

TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF WEDNESDAY 03/10/2018

FOR: EVENTS OF TUESDAY 02/10/2018

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	22,780	21:45	02/10/2018
GENERATION CAPABILITY	7506.9	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5030.2	-do-	-do-
PEAK GENERATION	4709.9	-do-	-do-
LOWEST GENERATION	3201.3	04:00	02/10/2018
8-HOURLY DURATION PEAK	3683.1	0100-0800	-do-
	3776.8	0900-1600	-do-
	4709.9	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	352	Makurdi & Ikot-Ekpene	03:00 & 04:00
LOWEST VOLTAGE FOR THE DAY	300	Kumbotso & Gombe	12:00 & 14:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.99	07:30
LOWEST FREQUENCY	50.06	19:24

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 20th Sept, 2018		No. of days since last total collapse: 13												
Date of last partial collapse: 12th April, 2018		No. of days since last partial collapse: 172												
Highest No of days ever attained in-between total collapses: 134		Highest No of days ever attained in-between partial collapses: 240												
	Jan	Feb.	Mar.	Apr	May	Jun	Jul	Aug	Sep.	Oct	Nov	Dec	Total	
2010	Total	---	3	1	--	3	3	--	2	2	1	4	22	
	Partial	1	--	--	1	1	4	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	1	16	
	Partial	--		2	3	--	--	--	1	--	1	1	8	
2013	Total	--	1	2	2	3	4	1	1	1	4	2	22	
	Partial	--		--	--	--	--	--	2				2	
2014	Total	2			2	0	3	1	0	0	1	0	9	
	Partial			0	0	1	0	0	0	0	2	1	4	
2015	Total	1	0	1	0	2	0	1	0	0	1	0	6	
	Partial	--	--	1	0	2	0	0	0	1	0	0	4	
2016	Total	--	--	2	3	6	5	0	0	1	2	2	22	
	Partial	--	--	1	0	1	3	1	0	0	0	0	6	
2017	Total	5	3	0	3	1	1	0	0	1	1		15	
	Partial	1	0	1	0	0	0	1	0	3	3		9	
2018	Total	5	1	0	0	0	1	1		2			10	
	Partial	0	0	0	1	0			0				1	

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

STATION	TURBINE	PEAK GEN. (MW)	OFF-PEAK GEN.(MW)
1 KAINJI	HYDRO	373	310
2 JEBBA	HYDRO	440	312
3 SHIRORO	HYDRO	440	430
4 EGBIN ST2 - 5	STEAM	348	332
5 SAPELE	STEAM	0	52
6 DELTA	GAS	492	276
7 AFAM IV-V	GAS	0	0
8 GEREGU GAS	GAS	140	80
9 OMOTOSHO GAS	GAS	138.8	101.3
10 OLORUNSOGO GAS	GAS	137.9	103.8
11 GEREGU NIPP	GAS	0	0
12 SAPELE NIPP	GAS	200.3	77.2
13 ALAOJI NIPP	GAS	111.4	80.9
14 OLORUNSOGO NIPP	GAS	110.1	80.6
15 OMOTOSHO NIPP	GAS	110.8	65.9
16 ODUKPANI NIPP	GAS	0	0
17 IHOVBOR NIPP	GAS	108.4	81.1
18 OKPAI	GAS	318	176
19 AFAM VI	GAS	144	101
20 IBOM POWER	GAS	103.5	71.8
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	55.6	35.1
24 TRANS AMADI	GAS	63.4	32.8
25 RIVERS IPP	(GAS)	153	70
26 AZURA - EDO IPP	(GAS)	435	150
27 EGBIN ST6	(GAS)	110	114
28 PARAS ENERGY	(GAS)	71	67.8
29 GBARAIN NIPP	GAS	105.7	0
TOTAL		4709.9	3201.3

