

TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF MONDAY 07/01/2019
FOR: EVENTS OF SUNDAY 06/01/2019

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	23,020	20:15	06/01/2019
GENERATION CAPABILITY	5271.4	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5020.4	-do-	-do-
PEAK GENERATION	4629.9	-do-	-do-
LOWEST GENERATION	3504.8	11:00	06/01/2019
8-HOURLY DURATION PEAK	4165.8	0100-0800	-do-
	3917.5	0900-1600	-do-
	4629.9	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	344	Birin-Kebbi T/S	09:00
LOWEST VOLTAGE FOR THE DAY	297	Alagbon T/S	01:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.43	03:35
LOWEST FREQUENCY	49.865	13:13

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 3rd Jan., 2019		No. of days since last total collapse: 04												
Date of last partial collapse: 12th April, 2018		No. of days since last partial collapse: 269												
Highest No of days ever attained in-between total collapses: 134		Highest No of days ever attained in-between partial collapses: 240												
		Jan	Feb.	Mar.	Apr	May	Jun	Jul	Aug	Sep.	Oct	Nov	Dec	Total
2010	Total	---	3	1	--	3	3	3	--	2	2	1	4	22
	Partial	1	--	--	1	1	3	4	4	3	2	--	1	20
2011	Total	--	--	--	--	4	3	1	1	1	2	1	--	13
	Partial	--	1	1	--	--	--	--	1	--	1	2	--	6
2012	Total	--	--	2	1	5	2	1	--	--	2	2	1	16
	Partial	--	--	2	3	--	--	--	--	1	--	1	1	8
2013	Total	--	1	2	2	3	4	1	1	1	1	4	2	22
	Partial	--	--	--	--	--	--	--	--	2	--	--	--	2
2014	Total	2	--	--	2	0	3	1	0	0	1	0	0	9
	Partial	--	--	0	0	1	0	0	0	0	0	2	1	4
2015	Total	1	0	1	0	2	0	1	0	0	0	1	0	6
	Partial	--	--	1	0	2	0	--	0	0	1	0	0	4
2016	Total	--	--	2	3	6	5	0	0	1	1	2	2	22
	Partial	--	--	1	0	1	3	1	0	0	0	0	0	6
2017	Total	5	3	0	3	1	1	0	0	1	1	--	--	15
	Partial	1	0	1	0	0	0	1	0	3	3	--	--	9
2018	Total	5	1	0	0	0	1	1	--	2	--	1	--	11
	Partial	0	0	0	1	0	--	--	0	--	--	--	--	1
2019	Total	1	--	--	--	--	--	--	--	--	--	--	--	1
	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	375	371
2 JEBBA	HYDRO	459	273
3 SHIRORO	HYDRO	288	120
4 EGBIN ST2 - 5	STEAM	111	114
5 SAPELE	STEAM	0	0
6 DELTA	GAS	226	224
7 AFAM IV-V	GAS	43	0
8 GEREGU GAS	GAS	395	350
9 OMOTOSHO GAS	GAS	130.3	120.7
10 OLORUNSOGO GAS	GAS	196.9	168.9
11 GEREGU NIPP	GAS	267	210
12 SAPELE NIPP	GAS	89.5	88.3
13 ALAOJI NIPP	GAS	76	0
14 OLORUNSOGO NIPP	GAS	0	0
15 OMOTOSHO NIPP	GAS	107.6	101.6
16 ODUKPANI NIPP	GAS	98.9	103.1
17 IHOVBOR NIPP	GAS	104.5	101.9
18 OKPAI	GAS	300	187
19 AFAM VI	GAS	247	130
20 IBOM POWER	GAS	96.1	80.6
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	58.1	59.3
24 TRANS AMADI	GAS	61.8	62.3
25 RIVERS IPP	(GAS)	161	60
26 AZURA - EDO IPP	(GAS)	413	280
27 EGBIN ST6	(GAS)	166	166
28 PARAS ENERGY	(GAS)	68.8	67.2
29 GBARAIN NIPP	GAS	90.4	65.9
TOTAL		4629.9	3504.8

