	GT1 - 3 3	375	360	0 0	0	0	GT1 - 3 - Out due to gas constraint. GT4 - Out on 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	107.2	GT1 & 4 - Out due to gas constraint. GT3 - Shut down due to oil leakage on the unit.
	ODUKPANI NIPP	5	GT3, 4 & 5 3	360	345	GT3, 4 & 5 3	345	319.7	GT1 - Shut down due to fire alarm that refused to cancel. GT2 - Out due to motor starting problem. GT5 - Generation reduced due to gas constraint.
	IHOVBOR NIPP	4	GT1 - 3 3	345	330	GT3 1	110	107.3	GT1 & 2 - Out due to gas constraint. GT4 - Out on maintenance.
	GBARAIN NIPP GAS	1	GT2 1	112.5	112.5	GT2 1	112.5	94.2	Available unit on bar.
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	375	375	GT11, 12 & ST18 3	363	311	GT11 & 12 - Generation reduced due to gas constraint. ST18 - Generation reduced due to broken spray water valve of boiler #12.
	AZURA - EDO	0	0 0	0	0	0 0	0	0	GT11 - Undergoing commissioning tests. GT12 & 13 - Awaiting commissioning.
	AFAM VI GAS/STEAM	4	GT11 - 13 & ST10 4	650	650	GT11, 12 & ST10 3	450	429	GT13 - Shut down due to high load on cct T4A. Generation reduced on Afam management decision.
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	83.8	GT1 & 2 - Out on fault. GT3 - Generation reduced due to line constraint.
	AES	0	0 0	0	0	0 0	0	0	Out of production since 27/09/2014.
	ASCO	0	0 0	0	0	0 0	0	0	GT1 - Shut down due to leakage in the furnace.
	OMOKU GAS	6	GT1, 2, 5 & 6 4	100	80	GT1, 5 & 6 3	60	38.7	GT2 - Shut down due to low gas pressure. GT3 - Out due to gas leakage. GT4 - Awaiting major overhaul.
	TRANS-AMADI	4	GT1 & 2 2	50	44.1	GT1 & 2 2	44.1	44.1	GT3 - Out on fault. GT4 - Tripped on stator differential.
	RIVERS	1	GT1 1	180	160	GT1 1	160	85	Generation reduced due to gas constraint.
	SUB TOTAL	120	80	7589.5	7078.6	54	4642.6	4008.1	Frequency = 50.21Hz.

1.7B GENERATION POSITION AT 06:00HRS OF FRIDAY 09/03/2018 FOR UNITS ON BILATERAL AGREEMENT

FEEDER	MAX. LOAD (MW)	ST6		220	160	ST6		160	150	REMARK
		1	1			1	1			
EGBIN	1	ST6		220	160	ST6		160	150	Available unit on bar.
		1	1			1	1			
PARAS ENERGY	8	GT2 - 9		71	71	GT2-9		71	71	Available units on bar.
		8	8			8	8			
SUB TOTAL	9	9		291	231	9		231	221	
GRAND TOTAL	129	89		7880.5	7309.6	63		4,873.60	4,229.10	Frequency = 50.21Hz.

1.7C BILATERAL AGREEMENT UNITS DISPATCH - THURSDAY 08/03/2018

FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)			REMARK
Egbin ST6 120MW GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY					

FEEDER	MAX. LOAD (MW)	TIME (HRS)	24HRS	REMARK	
OGBA	U-STEEL	1MW	0700HRS	24HRS	NIL
	PTCEXPRESS	10MW	1600HRS	20HRS	TRIP ON FAULT.O/C & E/F
	SANKYO	OUT	0100HRS	NIL	TRIP ON FAULT.O/C & E/F
	FEEDER 8	17	1000HRS	24HRS	NIL
IKORODU	PULK IT	4	0700HRS	24HRS	NIL
	INDUSTRIAL	24	2100HRS	24HRS	NIL
	SPINTEX	5	0700HRS	24HRS	NIL
	DANGOTE	1	1700HRS	24HRS	NIL
	LAND CRAFT	43	0600HRS	24HRS	Nii
ALAUUSA	TR4 15MVA	8.5	1500HRS	24HRS	NIL
	TR5 -15MVA	7	1100HRS	24HRS	NIL
	ALAUUSA	13.8	0900HRS	24HRS	NIL
M/LAND	PTC (MARYLAND)	19	1200HRS	24HRS	NIL
	TOTAL LOAD	142.3			