1.6 ENERGY GENERATED/ENERGY SENT OUT:					
STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	9063.00	377.63	9046.90	376.95
2 JEBBA	HYDRO	9369.00	390.38	9344.16	389.34
3 SHIRORO	HYDRO	10440.00	435.00	10407.84	433.66
4 EGBIN ST2 - 5	STEAM	8232.00	343.00	7703.80	320.99
5 SAPELE	STEAM	349.00	14.54	281.20	11.72
6 DELTA	GAS	7966.97	331.96	7785.10	324.38
7 AFAM IV-V	GAS	0.00	0.00	0.00	0.00
8 GEREGU GAS	GAS	2479.70	103.32	2459.73	102.49
9 OMOTOSHO GAS	GAS	2625.00	109.38	2602.20	108.43
10 OLORUNSOGO GAS	GAS	2437.29	101.55	2411.96	100.50
11 GEREGU NIPP	GAS	0.00	0.00	0.00	0.00
12 SAPELE NIPP	GAS	2753.10	114.71	2735.30	113.97
13 ALAOJI NIPP	GAS	2287.69	95.32	2283.49	95.15
14 OLORUNSOGO NIPP	GAS	2349.30	97.89	2314.70	96.45
15 OMOTOSHO NIPP	GAS	2147.40	89.48	2130.10	88.75
16 ODUKPANI NIPP	GAS	0.00	0.00	0.00	0.00
17 IHOVBOR NIPP	GAS	2160.00	90.00	2136.67	89.03
18 OKPAI	GAS	5630.00	234.58	5507.50	229.48
19 AFAM VI	GAS	2809.32	117.06	2716.93	113.21
20 IBOM	GAS	1849.70	77.07	1841.00	76.71
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 AZURA - EDO IPP	GAS	5608.95	233.71	5589.40	232.89
23 A.E.S	GAS	0.00	0.00	0.00	0.00
24 OMOKU	GAS	1206.60	50.28	1175.19	48.97
25 TRANS AMADI	GAS	1112.10	46.34	1084.50	45.19
26 RIVERS IPP	GAS	2378.20	99.09	2371.40	98.81
27 EGBIN ST6	STEAM	2234.00	93.08	2097.10	87.38
28 PARAS ENERGY	GAS	1648.80	68.70	1644.20	68.51
29 GBARAIN NIPP	GAS	1142.10	47.59	1128.70	47.03
TOTAL		90,279.22	3,761.63	88,799.07	3,699.96