1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT		AV. ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H	MWH/H	MWH/H
1 KAINJI	HYDRO	9407.00	391.96	9392.30	391.35		
2 JEBBA	HYDRO	8157.00	339.88	8138.60	339.11		
3 SHIRORO	HYDRO	4028.00	167.83	4000.12	166.67		
4 EGBIN ST2 - 5	STEAM	6548.00	272.83	6138.00	255.75		
5 SAPELE	STEAM	0.00	0.00	0.00	0.00		
6 DELTA	GAS	6809.25	283.72	6709.20	279.55		
7 AFAM IV-V	GAS	716.20	29.84	712.51	29.69		
8 GEREGU GAS	GAS	9228.00	384.50	9196.99	383.21		
9 OMOTOSHO GAS	GAS	2992.00	124.67	2969.60	123.73		
10 OLORUNSOGO GAS	GAS	4562.44	190.10	4533.91	188.91		
11 GEREGU NIPP	GAS	6156.24	256.51	6137.15	255.71		
12 SAPELE NIPP	GAS	1900.20	79.18	1700.61	70.86		
13 ALAOJI NIPP	GAS	379.69	15.82	355.89	14.83		
14 OLORUNSOGO NIPP	GAS	0.00	0.00	0.00	0.00		
15 OMOTOSHO NIPP	GAS	2500.90	104.20	2482.70	103.45		
16 ODUKPANI NIPP	GAS	2384.81	99.37	2362.91	98.45		
17 IHOVBOR NIPP	GAS	2390.00	99.58	2367.48	98.65		
18 OKPAI	GAS	6049.00	252.04	5920.60	246.69		
19 AFAM VI	GAS	2827.19	117.80	2793.00	116.38		
20 IBOM	GAS	2239.45	93.31	2231.00	92.96		
21 ASCO	GAS	0.00	0.00	0.00	0.00		
22 AZURA - EDO IPP	GAS	8520.20	355.01	8494.00	353.92		
23 A.E.S	GAS	0.00	0.00	0.00	0.00		
24 OMOKU	GAS	1455.40	60.64	1423.42	59.31		
25 TRANS AMADI	GAS	1489.70	62.07	1460.10	60.84		
26 RIVERS IPP	GAS	2216.40	92.35	2207.90	92.00		
27 EGBIN ST6	STEAM	0.00	0.00	0.00	0.00		
28 PARAS ENERGY	GAS	1614.70	67.28	1607.40	66.98		
29 GBARAIN NIPP	GAS	2056.40	85.68	2042.90	85.12		
TOTAL		96,628.17	4,026.17	95,378.29	3,974.10		