BILATERAL AGREEMENT LOAD DISPATCH
60MW PARAS ENERGY GENERATION TO CEB

FEEDER	MAX	TIME	HOURS IN SERVICE	REMARK
Ikeja West/Sakete 330KV line	71.8	21:00	24	Nii

1.8 HYDROLOGICAL DATA: FRIDAY 09/03/2018

	KAINJI	JEBBA	SHRORO
HEAD WATER ELEVATION (METERS)	139.42	101.5	370.91
TAIL WATER ELEVATION (METERS)	103.64	74.10	268.60
GROSS OPERATING HEAD (METERS)	35.78	27.41	102.31
AVERAGE TURBINE DISCHARGE (M3/SEC)	1031.00	1336.00	0.00
AVERAGE SPILLAGE (M3/SEC)	0.00	0.00	0.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1031	1336	0
COMPUTED INFLOW (M3/SEC)	221.00	1024.00	0.00
STORAGE DIFFERENTIAL	-810.00	-312	0
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 THURSDAY 08/03/2018

DISCO	MAXIMUM LOAD(MW)	TIME(HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD(MW)	TIME(HRS)
ABUJA	542.90	02:00	509.69	359	17:00
EKO	475.9	06:00	664.06	220.8	13:00
IKEJA	577.5	08:00	769.17	351.3	14:00

2.0 GAS POSITION: FRIDAY 09/03/2018

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	383	1100		640	460
DELTA (GAS)	502	915		535	380
OMOTOSHO GAS	142.2	336.8		152	184.8
OMOTOSHO NIPP	107.2	500		120	380
OLORUNSOGO (GAS)	138.8	336		152	184
OLORUNSOGO NIPP	0	750		10	750
SAPELE NIPP	188.1	500		230	270
SAPELE STEAM	46	720		46	674
AFAM IV-V	63	300		63	237
AFAM VI	429	650		429	221
GEREGU GAS	70	435		145	290
GEREGU NIPP	120	435		145	290
OKPAI (GAS/STEAM)	311	480		375	105
ALAOJU NIPP	0	504		0	504
IHOVBOR NIPP	107.3	450		110	340
IBOM	83.8	198		115	83
ODUKPANI NIPP	319.7	625		345	280
TOTAL	3011.1	9234.80		3602	5632.8

1 MMSCF IS EQUIVALENT TO 3.79MW

3.0 SPINNING RESERVE FOR : THURSDAY 08/03/2018

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

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF FRIDAY 09/03/2018 = 0MW. FREQUENCY 50.21Hz.

S/N	POWER STATION	UNIT ON SPINNING RESERVE	CONTRACTED RESERVE	ACTUAL RESERVE (MW)	TOTAL (MW)
1	Egbin	ST2	100	0	0
		ST4		0	
		ST6		0	
		ST6		0	
2	Delta	GT16	40	0	0
		GT17	40	0	
3	Olorunsogo NIPP	GT1	40	0	0
		GT2		0	
		GT3		382.5	
		GT4		0	
4	Geregu NIPP	GT22	35	0	0
		GT1	0		
5	Omotosho NIPP	GT2	40	0	0
		GT3		0	
		GT4		0	
TOTAL (MW)			295	0	0

4.0 UNUTILIZED GENERATION CAPABILITY

The unutilized generation capability for Friday 09/03/2018 as at 0600Hrs was = 2765.3MW.

