

TRANSMISSION COMPANY OF NIGERIA

To: Head (ISO), TCN - Abuja

From: General Manager, NCC, Osogbo

DAILY OPERATIONAL REPORT OF MONDAY 04/12/2017

FOR: EVENTS OF SUNDAY 03/12/2017

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	17,720	21:45	03/12/2017
GENERATION CAPABILITY	7440.7	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5416.6	-do-	-do-
PEAK GENERATION	4553.7	-do-	-do-
LOWEST GENERATION	3548.5	09:00	03/12/2017
8-HOURLY DURATION PEAK	4069.6	0000-0800	-do-
	3824.7	0900-1600	-do-
	4553.7	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 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	356	Omotosho T/S	13:00
LOWEST VOLTAGE FOR THE DAY	300	Gombe T/S	10:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.463	02:58
LOWEST FREQUENCY	50.208	21:27

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 30th Oct, 2017		No. of days since last total collapse: 36												
Date of last partial collapse: 17 th Oct., 2017		No. of days since last partial collapse: 48												
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	3	--	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	--	1	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	--	0	2	0	3	1	0	0	1	0	0	9
	Partial	--	--	0	0	1	0	0	0	0	2	1	1	4
2015	Total	1	0	1	0	2	0	1	0	0	1	0	0	6
	Partial	--	--	1	0	2	0	0	0	1	0	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	0	3			9

1.5 BREAKDOWN OF PEAK & OFF PEAK GENERATION (NATIONAL PEAK & OFF PEAK)

STATION	TURBINE	PEAK GEN. (MW)	OFF-PEAK GEN(MW)
1 KAINJI	HYDRO	388	339
2 JEBBA	HYDRO	440	259
3 SHIRORO	HYDRO	287	119
4 EGBIN ST2 - 5	STEAM	500	446
5 SAPELE	STEAM	0	0
6 DELTA	GAS	472	349
7 AFAM IV-V	GAS	62	62
8 GEREGU GAS	GAS	265	172
9 OMOTOSHO GAS	GAS	172.9	174.7
10 OLORUNSOGO GAS	GAS	122.7	122.2
11 GEREGU NIPP	GAS	134	93
12 SAPELE NIPP	GAS	168	152
13 ALAQJI NIPP	GAS	0	0
14 OLORUNSOGO NIPP	GAS	107.8	81.1
15 OMOTOSHO NIPP	GAS	204.9	93.1
16 ODUKPAI NIPP	GAS	265.3	171.6
17 IHOVBOR NIPP	GAS	85	75.5
18 OKPAI	GAS	251	233
19 AFAM VI	GAS	249	225
20 IBOM POWER	GAS	81.6	86.3
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	22.1	22.2
24 TRANS AMADI	GAS	41.8	40.4
25 RIVERS IPP	(GAS)	0	0
26 EGBIN ST6	(GAS)	165	163
27 PARAS ENERGY	(GAS)	68.6	69.4
28 GBARAIN NIPP	GAS	0	0
TOTAL		4553.7	3548.5

1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	8829.00	367.88	8813.40	367.23
2 JEBBA	HYDRO	7085.00	295.21	7061.56	294.23
3 SHIRORO	HYDRO	3770.00	157.08	3738.61	155.78
4 EGBIN ST2 - 5	STEAM	11170.00	465.42	10588.40	441.18
5 SAPELE	STEAM	0.00	0.00	0.00	0.00
6 DELTA	GAS	9875.90	411.50	9693.00	403.88
7 AFAM IV-V	GAS	1479.00	61.63	1474.77	61.45
8 GEREGU GAS	GAS	5029.40	209.56	5004.54	208.52
9 OMOTOSHO GAS	GAS	4386.00	182.75	4352.90	181.37
10 OLORUNSOGO GAS	GAS	3039.00	126.63	3012.97	125.54
11 GEREGU NIPP	GAS	2579.37	107.47	2564.93	106.87
12 SAPELE NIPP	GAS	4091.37	170.47	4011.00	167.13
13 ALAQJI NIPP	GAS	0.00	0.00	0.00	0.00
14 OLORUNSOGO NIPP	GAS	2388.00	99.50	2352.20	98.01
15 OMOTOSHO NIPP	GAS	2867.60	119.48	2848.50	118.69
16 ODUKPAI NIPP	GAS	4536.19	189.01	4506.77	187.78
17 IHOVBOR NIPP	GAS	1960.00	81.67	1942.43	80.93
18 OKPAI	GAS	5837.00	243.21	5679.50	236.65
19 AFAM VI	GAS	5915.66	246.49	5765.08	240.21
20 IBOM	GAS	2150.23	89.59	2141.00	89.21
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 A.E.S	GAS	0.00	0.00	0.00	0.00
23 OMOKU	GAS	519.00	21.63	504.50	21.02
24 TRANS AMADI	GAS	980.60	40.86	956.10	39.84
25 RIVERS IPP	GAS	0.00	0.00	0.00	0.00
26 EGBIN ST6	STEAM	3936.00	164.00	3740.30	155.85
27 PARAS ENERGY	GAS	1647.10	68.63	1642.10	68.42
28 GBARAIN NIPP	GAS	0.00	0.00	0.00	0.00
TOTAL		94,071.42	3,919.64	92,394.56	3,849.77