1.7A GENERATION POSITION AT 06:00HRS WEDNESDAY 03/10/2018

	STATIONS	NO OF INSTALLED UNITS	AVAILABLE UNITS	INSTALLED CAPACITY OF AVAILABLE UNITS(MW)	GENERATION CAPABILITY OF AVAILABLE UNITS(MW)	UNITS ON BAR	CAPABILITY OF UNITS ON BAR (MW)	GENERATION AT 06:00HRS (MW) AT 50.55Hz.	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	8	1G5, 6, 11 & 12 4	440	420	1G5, 6, 11 & 12 4	420	375	1G7 - Out on stator winding failure. 1G8 - Out due to oil leakage on governor runner head. 1G9 - Out due to burnt 7.5MVA 33/0.415kV & 183.6MVA 16/330kV station service transformer and generator transformer. 1G10 - Shut down due to thrust bearing temperature problem.
	JEBBA HYDRO	6	2G1- 5 5	475	450	2G1- 5 5	450	411	2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G2 - 4 3	450	450	411G2 - 4 3	450	440	411G1 - Out due to technical problem.
	EGBIN STEAM	5	ST2, 4 & 5 3	660	448	ST2, 4 & 5 3	448	337	ST1 - Out due to undisclosed fault since 04/09/2018. ST3 - Out on high vibration since 19th June 2017. Generation reduced due to low load demand by the Discos.
	SAPELE (STEAM)	6	ST2 1	120	51	ST2 1	51	35	ST1 - Shut down due to alarm on inlet gas guide control trouble. ST2 - Still loading up. ST4 & 5 - Awaiting major overhaul. ST6 - Out on gas control valve not following reference point.
	DELTA (GAS)	18	GT9 - 13, 15, 16 & 18 - 20 10	625	610	GT9 - 13, 18 & 19 7	300	300	GT3 & 5 - Out due to generator winding fault. GT4 - Out on loss of excitation. GT6, 8 & 14 - Out on major overhaul. GT7 - Out on fault. GT15, 16, 19 & 20 - Out due to low load demand by the Discos. GT17 - Tripped on bearing vibration more than maximum.
	AFAM IV & V (GAS)	8	0 0	0	0	0 0	0	0	GT1 - 12 - De-commissioned and scrapped. GT13,14 & 16 - Out on blade failure. GT17 - Out due to technical problem. GT18 - Out on maintenance. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT12 1	145	104	GT11 - Out due to gas constraint. GT13 - Out due to low load demand by the discos.
	OMOTOSHO GAS	8	GT1 - 8 8	336	304	GT1,2, 5 & 7 4	152	100.7	GT3, 4, 6 & 8 - Out due to low load demand by the Discos. Generation reduced due to low load demand by the Discos.
	OLORUNSOGO GAS	8	GT1 - 8 8	336	304	GT2 & 4 - 6 4	152	108.1	GT1, 3, 7 & 8 - Out due to low load demand by the Discos. Generating reduced due to low load demand by the Discos.
NIPP	GEREGU NIPP	3	GT22 & 23 2	290	290	0 0	0	0	GT21 - Out on maintenance. GT22 & 23 - Out due to gas constraint.
	SAPELE NIPP	4	GT1, 3 & 4 3	337.5	337.5	GT3 1	112.5	74.8	GT1 - Out due to low load demand by the Discos. GT2 - Out due to high air inlet differential pressure. GT4 - Out due to gas constraint.
	ALAOJI NIPP GAS	4	GT1 & 2 2	250	120	GT2 1	120	80.6	GT1 - Out due to low load demand by the Discos. GT3 - Shut down due to lack of spare part. GT4 - Tripped on over voltage lockout relay trip. Generation reduced due to low load demand by the Discos.
	OLORUNSOGO NIPP	6	GT1 - 3 3	375	360	GT1 1	120	112.3	GT2 & 3 - Out due to low load demand by the Discos. GT4 - Out due to ignition failure and control relay failure alarm. ST13 & ST23 - Out on maintenance.
	OMOTOSHO NIPP GAS	4	GT1, 2 & 4 3	375	360	GT4 1	120	87	GT1 & 2 - Out due to low load demand by the Discos. GT3 - Out due to oil leakage on the unit.
	ODUKPANI NIPP	5	0 0	0	0	0 0	0	0	GT1 & 2 - Out on fault. GT3 & 5 - Out due to gas leakage. GT4 - Tripped on main transformer neutral O/C and HV protection.
	IHOVBOR NIPP	4	GT1, 2 & 4 3	337.5	337.5	GT1 1	112.5	89.9	GT1 - On manual adjustment to frequency. GT2 & 4 - Out due to low load demand by the Discos. GT3 - Tripped on high vibration.
	GBARAIN NIPP GAS	1	GT2 1	115	112.5	GT2 1	112.5	67.9	Generation reduced due to gas constraint.
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	370	370	GT11, 12 & ST18 3	370	176	GT11 - Generation reduced due to low load demand by the Discos. ST18 - Generation reduced due to boiler problem.
	AZURA - EDO	3	GT11 - 13 3	461	461	GT11 & 13 2	306	150	GT11 & 13 - Generation reduced due to low load demand by the Discos. GT12 - Out due to low load demand by the Discos.
	AFAM VI GAS/STEAM	4	GT11 - 13 & ST10 4	650	640	GT13 1	150	107	GT11& 12 - Out due to low load demand by the Discos. ST10 - Out due to gas constraint.
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	65.8	GT1 & 2 - Out due to fire outbreak on the control panel.
	AES	9	0 0	0	0	0 0	0	0	Out of production since 27/09/2014.
	ASCO	2	0 0	0	0	0 0	0	0	ST1 - Shut down due to leakage in the furnace.
	OMOKU GAS	6	GT1, 2 & 5 3	75	60	GT1, 2 & 5 3	60	48.4	GT3 - Tripped on over speed. GT4 - Awaiting major overhaul. GT6 Out on maintenance. Generation reduced due to low load demand by the Discos.
	TRANS-AMADI	4	GT 1, 2 & 4 3	75	60	GT1,2 & 4 3	60	57.3	GT3 - Out on fault. Generation reduced due to low load demand by the Discos.
	RIVERS	1	GT1 1	160	160	GT1 1	160	80	GT1 - Generation reduced due to low load demand by the Discos.
	SUB TOTAL	140	80	7863	7255.5	52	4486.5	3407.8	Frequency = 50.55Hz.