S/NO	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNUTILIZED GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO GAS CONSTRAINTS:					
1	Omotosho NIPP GT1 & 4	240	0	240	2583.9
2	Ihobor GT1 & 2	225	0	225	
3	Alaoju NIPP GT1, 2 & 3	360	0	360	
4	Olorunsogo Gas GT1 - 8	304	138.8	165.2	
5	Olorunsogo NIPP GT1 - 3	360	0	360	
6	Omotosho Gas GT3, 4, 5 & 7	152	0	152	
7	Geregu NIPP GT22	145	0	145	
8	Geregu Gas GT11 - 13	435	70	365	
9	Rivers GT1	160	85	75	
10	Egbin ST1, 2, 4 & 5	640	383	257	
11	Okpai GT11 & 12	300	248	52	
12	Delta GT4 & 16	120	0	120	
13	Omoku GT1, 2, 5 & 6	80	38.7	41.3	
14	Odukpani GT5	115	88.6	26.4	
IT IS ENVISAGED WITH IMPROVED PLANT AVAILABILITY AND RELIEF FROM EXISTING POWER SYSTEM NETWORK RELATED CONSTRAINTS, ADDITIONAL 1502.08MMSCF OF GAS (EQUIVALENT TO 5532.8MW) WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.					
4.2 DUE TO LINE CONSTRAINTS					
1	Afam VI GT13	150	0	150	161.4
2	Ibom Power GT3	115	83.6	31.4	
				0	
4.3 DUE TO FREQUENCY MANAGEMENT OCCASIONED BY DISCOS' LOAD DEMAND					
				0	0
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
4.4 DUE TO WATER MANAGEMENT					
				0	2765.3
Grand Total					

5.0 **OUTAGES:**

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

- 1 07:37 - 18:47Hrs, Delta P/S GT19 tripped on inlet gas valve trouble. LHR = 70MW
- 2 09:31 - 10:14Hrs, Afam VI P/S GT13 tripped on high boiler level. LHR = 140MW
- 3 11:01Hrs, Afam VI P/S GTs 11 - 13 & ST10 tripped due to low gas pressure. LHR = 508MW
13:05Hrs - GT11 was tied, 14:43Hrs - GT12 was tied, 15:49Hrs - GT13 was tied, 21:04Hrs - ST10 was tied.

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

- 1 05:30 - 13:55Hrs, Ayede T/S 100MVA 132/33kV transformer primary and secondary CBs tripped on O/C 3 phases and SBEF respectively. LHR = 34MW
- 2 15:32 through 24:00Hrs, New Haven T/S 60MVA 132/33kV transformer T3 tripped on differential relay. LHR = 8.2MW.

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

- 1 08:53 – 16:53Hrs, Kainji P/S 1G6 was taken out for monthly inspection on the unit. Load loss = 85MW.
- 2 10:55 – 17:12Hrs, Oke Aro T/S 300MVA 330/132/33kV transformer T1 was taken out to enable maintenance crew carry out annual preventive maintenance on the transformer and its associated equipment. No load loss as transformer T2 was in service.
- 3 11:20 - 16:40Hrs, Benin/Onitsha 330kV line 2 (cct B2T) was taken out for annual preventive maintenance on the line CB and its associated equipment at Benin T/S. No load loss as ccts B1T, D3T & B3D were in service.

5(D) **URGENT OUTAGES:**

- 1 09:50 - 13:15Hrs, Mando/Zaria/Gusau 132kV incomer line CB was opened at Gusau T/S to treat hot spot on 30MVA 132/33kV transformer T1 secondary CB Red phase clamp. Load loss = 13.3MW

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 CONTACTED 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).

GROUP 7 - ALL OTHER PLANTS.

11 (A) **COMMUNICATION MEDIA**

STATIONS	NO INSTALLED	NO. WORKING
PLC/PAX	37	33
OPTIC FIBRE	13	10
PLS	14	5

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

The under mentioned lines were opened on frequency control:-

- 1 11:02 - 11:12Hrs, Osogbo/Akure/Ado-Ekiti 132kV line. Load loss = 21MW. Frequency was 49.45Hz
- 2 11:04 = 11:33Hrs, 18:45 - 19:05Hrs & 21:05 - 21:30Hrs, Akangba/Ojo 132kV line 2. Load loss = 38MW, 24MW & 24MW respectively. Frequency was 49.24Hz, 49.98Hz & 49.99Hz respectively.
- 3 11:23 - 11:24Hrs, Osogbo/Offa/Omuaran 132kV line. Load loss = 7MW. Frequency was 49.85Hz
- 4 11:28 - 12:11Hrs & 20:36 – 21:12Hrs, Jos/Gombe 330kV line (cct S1E). Load loss = 190MW & 150MW respectively, Frequency was 49.80Hz & 49.79Hz respectively.
- 5 12:56 – 13:03Hrs, Akangba/Solo 132kV line 2. Load loss = 27MW. Frequency was 49.98Hz.
- 6 14:16 – 15:32Hrs, Ayede/Mcpherson/Shagamu/Ijebu-Ode 132kV line. Load loss = 55MW. Frequency was 49.84Hz.
- 7 19:20 - 21:45Hrs, Shiroro/Tegina 132kV line. Load loss = 28MW. Frequency was 49.97Hz.