GENERATION POSITION AT 06:00HRS OF MONDAY 04/12/2017

	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	8	1G5, 6, 11 & 12 4	440	440	1G5, 6, 11 & 12 4	440	349	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 & 12 Generation reduced on frequency management.
	JEBBA HYDRO	6	2G1 - 5 5	475	475	2G1, 3 & 5 3	285	263	2G2 & 4 - Out on frequency management. 2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G1, 2 & 4 3	450	450	411G1 & 2 2	300	119	411G3 - Out on maintenance. 411G4 - Out on water management. Generation reduced on frequency management.
	EGBIN STEAM	5	ST2, 4 & 5 3	660	660	ST2, 4 & 5 3	660	471	ST1 - Tripped on generator CB trouble. ST3 - Tripped on high vibration.
	SAPELE (STEAM)	6	0 0	0	0	0 0	0	0	ST1 - Tripped on low drum level. ST2 - Out on maintenance. 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 & 19 11	590	555	GT4, 7, 9 -13, 15, 16, 18 & 19 11	555	513	GT3 & 5 - Out due to generator winding fault. GT6 & 14 - Out on major overhaul. GT8 - Out on maintenance. GT17 - Out on excitation trouble. GT20 - Tripped on high exhaust temperature
	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 - Tripped on loss of excitation. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT12 & 13 2	290	217	GT11 - Shut down due to gas constraint. Generation reduced on frequency management.
	OMOTOSHO GAS	8	GT1 - 8 8	336	304	GT1, 3-5 & 7 5	190	156.8	GT2, 6 & 8 - Out on frequency management.
	OLORUNSOGO GAS	8	GT1 - 8 8	336	304	GT2, 4, 6 & 8 4	152	114	GT1, 3, 5 & 7 - Out on frequency management.
NIPP	GEREGU NIPP	3	GT22 & 23 2	290	290	GT22 1	145	134	GT21 - Out on maintenance. GT23 - Out due to gas constraints.
	SAPELE NIPP	4	GT1 & 2 2	225	225	GT1 & 2 2	225	168.5	GT3 - Out on undisclosed fault. GT4 - Tripped on fire protection alarm. Generation reduced due to high gas temperature.
	ALAOJI NIPP GAS	4	GT1 & 2 2	250	240	0 0	0	0	GT1 & 2 - Tripped due to low gas pressure. GT3 - Shut down due to generator air inlet filter trouble. GT4 - Out on maintenance.
	OLORUNSOGO NIPP GAS	6	GT1 - 3 3	375	360	GT1 1	120	110.1	GT2 & 3 - Out on frequency management. GT4 - Out of production since 25/10/2016. ST13 & ST23 - Out on maintenance.
	OMOTOSHO NIPP GAS	4	GT1, 2 & 4 3	375	360	GT2 1	120	102	GT1 & 4 - Out on frequency management. GT3 - Shut down due to oil leakage on the unit.
	ODUKPANI NIPP	5	GT2, 3, 4 & 5 4	480	468	GT2, 4 & 5 3	351	251.7	GT1 - Out due to air inlet differential pressure. GT3 - Out due to line constraint.
	IHOVBOR NIPP	4	GT1 - 3 3	337.5	337.5	GT3 1	112.5	83.4	GT1 & 2 - Out due to gas constraint. GT4 - Out on maintenance.
	GBARAIN NIPP GAS	1	0 0	0	0	0 0	0	0	GT2 - Out due to heater problem.
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	375	375	GT11, 12 & ST18 3	375	227	GT11 & 12 - Generation reduced on frequency management. Generation limited to 375MW due to unavailability of one boiler as a result of water shortage.
	AFAM VI GAS/STEAM	4	GT11 - 13 & ST10 4	620	620	GT11 & 13 2	280	242	GT12 & ST10 - Out on frequency management.
	IBOM POWER GAS	3	GT3 1	115	100.2	GT3 1	100.2	100.2	GT1 & 2 - Out on fault.
	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	6	GT2 & 5 2	50	40	GT2 & 5 2	21.4	21.4	GT1 & 6 - Out on fault. GT3 - Out due to gas leakage. GT4 - Awaiting major overhaul. Generation reduced due to gas constraint.
	TRANS-AMADI	4	GT1 & 4 2	50	40	GT1 1	21.2	21.2	GT2 - Tripped on turbine compartment high temperature. GT3 - Out on fault. GT4 - Shut down due to gas constraints.
	RIVERS		0 0	0	0	0 0	0	0	Out of production since 16/09/2016.
	SUB TOTAL	125	77	7339.5	7141.7	53	4806.3	3727.3	Frequency = 50.33Hz.

