

TRANSMISSION COMPANY OF NIGERIA

To: Head (ISO), TCN - Abuja

From: General Manager, NCC, Osogbo

DAILY OPERATIONAL REPORT TUESDAY 11/07/2017

FOR: EVENTS OF MONDAY 10/07/2017

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	17,720	22:00	10/07/2017
GENERATION CAPABILITY	7469.5	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	4832.2	-do-	-do-
PEAK GENERATION	4391.2	-do-	-do-
LOWEST GENERATION	2962.1	03:00	10/07/2017
8-HOURLY DURATION PEAK	3511.7	0000-0800	-do-
	3623.9	0900-1600	-do-
	4391.2	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 PEAK GENERATION CAPABILITY TO DATE	7099	07:00	13/04/2014
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	359	Omotosho T/S	04:00
LOWEST VOLTAGE FOR THE DAY	299	Akangba T/S	22:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.65	02:53
LOWEST FREQUENCY	49.66	18:38

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 27th June, 2017							No. of days since last total collapse: 12						
Date of last partial collapse: 16 th March, 2017							No. of days since last partial collapse: 114						
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	--	--	19
	Partial	--	5	4	3	3	--	--	1	--	2	1	20
2010	Total	---	3	1	--	3	3	--	2	2	1	4	22
	Partial	1	--	--	1	1	3	4	3	2	--	1	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	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		3	1		1			9
	Partial										2	1	4
2015	Total	1		1				1			1		6
	Partial	--	--	1		2				1			4
2016	Total	--	--	2	3	6	5		1	1	2	2	22
	Partial	--	--	1		1	3	1					6
2017	Total	5	3		3	1							13
	Partial	1		1									2

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

STATION	TURBINE	PEAK GEN. (MW)	OFF-PEAK GEN(MW)
1 KAINJI	HYDRO	210	113
2 JEBBA	HYDRO	343	168
3 SHIRORO	HYDRO	372	141
4 EGBIN ST2 - 5	STEAM	309	280
5 SAPELE	STEAM	62	65
6 DELTA	GAS	511	355
7 AFAM IV-V	GAS	0	0
8 GEREGU GAS	GAS	273	140
9 OMOTOSHO GAS	GAS	103.6	60.8
10 OLORUNSOGO GAS	GAS	141	100.3
11 GEREGU NIPP	GAS	145	101
12 SAPELE NIPP	GAS	110.7	87.2
13 ALAQJI NIPP	GAS	113.6	100.6
14 OLORUNSOGO NIPP	GAS	111.4	97.2
15 OMOTOSHO NIPP	GAS	108.1	68.3
16 ODUKPANI NIPP	GAS	231.6	87.2
17 IHOVBOR NIPP	GAS	109.4	91.5
18 OKPAI	GAS	311	255
19 AFAM VI	GAS	238	103
20 IBOM POWER	GAS	103.2	92.5
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	95	61.5
24 TRANS AMADI	GAS	0	0
25 RIVERS IPP	(GAS)	0	0
26 EGBIN ST6	(GAS)	216	216
27 PARAS ENERGY	(GAS)	62.3	65.1
28 GBARAIN NIPP	GAS	111.3	112.9
TOTAL		4391.2	2962.1