1.7A GENERATION POSITION AT 06:00HRS OF MONDAY 07/01/2019

	STATIONS	NO OF UNITS INSTALLED	AVAILABLE UNITS	INSTALLED CAPACITY OF AVAILABLE UNITS(MW)	GENERATION CAPABILITY OF AVAILABLE UNITS(MW)	UNITS ON BAR	CAPABILITY OF UNITS ON BAR (MW)	GENERATION AT 06:00HRS (MW) AT 50.22Hz.	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	8	1G5, 6, 11 & 12 4	440	420	1G5, 6, 11 & 12 4	420	401	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	461	2G1, 3, 4 & 5 4	364	364	2G2 - Out due to low load demand by the Discos. 2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G1, 2 & 4 3	450	450	411G1 & 4 2	300	210	411G1 - Generation reduced due to low load demand by the Discos. 411G2 - Shut down on water management. 411G3 - Out on annual maintenance.
	EGBIN STEAM	6	ST4 & 6 2	440	276	ST4 & 6 2	276	276	ST1 - Out due to the unit transformer problem. ST2 - Out due to middle burner level problem. ST3 - Out on high vibration since 19th June 2017. ST4 - Generation reduced due to turbine valve problem. ST5 - Tripped due to loss of lower burner and tube leakage. ST6 - Generation reduced due to a burner problem. Generation reduced due to low load demand by the Discos.
	SAPELE (STEAM)	6	0 0	0	0	0 0	0	0	ST1 & 3 - Tripped on low water drum level. ST2 - Tripped on high vibration. ST4 & 5 - Awaiting major overhaul. ST6 - Tripped on gas control valve not following reference point.
	DELTA (GAS)	18	GT6, 7, 9 - 13, 15, 16, 19 & 20 11	565	560	GT6, 7, 9 - 13, 15, 16 & 19 10	397	369	GT2 - Tripped on transformer differential lockout. GT3 & 5 - Out on generator winding fault. GT4 - Out on loss of excitation. GT8 & 14 - Out on major overhaul. GT20 - Out due to low load demand by the Discos. GT15 - Generation reduced due to cooling fan trouble. GT17 - Tripped on bearing vibration more than maximum. GT18 - Out due to generator lockout problem.
	AFAM IV & V (GAS)	8	GT18 1	70	44	GT18 1	44	44	GT11 - 12 - De-commissioned and scrapped. GT13, 14 & 16 - Out on blade failure. GT17 - Out due to oil leakage on the bearing compartment. GT18 - Tripped on air intake pressure less than minimum. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT11 - 13 3	435	343	GT11 - Generation reduced due to low load demand by the Discos.
	OMOTOSHO GAS	8	GT1, 4, 6, 7 & 8 5	210	190	GT1, 6, 7 & 8 4	121.4	121.4	GT2, 3 & 5 - Out due to gas constraint. GT4 - Out due to low load demand by the Discos.
	OLORUNSOGO GAS	8	GT1, 3, 4, 5, 7 & 8 6	252	198.8	GT1, 3, 4, 5, 7 & 8 6	198.8	198.8	GT2 & 6 - Out due to gas constraint.
NIPP	GEREGU NIPP	3	GT21 & 23 2	290	290	GT21 & 23 2	290	222	GT21 - Generation reduced due to low load demand by the Discos. GT22 - Out on maintenance.
	SAPELE NIPP	4	GT1 1	112.5	112.5	GT1 1	112.5	95.4	GT3 - Out due to low gas pressure. GT4 - Out due to high air filter differential pressure.
	ALAOJI NIPP GAS	4	0 0	0	0	0 0	0	0	GT1 - 2 - Out due to high air inlet differential pressure. GT3 - Shut down due to lack of spare part. GT4 - Tripped on over voltage lockout relay trip.
	OLORUNSOGO NIPP	6	0 0	0	0	0 0	0	0	GT1 - 3 - Shut down due to low gas pressure. GT4 - Out due to ignition failure and control relay failure alarm. ST13 & ST23 - Out on maintenance.
	OMOTOSHO NIPP GAS	4	GT2 1	125	120	GT2 1	120	106.9	GT1, 3 & 4 - Out due to gas constraint.
	ODUKPANI NIPP	5	GT4 1	112.5	112.5	GT4 1	112.5	101.3	GT1 - Out on fault. GT2, 3 & 5 - Tripped on low gas pressure.
	IHOVBOR NIPP	4	GT4 1	112.5	112.5	GT4 1	112.5	109.8	GT1 - Out due to gas station maintenance. GT4 - On manual adjustment to frequency. GT2 - Tripped on main transformer oil temperature 2nd phase trip alarm. GT3 - Tripped on high vibration.
	GBARAIN NIPP GAS	1	GT2 1	112.5	112.5	GT2 1	112.5	95.2	Available units on bar.
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	450	370	GT11, 12 & ST18 3	370	228	GT12 - Generation reduced due to low load demand by the Discos. ST18 - Generation limited due to boiler problem.
	AZURA - EDO	3	GT11 - 13 3	461	461	GT11 - 13 3	461	411	Available units on bar.
	AFAM VI GAS/STEAM	4	0 0	0	0	0 0	0	0	GT11 - Out on type C inspection. GT12 & 13 - Tripped due to low gas pressure.
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	93.5	GT1 & 2 - Out due to fire outbreak on the control panel. GT3 - On manual adjustment to frequency.
	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, 3 & 5 3	75	60.6	GT1, 3 & 5 3	60.6	60.6	GT2 - Tripped on high vibration. GT4 - Out on major overhaul. GT6 - Out on maintenance.
	TRANS-AMADI	4	GT1, 2 & 4 3	75	62.2	GT1, 2 & 4 3	62.2	62.2	GT3 - Out on fault.
	RIVERS	1	GT 1	160	160	GT 1	160	80	GT1 - Generation reduced due to low load demand by the Discos.
	SUB TOTAL	141	61	5538	5123.6	57	4645	3993.1	Frequency = 50.22Hz.