1.7B GENERATION POSITION AT 06:00HRS OF MONDAY 04/12/2017 FOR UNITS ON BILATERAL AGREEMENT

GENERATOR	UNIT	ST	MAX. LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	REMARK
EGBIN	1	ST6	220	220	220	Available unit on bar.
		1				
PARAS ENERGY	8	GT2 - 9	68.6	68.6	68.6	Available units on bar.
		8				
SUB TOTAL	9	9	288.6	288.6	288.6	
GRAND TOTAL	134	86	7628.1	7430.3	62	5,094.90 3,958.90 Frequency = 50.33Hz.

1.7C BILATERAL AGREEMENT UNITS DISPATCH - SUNDAY 03/12/2017

FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	REMARK	
Egbin ST6 120MW GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY					
OGBA	U-STEEL	ON	0100	24	NIL
	PTCEXPRESS	5MW	0700	24	NIL
	SANKYO	OUT	NIL	NIL	Tripped on E/F
	FEEDER 8	10MW	0700	24	NIL
IKORODU	PULK IT	1	1900	24	NIL
	INDUSTRIAL	24	2100	24	NIL
	SPINTEX	2	0100	24	NIL
	DANGOTE	1	0100	24	NIL
	LAND CRAFT	33	1700	24	NIL
ALAUUSA	TR4 15MVA	4.6	15:00	24	NIL
	TR5 -15MVA	4.1	14:00	24	NIL
	ALAUUSA	12	15:00	24	NIL
M/LAND	PTC (MARYLAND)	15	21:00	2400	NIL
	TOTAL LOAD	96.7			

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

FEEDER	MAX	TIME	HOURS IN SERVICE	REMARK
Ikeja West/Sakete 330kV line	70.2	13:00	24	NIL

1.8 HYDROLOGICAL DATA: MONDAY 04/12/2017

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	141.62	102.25	377.38
TAIL WATER ELEVATION (METERS)	104.30	74.10	270
GROSS OPERATING HEAD (METERS)	37.32	28.15	107.38
AVERAGE TURBINE DISCHARGE (M3/SEC)	1092	1157	179
AVERAGE SPILLAGE (M3/SEC)	92	0	0
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1184	1157	179
COMPUTED INFLOW (M3/SEC)	1184	1192	22
STORAGE DIFFERENTIAL	0	35	-157
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 SUNDAY 03/12/2017

DISCO	MAXIMUM LOAD(MW)	TIME(HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD(MW)	TIME(HRS)
ABUJA	453.6	22:00	661.88	313.4	09:00
EKO	486	22:00	733.1	346.1	12:00
IKEJA	380.5	22:00	863.32	254.54	08:00

2.0 GAS POSITION: MONDAY 04/12/2017

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	471		1100		880	220
DELTA (GAS)	513		765		555	210
OMOTOSHO GAS	156.8		336.8		190	146.8
OMOTOSHO NIPP	102		500		120	380
OLORUNSOGO (GAS)	114		336		152	184
OLORUNSOGO NIPP	110.1		750		120	630
SAPELE NIPP	168.5		500		225	275
SAPELE STEAM	0		720		0	720
AFAM IV-V	63		300		63	237
AFAM VI	242		650		280	370
GEREGU GAS	217		435		290	145
GEREGU NIPP	134		435		145	290
OKPAI (GAS/STEAM)	227		480		375	105
ALAOJI NIPP	0		504		0	504
IHOVBOR NIPP	83.4		450		112.5	337.5
IBOM	100.2		198		100.2	97.8
ODUKPANI NIPP	251.7		625		351	274
TOTAL	2953.7		9085.72		3958.7	5126.1

1 MMSCF IS EQUIVALENT TO 3.75MW

3.0 SPINNING RESERVE FOR : SUNDAY 03/12/2017

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

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF MONDAY 04/12/2017 = 0MW. FREQUENCY 50.33Hz.