1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	3,683.00	153.46	3,667.20	152.80
2 JEBBA	HYDRO	6,440.00	268.33	6,415.28	267.30
3 SHIRORO	HYDRO	6,517.00	271.54	6,489.84	270.41
4 EGBIN ST2 - 5	STEAM	6,930.00	288.75	6,726.40	280.27
5 SAPELE	STEAM	1,485.80	61.91	1,468.90	61.20
6 DELTA	GAS	9,060.64	377.53	8,882.80	370.12
7 AFAM IV-V	GAS	-	0.00	-	0.00
8 GEREGU GAS	GAS	5,313.10	221.38	5,290.11	220.42
9 OMOTOSHO GAS	GAS	2,193.00	91.38	2,168.70	90.36
10 OLORUNSOGO GAS	GAS	2,477.58	103.23	2,457.27	102.39
11 GEREGU NIPP	GAS	2,539.75	105.82	2,526.82	105.28
12 SAPELE NIPP	GAS	2,292.67	95.53	2,279.13	94.96
13 ALAQJI NIPP	GAS	2,618.31	109.10	2,594.41	108.10
14 OLORUNSOGO NIPP	GAS	2,564.80	106.87	2,523.80	105.16
15 OMOTOSHO NIPP	GAS	1,807.10	75.30	1,793.30	74.72
16 ODUKPANI NIPP	GAS	3,008.10	125.34	2,963.78	124.32
17 IHOVBOR NIPP	GAS	2,241.00	93.38	2,218.00	92.42
18 OKPAI	GAS	6,933.00	288.88	6,778.90	282.45
19 AFAM VI	GAS	3,165.72	131.91	3,114.44	129.77
20 IBOM	GAS	2,170.15	90.42	2,161.00	90.04
21 ASCO	GAS	-	0.00	-	0.00
22 A.E.S	GAS	-	0.00	-	0.00
23 OMOKU	GAS	1,878.50	78.27	1,830.61	76.28
24 TRANS AMADI	GAS	336.40	14.02	330.70	13.78
25 RIVERS IPP	GAS	-	0.00	-	0.00
26 EGBIN ST6	STEAM	5,138.00	214.08	4,912.00	204.67
27 PARAS ENERGY	GAS	1,530.00	63.75	1,524.50	63.52
28 GBARAIN NIPP	GAS	2,430.00	101.25	2,410.10	100.42
TOTAL		84,753.62	3,531.40	83,547.99	3,481.17