1.7B GENERATION POSITION AT 06:00HRS OF WEDNESDAY 03/10/2018 FOR UNITS ON BILATERAL AGREEMENT

EGBIN	1	ST6		220	110	ST6		110	110	Available unit on bar.
		1	1			1	1			
PARAS ENERGY	8	GT2 - 9		67	67	GT2 - 9		67	67	Available units on bar.
		8	8			8	8			
SUB TOTAL	9	9		287	177	9		177	177	
GRAND TOTAL	149	89		8150	7432.5	61		4,663.50	3,584.80	Frequency = 50.55Hz

1.7C

BILATERAL AGREEMENT UNITS DISPATCH - TUESDAY 02/10/2018.							
EGBIN ST6 120MW GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY							
FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HRS IN SERVICE	TOTAL (MWH)	REMARK
OGBA	U-STEEL	ON	0100HRS	23			PERMIT ON FDR 2 33KV TO REPLACE GLOWING BOLT AND NUT ON BUS ISOLATOR
	PTCEXPRESS	ON	0100HRS	23			PERMIT ON FDR 2 33KV TO REPLACE GLOWING BOLT AND NUT ON BUS ISOLATOR
	SANKYO	ON	0100HRS	21			T3 60MVA TRANSFORMER TRIPPED ON PRIMARY CB LOCKOUT
	FEEDER 8	15	1100HRS	21			T3 60MVA TRANSFORMER TRIPPED ON PRIMARY CB LOCKOUT
IKORODU	PULK IT	1	1600	24			NIL
	INDUSTRIAL	8	0800	24			NIL
	SPINTEX	8	0100	24			NIL
	DANGOTE	ON	0100	24			TRIPPED ON E/F RELAY
	LAND CRAFT	30	1900	24			NIL
ALAUSA	TR4 15MVA	6.9	9:00	24			NIL
	TR5 -15MVA	4.6	13:00	24			NIL
	ALAUSA	14.7	15:00	23			OUT FOR SAFE WORKING SPACE
M/LAND	PTC (MARYLAND)	19	1200HRS	24HRS			NIL
	TOTAL LOAD	107.2					

BILATERAL AGREEMENT LOAD DISPATCH 60MW PARAS ENERGY GENERATION TO CEB OF TUESDAY 02/10/2018							
FEEDER	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK
Ikeja West/Sakete 330kV line	70.2	20:00	67.0	01:00	24	1646.4	NIL

BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI LOAD DISPATCH TO THE FOLLOWING COMPANIES OF TUESDAY 02/10/2018									
COMPANY NAME	VOLTAGE LEVEL	CONTRACTUAL LOAD (MW)	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK
INNER GALAXY	132kV line 2	0	ON	ON		ON		ON	SUPPLY NOT INTERRUPTED
KAM STEEL		15.0	0.3	10:00	0.2	12:00		5.2	SUPPLY NOT INTERRUPTED
ASAKA CEMENT		0.0	6.6	01:00	0.2	24:00		80.2	SUPPLY NOT INTERRUPTED
XING 1	33kV feeder	0.0	21.4	01:00	6.3	06:00		380.2	SUPPLY NOT INTERRUPTED
XING 2		0.0	25	13:00	4:48	17:00		523.7	SUPPLY NOT INTERRUPTED
KAM INTEGRATED		15.0	4.5	02:00	1.4	01:00		46.6	SUPPLY NOT INTERRUPTED
OLAM FLOUR MILLS		3.0	2.7	13:00	0.1	01:00		31.2	SUPPLY NOT INTERRUPTED
LORDSMITH		0	0.4	21:00	0.2	10:00		2.6	SUPPLY NOT INTERRUPTED

1.8 HYDROLOGICAL DATA: WEDNESDAY 03/10/2018

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	140.62	103.14	382.38
TAIL WATER ELEVATION (METERS)	105.20	76.00	272.20
GROSS OPERATING HEAD (METERS)	35.42	27.14	110.18
AVERAGE TURBINE DISCHARGE (M3/SEC)	1191.00	1641.00	446.00
AVERAGE SPILLAGE (M3/SEC)	776.00	1111.00	839.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1967.00	2752.00	1285.00
COMPUTED INFLOW (M3/SEC)	2812.00	2683.00	1111.00
STORAGE DIFFERENTIAL	845.00	-69	-174.00
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 TUESDAY 02/10/2018