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	
		GT4		0	
				0	
TOTAL (MW)			295	0	0

4.0 UNUTILIZED GENERATION CAPABILITY

The unutilized generation capability for Monday 04/12/2017 as at 0600hrs was = 2896.6MW.

S/NO	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNUTILIZED GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO GAS CONSTRAINTS:					
1	Geregu NIPP GT23	145	0	145	793.6
2	Ihovbor GT1 & 2	225	0	225	
3	Alaoji NIPP GT1 & 2	240	0	240	
4	Geregu Gas GT11	145	0	145	
5	Omoku GT2 & 5	40	21.4	18.6	
6	Trans-Amadi GT4	20	0	20	
			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 1366.96MMSCF OF GAS (EQUIVALENT TO 5126.1MW) WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.					
4.2 DUE TO LINE CONSTRAINTS					
1	Odukpani NIPP GT3	117	0	117	117
				0	
4.3 DUE TO FREQUENCY MANAGEMENT OCCASIONED BY DISCOS' LOAD DEMAND					
1	Olorunsogo Gas GT1, 3, 5 & 7	152	0	152	1836
2	Omotosho NIPP GT1 & 4	240	0	240	
3	Jebba 2G2 & 4	190	0	190	
4	Afam VI ST10 & GT12	340	0	340	
5	Omotosho Gas GT2, 6 & 8	114	0	114	
6	Olorunsogo NIPP GT2 & 3	240	0	240	
7	Okpai GT11 & 12	300	164	136	
8	Shiroro 411G1 & 2	300	119	181	
9	Odukpani NIPP GT4	117	0	117	
10	Geregu Gas GT12 & 13	290	217	73	
11	Kainji TG11 & 12	200	147	53	
4.4 DUE TO WATER MANAGEMENT					
1	Shiroro 411G4	150	0	150	150
Total					2896.6

5.0 **OUTAGES:**

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

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

- 1 0430 – 06:28Hrs, Irrua T/S 30MVA 132/33kV transformer T2 primary & secondary CBs tripped on the following relay indications:
Primary CB: O/C Red, Yellow & Blue phases
Secondary CB: Without relay indication. LHR = 5.8MW
- 2 12:12 - 19:02Hrs, Ogba T/S 60MVA 132/33kV transformer T2 primary & secondary CBs tripped on differential protection relay. LHR = 14MW
- 3 12:21 – 13:01Hrs, Asaba/Onitsha 330kV line (cct S3T) CBs tripped at both ends on the following relay indications:
At Asaba T/S:
SEL Relay: Operated on O/C Red phase and E/F.
At Onitsha T/S:
Siprotec Relay: O/C Red phase zone 1, general trip, distance = 3.4km, period = 49ms.
No load loss as cct B3S was in service.
- 4 12:44 – 13:00Hrs, Osogbo/Ayede 330kV line (cct H2A) CBs tripped at both ends on the following relay indications:
At Osogbo T/S:
Ohmega Relay: Zone 2, O/C Earth >>, 86 ABC and T/2, distance = 103.30km
At Ayede T/S:
Ohmega Relay: Zone 1, O/C, Earth. No load loss as ccts R2A & R1W were in service
- 5 12:59Hrs, Ganmo T/S 60MVA 132/33kV transformer T2B primary & secondary CBs tripped on over current protection relay. LHR = 34.4MW
- 6 13:29 – 13:50Hrs, Delta/Benin 330kV line (cct G3B) CBs tripped at both ends on the following relay indications:
At Delta T/S:
Siprotec Relay: Distance protection trip, distance pick up L3E, PU time = 70ms, trip time = 10ms, distance = 52.5km, E/F Blue phase zone 1 trip.
At Benin T/S:
ABB Relay: Trip start (L3PE) zone 1 trip, fuse VTSZ, Zcoms -CS, DEF-CS, trip-trip, trip-TRL3, PHS – STSW (L3PE), ZN – trip, EFC-CS, auto reclosure in progress, DEF-block (Zm2, Zm3) – start, ZCIB – CSL3, fault loop L3-N, distance = 55.3km
Auxiliary Relay: MVAJ K86C and lock out trip relay operated.
No load loss as cct S4G was in service.
- 7 19:30 - 19:45Hrs, Ayede/Ibadan North/Iwo/Iseyin 132kV line CB line tripped at Ayede T/S on O/C Blue phase. LHR = 80MW