GENERATION POSITION AT 06:00HRS OF TUESDAY 11/07/2017

	STATIONS	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	1G6,11 & 12	320	320	1G6 & 11	220	197	1G5 - On planned outage. 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. 1G12 - Out for frequency management.
		3			2			
	JEBBA HYDRO	2G2 - 5	386	380	2G2 - 5	370	370	2G1 - Out on maintenance. 2G6 - Out due to burnt generator winding and AVR.
		4			4			
	SHIRORO HYDRO	411G1 - 3	450	450	411G1 - 3	435	303	411G4 - Out on maintenance.
		3			3			
	EGBIN STEAM	ST2 & 5	440	440	ST2 & 5	343	293	ST1 - Tripped on generator CB trouble. ST3 - Tripped on high vibration. ST4 - Out of production since 17/11/2016. ST5 - Generation reduced due to un-availability of one circulating water pump.
		2			2			
	SAPELE (STEAM)	ST2	120	65	ST2	65	65	ST1 - Shut down due to generator breaker problem. ST4 & 5 - Awaiting major overhaul. ST6 - Tripped on gas control valve not following reference point.
		1			1			
DELTA (GAS)	GT4, 7- 13, 15, 16, 18 & 19	615	575	GT4, 9 -13, 15, 16, 18 & 19	555	532	GT3 & 5 - Out due to generator winding fault. GT8 - Out for frequency management. GT6 - Out on maintenance. GT14 - Out on major overhaul. GT17 - Out on excitation trouble. GT20 - Out on major inspection.	
	12			11				
AFAM IV & V (GAS)	0	0	0	0	0	0	GT1 - 12 - De-commissioned and scrapped. GT13 -16 - Out on blade failure. GT17 & 18 - Out due to burnt generator transformer. GT19 & 20 - Awaiting major overhaul.	
	0			0				
GEREGU GAS	GT11 - 13	435	435	GT12 & 13	250	250	GT11 - Out for frequency management.	
	3			2				
OMOTOSHO GAS	GT1 - 8	336	304	GT2, 6 & 7	114	105.2	GT3 - 5 - Out for frequency management. GT1 & 8 - Out due to gas constraints.	
	8			3				
OLORUNSOGO GAS	GT1 - 8	336	304	GT2, 6, 7 & 8	152	116.9	GT1, 3 & 4 - Out for frequency management. GT5 - Out due to gas constraints.	
	8			4				
GEREGU NIPP	GT21 - 23	435	435	GT23	145	103	GT21 & 22 - Out due to gas constraints.	
	3			1				
SAPELE NIPP	GT2	112.5	112.5	GT2	112.5	89.6	GT1 - Out on undisclosed fault. GT3 - Out on bearing lift pump trouble. GT4 - Tripped on loss of auxiliary.	
	1			1				
ALAOJI NIPP GAS	GT2 & 4	250	240	GT4	120	78.7	GT1 - Tripped on high air inlet differential pressure. GT2 - Out due to gas constraints. GT3 - Shut down due to generator air inlet filter trouble.	
	2			1				
OLORUNSOGO NIPP GAS	GT1 - 3	375	360	GT1	120	107.4	GT2 & 3 - Out for frequency management. GT4 & ST2 - Out of production since 25/10/2016.	
	3			1				
OMOTOSHO NIPP GAS	GT1, 2 & 4	375	360	GT2	120	101.3	GT1 - Out for frequency management. GT3 - Out of production since 02/08/2016. GT4 - Out due to gas constraints.	
	3			1				
ODUKPANI NIPP	GT1 - 3 & 5	500	480	GT1 & 5	240	222.7	GT2 & 3 - Out for frequency management. GT4 - Out on unit transformer problem.	
	4			2				
IHOVBOR NIPP	GT1 - 3	337.5	337.5	GT2	112.5	70.1	GT1 & 3 - Shut down for frequency management. GT4 - On maintenance.	
	3			1				
GBARAIN NIPP GAS	GT2	112.5	112.5	GT2	112.5	96.8	Available unit on bar.	
	1			1				
OKPAI GAS/STEAM	GT11, 12 & ST18	450	450	GT11, 12 & ST18	367	299	Generation limited to 367MW due to unavailability of one boiler.	
	3			3				
AFAM VI GAS/STEAM	GT11- 13 & ST10	650	650	GT13	150	122	GT11, 12 & ST10 - Out for frequency management.	
	4			1				
IBOM POWER GAS	GT2 & 3	150	150	GT3	115	59	GT2 - Out due to line constraints. Generation reduced due to air inlet differential pressure.	
	2			1				
AES	0	0	0	0	0	0	Out of production since 27/09/2014.	
	0			0				
ASCO	0	0	0	0	0	0	GT1 - Shut down due to leakage in the furnace.	
	0			0				
OMOKU GAS	GT1 - 3, 5 & 6	125	100	GT1 - 3, 5 & 6	100	91.7	GT4 - Out for overhaul.	
	5			5				
TRANS-AMADI	GT4	25	20.1	GT4	20.1	20.1	Available unit on bar.	
	1			1				
RIVERS	0	0	0	0	0	0	Out of production since 16/09/2016.	
	0			0				
	SUB TOTAL	79	7335.5	7080.6	52	4338.6	3693.5	Frequency = 50.31Hz.

1.7B GENERATION POSITION AT 06:00HRS OF TUESDAY 11/07/2017 FOR UNITS ON BILATERAL AGREEMENT

FEEDER	UNIT	MAX. LOAD (MW)	HOURS IN SERVICE	REMARK
EGBIN	ST6	220	220	Available unit on bar.
	1			
PARAS ENERGY	GT2 - 9	72	72	GT2 - On standby.
	8			
SUB TOTAL		292	292	
GRAND TOTAL		88	7627.5	7372.6
				60
				4,619.00
				3,973.90
Frequency = 50.31Hz.				