1.7B GENERATION POSITION AT 06:00HRS OF MONDAY 07/01/2019 FOR UNITS ON BILATERAL AGREEMENT

PARAS ENERGY	8	GT2 - 9	70	67.2	GT2 - 9	67.2	67.2	Available units on bar.
		8			8			
SUB TOTAL	8	8	70	67.2	8	67.2	67.2	
GRAND TOTAL	149	69	5608	5190.8	65	4,712.20	4,060.30	Frequency = 50.22Hz

1.7C		BILATERAL AGREEMENT UNITS DISPATCH - SUNDAY 06/01/2019							
		EGBIN ST6 5MW GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY							
FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HRS IN SERVICE	TOTAL (MWH)	REMARK		
U-STEEL	ON	0100HRS			21		DUE TO OUTAGE ON FEEDER 2		
PTCEXPRESS	ON	0100HRS			21		DUE TO OUTAGE ON FEEDER 2		
SANKYO	1	0100HRS			24		NIL		
FEEDER 8	12	2200HRS			24		NIL		
IKORODU	PULK IT	2	0100HRS		23		O/S DUE TO 33KV BUS3 EXTENTION THAT WAS O/S ON URGENT OUTAGE		
	INDUSTRIAL	1	0100HRS		22		O/S ON PLANNED OUTAGE		
	SPINTEX	3	0100HRS		22		O/S ON PLANNED OUTAGE		
	DANGOTE	3	0100HRS		23		O/S DUE TO 33KV BUS3 EXTENTION THAT WAS O/S ON URGENT OUTAGE		
	LAND CRAFT	44	1700HRS		24		NIL		
ALAUUSA	TR4 15MVA	5.1	1900HRS		24		NIL		
	TR5 -15MVA	3.7	1400HRS		24		NIL		
	ALAUUSA	13.8	1500HRS		24		NIL		
M/LAND	PTC (MARYLAND)	20	1400HRS		24		NIL		
TOTAL LOAD									

BILATERAL AGREEMENT LOAD DISPATCH													
60MW PARAS ENERGY GENERATION TO CEB OF SUNDAY 06/01/2019													
FEEDER	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK						
Ikeja West/Sakete 330kV line	68.8	09:00	64	01:00	24	1611	NIL						
BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI LOAD DISPATCH TO THE FOLLOWING COMPANIES OF: SUNDAY 06/01/2019													
COMPANY NAME	VOLTAG E LEVEL	CON-TRAC-TUAL 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				
KAM STEEL		25.0	0.2	01:00	0.1	16:00	24	4.7	SUPPLY NOT INTERRUPTED				
ASHAKA CEMENT		0	7.2	20:00	4.9	11:00	24	149.3	SUPPLY NOT INTERRUPTED				
XING 1	33kV feeder	0	22	04:00	11.4	19:00	10	161	TRIPPED ON E/F				
XING 2		0	25	22:00	0.6	18:00	7	133					
KAM INTEGRATED		15	2.8	09:00	1.2	06:00	19	30.4	SUPPLY NOT INTERRUPTED				
OLAM FLOUR MILLS		3	2	21:00	0.9	16:00	24	34.5	SUPPLY NOT INTERRUPTED				
LORDSMITH		3	0.4	06:00	0.4	02:00	24	9.6	SUPPLY NOT INTERRUPTED				