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

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

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

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

5 (H) **330KV LINES THAT ARE OUT ON BREAKER PROBLEM:-** cct N4J (on soak at Egbin T/S)

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

5 (J) **330KV LINES THAT ARE OUT ON LINE FAULT:-** ccts D1K, U2A & S5B

5(K) **cct K1J on soak at Jebba T/S due to energy meter problem at Kainji T/S.**

6 **WEATHER REPORT:-** NIL

7 **INTERNATIONAL LINES:-**

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

Maximum load - 260MW at 22:00Hrs.

Minimum load - 173MW at 08:00Hrs.

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

Maximum load - 84MW at 22:00Hrs.

Minimum load - 53MW at 08:00Hrs.

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

Maximum load - 30MW at 21:00Hrs.

Minimum load - 16MW at 11:00Hrs.

8 **MISCELLANEOUS:-**

- 1 00:48Hrs, Afam VI GT12 was shut down on frequency management. Load loss = 115MW
- 2 01:07Hrs, Jebba T/S 330kV 75MX Reactor 2R2 was placed in service on voltage control. V/P = 341/340kV
- 3 01:21 - 20:41Hrs, Odukpani NIPP GT4 was shut down on frequency management. Load loss = 85MW

5(D) URGENT OUTAGES:

- 1 16:08 - 20:40Hrs, Ilorin T/S 60MVA 132/33kV transformer T1A was taken out to enable maintenance crew refill low SF6 gas pressure of primary of GCB to normal. No load loss transformer was on soak.

- 4 01:18Hrs, Kaduna T/S 330kV 75MX Reactor 3R3 was placed in service on voltage control. V/P = 333/325kV
- 5 07:09 - 21:27Hrs, Jebba 2G2 was shut down on frequency management. Load loss = 75MW
- 6 07:12Hrs, Omotosho Gas GT6 was shut down on frequency management. Load loss = 34.8MW
- 7 18:20Hrs, Shiroro P/S increased generation by 100MW. Frequency was 50.24Hz
- 8 18:41Hrs, Jebba 2G4 was tied. The unit was out on frequency management.
- 9 18:58Hrs, Shiroro P/S increased generation by 100MW. Frequency was 50.18Hz
- 10 19:11Hrs, Omotosho NIPP GT2 was tied. The unit was out on fault.
- 11 19:50Hrs, Ayede 100MVA 132/33kV transformer T1 was restored. The transformer was out on fault.
- 12 19:56Hrs, of 02/12/2017 - 14:35Hrs of 03/12/2017, Jebba/Osogbo 330kV line 1 was taken out to enable maintenance crew retighten Red phase bolt & nut on wave trap connector at Osogbo T/S. No load interruption as cct J2H was in service.
- 13 22:51Hrs, Shiroro P/S reduced generation by 100MW. Frequency was 50.42Hz.
- 14 23:07Hrs, Jebba 2G2 was shut down on frequency management. Load loss = 80MW
- 15 23:50Hrs, Egbin P/S reduced generation by 55MW. Frequency was 50.39Hz.
- 16 23:50Hrs, Okpai P/S reduced generation by 50MW. Frequency was 50.41Hz.
- 17 **LACK OF REACTOR AT IKOT-EKPENE T/S IS HINDERING SMOOTH OPERATION.**

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 2 - OTHER 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.
- GROUP 7 - ALL OTHER PLANTS.

10 SYSTEM BLACK START CAPABILITY

Delta, Shiroro & Egbin - Available.

11 (A) COMMUNICATION MEDIA

STATIONS	NO. INSTALLED	NO. WORKING
PLC/PAX	37	31
OPTIC FIBRE	13	10
PLS	14	5

11 (B) 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	81	21

12(A) UNAVAILABLE TRANSFORMERS/REACTORS:

SHIRORO REGION:

- 1 Apo T/S 60MVA 132/33kV transformer TR3 - Burnt.
- 2 Birnin Kebbi 75MX Reactor R1.

12(D) LAGOS REGION

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

SHIRORO REGION:- NII

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/SOLATORS

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.

OSOGBO 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 NIL

12 (C) UNAVAILABLE/DEFECTIVE GROUND SWITCHES

Benin Region

- 1 Irrua T/S: Benin/Irrua 132kV line Earth Switch - faulty.

ENUGU REGION:

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

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 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 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, Ugwuaji, 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