1.7C BILATERAL AGREEMENT UNITS DISPATCH - MONDAY 10/07/2017

FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	REMARK	
Egbin ST6 120MW GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY					
OGBA	U-STEEL	ON	0100hrs	24	NIL
	PTCEXPRESS	10	1100hrs	17	Tripped on E/F
	SANKYO	ON	0100hrs	24	NIL
	FEEDER 8	10	0900hrs	24	NIL
IKORODU	PULK IT	ON	0100hrs	24	NIL
	INDUSTRIAL	16	2000hrs	24	NIL
	SPINTEX	6	2200hrs	24	NIL
	DANGOTE	3	0100hrs	24	NIL
ALAUUSA	LAND CRAFT	8	0500hrs	24	NIL
	TR4 -15MVA	5.1	1400hrs	24	NIL
	TR5 -15MVA	4.6	1600hrs	24	NIL
	ALAUUSA	12.1	0900hrs	24	NIL
MLAND	PTC (MARYLAND)	14	1700hrs	24	NIL
TOTAL LOAD		88.8			
GRAND TOTAL		200.8			

BILATERAL AGREEMENT LOAD DISPATCH
60MW PARAS ENERGY GENERATION TO CEB

FEEDER	MAX	TIME	HOURS IN SERVICE	REMARK
SAKATE/IKEJA WEST 330KV LINE	66.5	06:00	24	NIL

1.8 HYDROLOGICAL DATA: TUESDAY 11/07/2017

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	133.87	102.76	364.3
TAIL WATER ELEVATION (METERS)	104.65	73.90	271.00
GROSS OPERATING HEAD (METERS)	29.22	28.86	93.3
AVERAGE TURBINE DISCHARGE (M3/SEC)	550	1002	327
AVERAGE SPILLAGE (M3/SEC)	0	0	0
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	550	1002	327
COMPUTED INFLOW (M3/SEC)	1013	1210	607
STORAGE DIFFERENTIAL	463	208	280
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 MONDAY 10/07/2017

DISCO	MAXIMUM LOAD(MW)	TIME(HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD(MW)	TIME(HRS)
ABUJA	439	20:00	490.66	289.3	02:00
EKO	333.5	24:00	489.33	244.5	03:00
IKEJA	527.7	22:00	509.99	394.4	04:00

2.0 GAS POSITION: TUESDAY 11/07/2017

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	281		1100		343	757
DELTA (GAS)	317		765		555	210
OMOTOSHO GAS	102.4		336.8		114	222.8
OMOTOSHO NIPP	77.6		500		120	380
OLORUNSOGO (GAS)	100		336		152	184
OLORUNSOGO NIPP	106.7		750		120	630
SAPELE NIPP	92.1		500		112.5	387.5
SAPELE STEAM	64		720		65	655
AFAM IV-V	0		300		0	300
AFAM VI	114		650		150	500
GEREGU GAS	196		435		250	185
GEREGU NIPP	143		435		145	290
OKPAI (GAS/STEAM)	172		480		367	113
ALAOJI NIPP	114.1		504		120	384
IHOVBOR NIPP	90.8		450		112.5	337.5
IBOM	80.6		198		115	83
ODUKPANI NIPP	173.5		625		240	385
TOTAL	2224.8		9085.716667		3081	6003.8

1 MMSCF IS EQUIVALENT TO 3.75MW

SYSTEM BLACK START CAPABILITY

Delta, Shiroro & Egbin - Available.

SPINNING RESERVE FOR : MONDAY 10/07/2017

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

3.0 SYSTEM SPINNING RESERVE AS AT 0600HRS OF TUESDAY 11/07/2017 = 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	
3	Delta	GT16	40	0	0
		GT17	40	0	
4	Olorunsogo NIPP	GT1	40	0	0
		GT2		0	
		GT3		0	
		GT4		0	
5	Geregu NIPP	GT22	35	0	0
6	Omotosho NIPP	GT1	40	0	0
		GT2		0	
		GT3		0	
		GT4		0	
TOTAL (MW)			295	0	0

4.0 UNUTILIZED GENERATION CAPABILITY

The unutilized generation capability for Tuesday 11/07/2017 as at 0600Hrs was = 2406.3MW.