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

5 (G) **330KV LINES THAT ARE OUT ON VOLTAGE CONTROL:-** ccts A1S & K3U.

5 (H) **330KV LINES THAT ARE OUT ON BREAKER PROBLEM:- NIL.**

5 (I) **330KV LINES THAT ARE OUT ON PLANNED OUTAGE:- NIL**

5 (J) **330KV LINES THAT ARE OUT ON LINE FAULT:-** ccts S5B & U1A.

5 (K) **330KV LINES THAT ARE ON SOAK:-** ccts N4J, A2K & F1K.

6 **WEATHER REPORT:-** Nil.

7 **INTERNATIONAL LINES:-**

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

Maximum load - 299MW at 22:00Hrs.
Minimum load - 219MW at 08:00Hrs.

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

Maximum load - 103MW at 15:00Hrs.
Minimum load - 79MW at 08:00Hrs.

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

Maximum load - 36.7MW at 21:00Hrs.
Minimum load - 25.5MW at 08:00Hrs.

8 **MISCELLANEOUS:-**

- 1 05:49Hrs, Odukpiani NIPP GTs1 & 2 were declared unavailable due to fire alarm that could not be cancelled and motor starting problem respectively.
- 2 07:39 - 18:06Hrs, Shiroro T/S placed Hold Off Tag (OF 12) on cct J7R for the continuation of optic fibre upgrade.
- 3 07:55 - 11:46Hrs, Jebba 2G4 was shut down on frequency management. Load loss = 70MW
- 4 08:52 - 15:07Hrs, Benin T/S placed Hold Off Tag (OF12) on ccts B6N and B5M in continuation of corroded insulators replacement along the lines.
- 5 09:39Hrs of 03/03/2018 to 15:50Hrs, Omotosho T/S 150MVA 330/132kV auto transformer T1 was opened on emergency due to continuous arcing sound heard at the tertiary compartment of the transformer. Load loss = 0.1MW.
- 6 10:13Hrs, Delta P/S GT16 was shut down due to gas constraint. Load loss = 70MW

11 (B) **SCADA RTU STATUS**

STATIONS	NO. INSTALLED	NO OF RTU DISTURBED	NO OF RTU WORKING
POWER STATIONS	8	6	2
330kV	19	7	12
132kV	102	76	26

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.

- 7 13:47Hrs, Ikeja-West T/S 150MVA 330/132/33kV transformer T1B was restored. The transformer had been out due to faulty secondary CB.
- 8 14:33Hrs, Odukpai NIPP GT3 was tied. The unit had been out on heat vent gas module compartment fan motor trip.
- 9 19:55Hrs of 07/03/2018 – 14:51Hrs, New Haven T/S 60MVA 132/33kV transformer T3 primary CB tripped on differential relay. LHR = 12.5MW
- 10 **LACK OF REACTOR AND UNRELIABLE STATION SERVICE SUPPLY AT IKOT-EKPENE T/S ARE HINDERING SMOOTH OPERATION.**
- 11 **THE SCADA COVERAGE OF ONLY LIMITED AREAS IS NOT GOOD FOR THE SMOOTH OPERATION OF THE GRID.**

12(D) **LAGOS REGION**

- 1 Agbara/Ojo 132kV line 1 on soak from Agbara end.

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**

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)
- 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.
- 7 Omotosho/Ikeja West 330kV line CB at Ikeja West T/S.

BENIN REGION:

- 1 Omotosho 330kV T/S, 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.

SHIRORO REGION

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

PORT HARCOURT REGION

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

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/Iire 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 (G) UNAVAILABLE SYNCHROSCOPES :

- 1 Benin, Ikeja West, Onitsha, Egbin, Uguwaji, Osogbo, Kaduna, 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