1.8 HYDROLOGICAL DATA: MONDAY 07/01/2019

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	141.37	102.39	376.90
TAIL WATER ELEVATION (METERS)	104.5	74.4	270.4
GROSS OPERATING HEAD (METERS)	36.87	27.99	106.50
AVERAGE TURBINE DISCHARGE (M3/SEC)	1171.00	1334.00	189.00
AVERAGE SPILLAGE (M3/SEC)	200.00	0.00	0.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1371.00	1334.00	189.00
COMPUTED INFLOW (M3/SEC)	1371.00	1403.00	43.00
STORAGE DIFFERENTIAL	0.00	69	-146
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 SUNDAY 06/01/2019

	MAXIMUM LOAD (MW)	TIME (HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD (MW)	TIME (HRS)
ABUJA	518.9	22:00	527.62	383.9	09:00
EKO	499.8	01:00	585.55	348.7	10:00
IKEJA	616.6	20:00	667.18	461.6	11:00

2.0 GAS POSITION: MONDAY 07/01/2019

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	282	1100		276	824
DELTA (GAS)	416	915		397	518
OMOTOSHO GAS	134	336.8		121.4	215.4
OMOTOSHO NIPP	114.7	500		120	380
OLORUNSOGO (GAS)	172.6	336		198.8	137.2
OLORUNSOGO NIPP	0	750		0	750
SAPELE NIPP	0	500		112.5	387.5
SAPELE STEAM	0	720		0	720
AFAM IV-V	50	300		44	256
AFAM VI	134	650		0	650
GEREGU GAS	270	435		435	0
GEREGU NIPP	181	435		145	290
OKPAI (GAS/STEAM)	216	480		370	110
ALAOJI NIPP	0	504		0	504
IHOV/BOR NIPP	100.1	337.5		112.5	225
IBOM	97.8	198		115	83
ODUKPANI NIPP		625		112.5	512.5
TOTAL	2168.2	9122.30		2559.7	6562.6

1 MMSCF IS EQUIVALENT TO 3.75MW

3.0 SPINNING RESERVE FOR : SUNDAY 06/01/2019

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

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF MONDAY 07/01/2019 = 0MW, FREQUENCY 50.22Hz.

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	
				0	
		GT4		0	
TOTAL (MW)			295	0	0

4.0 UNAVAILABLE GENERATION CAPABILITY

The unavailable generation capability for Monday 07/01/2019 as at 0600Hrs was = 817MW.

S/N	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNAVAILABLE GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO LINE CONSTRAINTS					
			0	0	0
			0	0	
			0	0	
			0	0	
4.2 DUE TO LOW LOAD DEMAND BY THE DISCOS					
1	Okpai GT12	145	50	95	667
2	Jebba 2G2	90	0	90	
3	Delta GT20	100	0	100	
4	Olorunsogo GT8	38	0	38	
5	Omotosho GT4	38	0	50	
6	Shiroro 411G1	150	80	90	
7	Geregu GT11	145	60	65	
8	Rivers GT1	160	80	80	
	Geregu NIPP GT21	145	86	59	
				0	
				0	
				0	
4.3 DUE TO WATER MANAGEMENT:					
1	Shiroro 411G2	150	0	150	150
Grand Total					817

5.0 OUTAGES:

5 (A) FORCED OUTAGES (GENERATION):

- 1 04:36 - 13:19Hrs, Afam IV GT18 tripped on air intake pressure less than minimum. LHR = 43MW
- 2 08:48 - 20:54Hrs, Delta GT19 tripped on high air inlet differential pressure. LHR = 18MW
- 3 20:36 through 24:00Hrs, Afam VI GT12 tripped on low gas pressure. LHR = 110MW.
- 4 20:36 through 24:00Hrs, Afam VI GT13 tripped on low gas pressure. LHR = 138MW.