S/NO	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNUTILIZED GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO GAS CONSTRAINTS:					
1	Geregu NIPP GT21 & 22	290	0	290	644
2	Omotosho Gas GT1 & 8	76	0	76	
3	Alaoji NIPP GT2	120	0	120	
4	Omotosho NIPP GT4	120	0	120	
5	Olorunsogo Gas GT5	38	0	38	
				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 1601.01MMSCF OF GAS (EQUIVALENT TO 6003.8MW WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.					
4.2 DUE TO LINE CONSTRAINTS					
1	Ibom GT2 & 3	150	91.7	58.3	58.3
				0	
4.3 DUE TO FREQUENCY MANAGEMENT OCCASIONED BY DISCOS' LOAD DEMAND					
1	Afam VI GT11, 12 & ST10	500	0	500	1704
2	Delta GT8	20	0	20	
3	Ihovbor GT1 & 3	225	0	225	
4	Odukpani GT2 & 3	240	0	240	
5	Olorunsogo NIPP GT2 & 3	240	0	240	
6	Omotosho Gas GT3 - 5	114	0	114	
7	Geregu Gas GT11	145	0	145	
8	Omotosho NIPP GT1	120	0	120	
9	Kainji 1G12	100	0	100	
				0	
4.4 DUE TO WATER MANAGEMENT					
				0	
Total					2406.3

5.0 OUTAGES:

5 (A) FORCED OUTAGES (GENERATION):-

- 1 02:54 – 04:58Hrs, Trans-Amadi P/S GT4 tripped on over voltage. LHR = 20.1MW.
- 2 15:51 through 24:00Hrs, Odukpiani P/S GT2 tripped on generator stator winding temperature. LHR = 115.2MW.
- 3 21:31 through 24:00Hrs, Trans Amadi GT4 tripped on 87G stator differential. LHR = 20MW.

5 (B) FORCED OUTAGES TRANSMISSION:-

- 1 13:55 – 14:03Hrs, New Haven/Nkalagu 132kV line 2 CB tripped at New Haven T/S on general trip, instantaneous O/C. LHR = 20MW.

5 (C) PLANNED OUTAGES:

- 1 10:45 – 12:30Hrs, Alimosho/Ogba 132kV line 1 CB was opened for annual preventive maintenance on the line CB at Ogba T/S. No load interruption as line the was on soak.

5(D) URGENT OUTAGES:

- 1 11:21 – 15:16Hrs, Osogbo T/S 30MVA 132/33kV transformer 4T5 was taken out of service for maintenance crew to treat hot spot on the secondary Yellow & Blue Phases bus extension. LHR = 0.1MW
- 2 13:08-13:39Hrs, Zaria T/S 60MVA 132/33kV transformer T3 was taken out of service for maintenance crew to top up low oil level of the conservator tank to normal level. LHR = 12.4MW
- 3 13:49 - 16:38Hrs, Trans - Amadi P/S GT4 was shut down to allow maintenance on the shell gas pipeline. LHR = 20MW.
- 4 13:48 – 15:24Hrs, Aba T/S 60MVA 132/33kV transformer T1B was taken out for maintenance crew to seal point of oil leakage on the secondary 3-Phases CT. LHR = 25MW.

6 GENERATOR MERIT ORDER BASED ON SYSTEM RESPONSE AND GRID RELIABILITY

GROUP 1 - ALL UNITS OFFERING FREE GOVERNOR FREQUENCY RESPONSE.

GROUP 2 - ALL UNITS OFFERING REGULATING RESERVE.

GROUP 3 - ALL UNITS OFFERING SPINNING RESERVE.

GROUP 4 - HYDRO IN HIGH FLOOD PERIOD SEASON, KAINJI, JEBBA AND SHIRORO.

GROUP 5 - ALL UNITS USED TO AVOID OVERLOADING TRANSMISSION LIMITS.

GROUP 6 - ALL UNITS OFFERING VOLTAGE SUPPORT OUTSIDE NORMAL LEVEL.

GROUP 7 - ALL UNITS IN LOCATION TO DIMINISH LOSSES

GROUP 8 - ALL UNITS NOT OFFERING ANY SERVICES.

8 (A) COMMUNICATION MEDIA

STATIONS	NO. INSTALLED	NO. WORKING
PLC/PAX	37	33

5 (E) EMERGENCY OUTAGES:-

The under mentioned line was opened on frequency control:-

- 1 18:38 – 18:45Hrs, Osogbo/Akure/Ado Ekiti 132kV line. LHR = 45MW. Frequency was 49.66Hz.