5 (B) FORCED OUTAGES (TRANSMISSION):

- 1 13:05 - 17:45Hrs, Onitsha/New Haven 330kV (cct T3H) line CBs tripped at both ends on the following relay indications:
At Onitsha T/S:
VAJ type F88S relay: All phases.
At New Haven T/S:
PAC relay: O/C phase A, zone 1 to ground. No load was interrupted as cct H1U was in service.
- 2 13:05 - 14:09Hrs, New Haven/Nkalagu 132kV line 1 CB tripped at New Haven T/S on E/F. LHR = 13.4MW
- 3 13:05 - 14:04Hrs, New Haven/Ugwuaji 330kV line 2 (cct H2U) CB tripped at Ugwuaji T/S on trip relay and lock out relay. No load was interrupted as cct H1U was in service.
- 4 13:05 - 14:04Hrs, Ugwuaji T/S 150MVA 330/132/33kV transformer T01 primary and secondary CBs tripped on differential protection relay. LHR = 40MW

5 (C) PLANNED OUTAGES:-

- 1 09:48 – 15:06Hrs, Ganmo/Ilorin 132kV line was taken out for safe working space to allow contractor carry out reconstruction work on Olak 33kV feeder that passes under the 132kV line as directed by Nigeria Electricity Management Service Agency (NEMSA). Load loss = 34MW

5 (D) URGENT OUTAGES:-

- 1 09:48 – 09:59Hrs, Ganmo/Omu-aran/Offa 132kV line was taken out to isolate Ganmo/Ilorin 132kV line due to work on Olak 33kV feeder at Ganmo T/S. Load loss = 7MW
- 2 14:44 – 15:06Hrs, Ganmo/Omu-Aran/Offa 132kV line was taken out to restore Ganmo/Ilorin 132kV line after reconstruction work on Olak 33kV feeder at Ganmo T/S. Load loss = 7MW

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 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).

5 (E) EMERGENCY OUTAGES:- NIL

5 (F) AUTOMATIC UNDER FREQUENCY OPERATION:-

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

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

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

5 (J) 330KV LINES THAT ARE OUT ON LINE FAULT:- ccts D3T, J2H, D2K, K3U & K4U

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

6 WEATHER REPORT:- NIL

7 INTERNATIONAL LINES:-

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

Maximum load - 282MW at 20:00Hrs.

Minimum load - 204MW at 11:00Hrs.

B BIRNIN KEBBI/NIAMEY 132KV LINE

Maximum load - 84.0MW at 20:00Hrs.

Minimum load - 47.0MW at 05:00Hrs.

C KATSINA/GAZAOUA/MARADI 132KV LINE

Maximum load - 31.8MW at 19:00Hrs.

Minimum load - 16.5MW at 12:00Hrs.

8 MISCELLANEOUS:-

- 1 00:41 - 13:19Hrs, Jebba 2G2 was shut down due to low load demand by the Discos. Load loss = 87MW
- 2 00:50 - 18:21Hrs, Jebba 2G3 was shut down due to low load demand by the Discos. Load loss = 87MW
- 3 01:11 through 24:00Hrs, Delta GT20 was shut down due to low load demand by the Discos. Load loss = 87MW
- 4 10:08Hrs, Sapele NIPP GT1 was tied to swap with GT3
- 5 10:18 through 24:00Hrs, Sapele NIPP GT3 was shut down. The load was transferred to GT1
- 6 10:10Hrs, Birnin-Kebbi T/S 75MX Shunt Reactor was placed in service for voltage control. V/P = 346/324kV
- 7 13:05 - 16:17Hrs, Okpai GT12 went on full speed no load. Load loss = 20MW

10 COMMUNICATION MEDIA

STATIONS	NO INSTALLED	NO. WORKING
PLC/PAX	38	34
OPTIC FIBRE	13	12
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	5	14
132kV	102	518	28

12(A) UNAVAILABLE TRANSFORMERS/REACTORS:

SHIRORO REGION:

- 1 Birnin Kebbi 75MX Reactor R1.

ABUJA REGION

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

KADUNA REGION:

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

BAUCHI REGION:

- 1 Gombe T/S -30MX Reactor R2A.

ENUGU REGION:

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

LAGOS REGION:

- 1 Oke-Aro T/S: 75MX Reactor R1.

PORT HARCOURT REGION

- 1 Ikot-Ekpene T/S: No reactor installed.

12 (B) UNAVAILABLE BREAKERS/ISOLATORS

LAGOS REGION:

- Akangba T/S. 132kV Bus Coupler CB - Serious Air leakage.(Undergoing repair)
- Egbin/Aja 330kV line 2 (cct N4J) - faulty breaker at Aja T/S
- Otta/Ogba 132kV line isolator - defective control shaft.
- Osogbo/Ikeja West and Olorunsogo/Ikeja West tie CB at Ikeja West T/S - defective pole .
- Oke-Aro/Ikeja West 330kV lines 1 & 2 tie CB at Ikeja West T/S - Defective pole.
- Omotosho/Ikeja West 330kV line CB at Ikeja West T/S.

BENIN REGION:

- 1 Omotosho T/S 330kV, 2nd series 330kV CB #3322 out due to control circuit problem.

ENUGU REGION:

- New Haven/Yandev 132kV line CB - Faulty Red phase CB pole. Protection is transferred to the bus coupler CB.
- Abakaliki T/S 30MVA 132/33kV transformer T1A and 60MVA 132/33kV transformer T2 primary CBs - Breakers were not provided since commissioning but the
- 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.
- Oturkpo/Yandev 132kV By pass isolator - Canibalized to repair the line isolator.
- 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.

- 13:20Hrs, Birnin-Kebbi T/S 75MX Shunt Reactor was taken out of service for voltage control. V/P = 321/342kV
- 18:51Hrs, Alaoji NIPP GT2 was tied. The unit was out due to gas constraint
- 19:59Hrs, Afam VI GT12 was tied. The unit was out due to low load demand by the Discos.
- 23:08 through 24:00Hrs, Jebba 2G2 was shut down due to low load demand by the Discos. Load loss = 85MW

**** THE SCADA COVERAGE OF ONLY LIMITED AREAS IS NOT GOOD FOR THE SMOOTH OPERATION OF THE GRID.

**** LACK OF REACTOR AND UNRELIABLE STATION SERVICE SUPPLY AT IKOT-EKPENE T/S ARE HINDERING SMOOTH OPERATION.

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

- Omotosho/Ikeja West line (M5W) and Egbin/Ikeja West line 3 (N6W) - 21 spans.
- Ikeja West/Olorunsogo line (cct R1W) - 80 spans.
- 330kV Ikeja West/Osogbo line. - 95 spans.
- Ikeja West/Alimosho/Ogba 132kV lines 1 & 2 - 15 spans.
- Ikeja West/Akangba 330kV line 2 - 1 span.
- Ikeja West/ Ilupeju 132kV lines 1 & 2 - 8 spans.
- Akangba/Iire 132kV lines 1 & 2 - 1 span.
- Ikeja West/Agbara 132kV lines 1 & 2 - 61 spans.
- Ikeja West/Otta 132kV lines 1 & 2- 17 spans.

SHIRORO REGION

- Jebba T/S 330kV Osogbo lines 1 & 2 and Ganmo line - 9 spans
- Minna T/S 132kV Bida line - 32 spans
- Shiroro T/S 330kV Jebba line 2 - 28 spans

ABUJA REGION

- 1 Apo T/S 132kV Keffi line - 36 spans

12 (F) UNAVAILABLE SYNCHROSCOPES :

- 1 Ikeja West, Onitsha, Egbin, Ugwuaji, Jos, Gwagwalada & Alaoji T/S.

FOR MORE INFORMATION: NCC Telephone Lines -

- PAX 09/300, 309, 303 & 305.
- NCC GSM - 08074888524, 08069379367, 08023572651 & 08051401331. CUG Nos. 08129458488, 08129458489, 08129929806; 08036665323.
- PLS - 622
- GM (NCC) - 08036744641.
- AGM (S/O) - 08056002757, CUG: 08129458475