5 (F) AUTOMATIC UNDER FREQUENCY OPERATION: NIL

5 (G) 330KV LINES THAT ARE OUT ON VOLTAGE CONTROL:- ccts J2L & U2A.

5 (I) 330KV LINES THAT ARE OUT ON BREAKER PROBLEM:- ccts K1J, A2K & N4J.

5 (J) 330KV LINES THAT ARE OUT ON PLANNED OUTAGE:- ccts M5W & W4L.

5 (K) 330KV LINES THAT ARE OUT ON LINE FAULT:- cct L7G.

9 WEATHER REPORT: Rainfall was reported at Alaoji & Makurdi.

10 INTERNATIONAL LINES:-

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

Maximum load - 228MW at 20:00Hrs.

Minimum load - 120MW at 15:00Hrs.

B BIRNIN KEBBI/NIAMEY 132KV LINE

Maximum load - 76MW at 12:00Hrs.

Minimum load - 63MW at 08:00Hrs.

C KATSINA/GAZAOUA/MARADI 132KV LINE

Maximum load - 33.0MW at 22:00Hrs.

Minimum load - 22.0MW at 08:00Hrs.

11 MISCELLANEOUS:-

- 1 01:10Hrs, Jebba P/S 2G2 was shut down for frequency management. LHR = 80MW.
- 2 01:25Hrs, Shiroro P/S 411G3 generation was reduced to 50MW. Frequency was 50.60Hz.
- 3 05:58Hrs, Delta P/S GT11 was tied. The unit was out for frequency management.
- 4 06:51Hrs, Jebba P/S 2G2 was tied. The unit was out for frequency management.
- 5 10:01Hrs, Jebba 2G4 was tied to the grid. The unit was out for frequency management.
- 6 10:05Hrs, Hold Off tag was placed on Kainji/Birnin- Kebbi 330kV line (cct K3R) for LMD crew to change corroded insulator on towers #278 & 279.
- 7 11:42Hrs, Delta P/S was instructed to reduce generation by 40MW. Frequency was 50.40Hz.
- 8 11:46Hrs, Okpai P/S was instructed to reduce generation by 50MW. Frequency was 50.42Hz.
- 9 12:28Hrs, Ukpilla T/S 15MVA 132/33kV transformer T1 was restored after maintenance crew replaced the primary breaker hydraulic pump motor that was running continuously. Note: The transformer was taken out of service at 15:05Hrs of 05/07/2017.

OPTIC FIBRE	13	11
PLS	14	6

8 (B) **SCADA RTU STATUS**

STATIONS	TOTAL NO OF STATIONS	NO OF RTU INSTALLED	NO OF RTU WORKING
POWER STATIONS	23	8	2
330kV	41	17	13
132kV	119	103	19

12.0 **UNAVAILABLE EQUIPMENTS**

12(A) **UNAVAILABLE TRANSFORMERS/REACTORS:**

SHIRORO REGION:

- 1 Apo T/S 60MVA 132/33kV transformer TR3 - Burnt.

KADUNA REGION:

- 1 Kumbotso 150MVA 330/132/33kV transformer T1A - Burnt control cables.

ENUGU REGION:

- 1 Onitsha T/S 90MVA 330/132/13.8kV transformer 9T2 - Out due to differential fault.

12 (B) **UNAVAILABLE BREAKERS/ISOLATORS**

- 10 13:47Hrs, Ikeja West 330kV 75MX Reactor R2 was taken out of service for voltage control. Voltage profile = 311/315kV.
- 11 15:01Hrs, Jebba P/S 2G4 was tied. The unit was out for frequency management.
- 12 15:41Hrs, Omoku P/S GT1 was tied. The unit has been out on fault.
- 13 15:48Hrs, Odukpai P/S GT2 was tied to swap with GT3.
- 14 16:10Hrs, Odukpai P/S GT3 was shut down and the load was transferred to GT2.
- 15 16:18Hrs, Shiroro P/S 411G3 was tied..
- 16 16:31Hrs, Kainji 1G12 was tied. The unit was out for frequency management.
- 17 16:46Hrs, Geregu NIPP was instructed to increase generation by 70MW. Frequency was 49.95Hz.
- 18 16:54Hrs, Odukpai GT5 was tied to the grid.
- 19 17:58Hrs, Delta P/S GT9 was tied. The unit has been out for frequency management.
- 20 18:08Hrs, Delta P/S GT18 was tied. The unit has been out for frequency management.
- 21 18:24Hrs, Osogbo T/S 330kV 75MX Reactor 4R1 was taken out of service for voltage control. V/P= 318/336kV.
- 22 18:27Hrs, Benin T/S 330kV 75MX Reactor 6R1 was taken out of service for voltage control. V/P= 333/335kV.
- 23 18:33Hrs, Jebba T/S 330kV 75MX shunt Reactor 2R2 was taken out of service for voltage control. V/P = 332/334kV.
- 24 19:28Hrs, Olorunsogo P/S GT7 was tied. The unit has been out for frequency management.
- 25 19:30Hrs, Delta P/S GT10 was tied. The unit has been out for frequency management.
- 26 19:53Hrs, Odukpai GT1 was tied.
- 27 20:15Hrs, Afam VI GT11 was tied. The unit has been out for frequency management.
- 28 23:14Hrs, Afam VI P/S GT11 was shut down for frequency management.
- 29 23:14Hrs, Odukpai P/S was instructed to reduce generation by 50MW. Frequency was 50.51Hz.
- 30 23:14Hrs, Sapele NIPP was instructed to reduce generation by 20MW. Frequency was 50.50Hz.
- 31 23:14Hrs, Geregu P/S was instructed to reduce generation by 60MW. Frequency was 50.49Hz.
- 32 23:14Hrs, Geregu NIPP was instructed to reduce generation by 30MW. Frequency was 50.48Hz.
- 33 23:14Hrs, Delta P/S was instructed to reduce generation by 50MW. Frequency was 50.49Hz.
- 34 23:36Hrs, Alaoji NIPP was instructed to reduce generation by 35MW. Frequency was 50.45Hz.
- 35 23:36Hrs, Ihovbor P/S was instructed to reduce generation by 30MW. Frequency was 50.45Hz.
- 36 23:36Hrs, Gbarain P/S was instructed to reduce generation by 20MW. Frequency was 50.45Hz.

12(D) **LAGOS REGION**

- 1 Egbin/Aja 330kV line 2 (cct N4J) - faulty breaker at Aja T/S.
- 2 132kV Akangba/Itire line 1 - Faulty line isolator at Akangba T/S.
- 3 Agbara/Ojo line 1 on soak.

SHIRORO REGION

- 1 Lokoja/Gwagwalada 330kV line 2 - Cut sky wire between towers 339 & 340.

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.

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.
- 2 Jebba/Osogbo 330kV line 1 (cct J1H) - Defective line isolator mechanism at Osogbo T/S

ENUGU REGION:

- 1 New Haven/Yendev 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/Yendev 132kV By pass isolator - Canibalized to repair the line isolator.

SHIRORO REGION

- 1 Kainji/Jebba 330kV line 1 - CB problem at Kainji T/S.
- 2 Jebba T/S 75MX reactor 2R2 CB - exploded.

PORT HARCOURT REGION

- 1 Alaoji/Ikot-Ekpen 330KV line 2 (cct A2K) Yellow Phase isolator not latching properly.

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 (F) LINES WITH MISSING SKY WIRE

LAGOS REGION

- 1 Omotosho/Ikeja West line (M5W) and Egbin/Ikeja West line 3 (N6W) - 21
- 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.
- 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, 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) - 08066067487, CUG: 09021765320
- f Coordinator (S/O) - 08037868916, 08054353904, 08028332125, CUG Airtel 08129458481.
- g SYSTEM OPERATIONS WEB SITE: www.nigeriasystemoperator.org