	MAXIMUM LOAD (MW)	TIME (HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD (MW)	TIME (HRS)
ABUJA	473.1	21:00	486.59	355.1	01:00
EKO	425.3	21:00	565.43	271.3	08:00
IKEJA	581.7	24:00	534.68	390.7	05:00

2.0 GAS POSITION: WEDNESDAY 03/10/2018

STATION	SIGNED ACQ Annual Contracted Quantity MMSCF/D	INSTALLED CAPACITY OF THERMAL STATIONS (MW)	PREVIOUS DAY OFF-TAKE (MMSCF/D)	CAPABILITY OF UNITS ON BAR OF THERMAL STATIONS (MW)	DIFFERENCE (MW)
EGBIN P/S	337	1100		484	616
DELTA (GAS)	300	915		315	600
OMOTOSHO GAS	100.7	336.8		152	184.8
OMOTOSHO NIPP	87	500		120	380
OLORUNSOGO (GAS)	108.1	336		152	184
OLORUNSOGO NIPP	112.3	750		120	630
SAPELE NIPP	74.8	500		112.5	387.5
SAPELE STEAM	35	720		51	669
AFAM IV-V	0	300		0	300
AFAM VI	107	650		150	500
GEREGU GAS	80	435		145	290
GEREGU NIPP	0	435		0	435
OKPAI (GAS/STEAM)	178	480		370	110
ALAOJI NIPP	80.6	504		120	384
IHOVBOR NIPP	89.9	450		112.5	337.5
IBOM	65.8	198		115	83
ODUKPANI NIPP	0	625		0	625
TOTAL	1754.2	9234.80		2519	6715.8

1 MMSCF IS EQUIVALENT TO 3.75MW

3.0 SPINNING RESERVE FOR : TUESDAY 02/10/018

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

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF WEDNESDAY 03/10/2018 = 0MW. FREQUENCY 50.Hz.

S/N	POWER STATION	UNIT ON SPINNING RESERVE	CONTRACTED RESERVE	ACTUAL RESERVE (MW)	TOTAL (MW)
1	Egbin	ST2	100	0	0
		ST4		0	
		ST5		0	
		ST6		0	
2	Delta	GT16	40	0	0
		GT17	40	0	
3	Olorunsogo NIPP	GT1	40	0	0
		GT2		0	
		GT3		0	
		GT4		0	
4	Geregu NIPP	GT22	35	0	0
5	Omotosho NIPP	GT1	40	0	0
		GT2		0	
		GT3		0	
		GT4		0	
TOTAL (MW)			295	0	0

4.0 UNAVAILABLE GENERATION CAPABILITY

The unavailable generation capability for Wednesday 03/10/2018 as at 0600Hrs was = 3494.5MW.

6	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNAVAILABLE GENERATION CAPABILITY (MW)	SUB-TOTAL	
4.1 DUE TO GAS CONSTRAINTS:						
1	Geregu Gas GT11	145	0	145	792.1	
2	Afam VI ST10	200	0	200		
3	Geregu NIPP GT22 & 23	290	0	290		
4	Sapele NIPP GT4	112.5	0	112.5		
5	Gbarain NIPP GT2	112.5	67.9	44.6		
				0		
				0		
				0		
				0		
				0		
				0		
				0		
				0		
				0		
				0		
				0		
IT IS ENVISAGED WITH IMPROVED PLANT AVAILABILITY AND RELIEF FROM EXISTING POWER SYSTEM NETWORK RELATED CONSTRAINTS, ADDITIONAL 1790.88MMSCF OF GAS (EQUIVALENT TO 6715.8MW) WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.						
4.2 DUE TO LINE CONSTRAINTS						
		0	0		0	
		0	0			
		0	0			
4.3 DUE TO LOW LOAD DEMAND BY THE DISCOS						
1	Ihobbor GT2 & 4	225	0	225	2645.6	
2	Azura Edo GT11 - 13	461	150	311		
3	Egbin ST2, 4 & 5	448	337	111		
4	Rivers IPP GT1	160	80	80		
5	Delta GT15, 16 & 20	305	0	305		
6	Alaoji NIPP GT1 & 2	240	80.6	159.4		
7	Omotosho NIPP GT1 & 2	240	0	240		
8	Olorunsogo NIPP GT2 & 3	240	0	240		
9	Omotosho Gas GT1- 8	304	100.7	203.3		
10	Olorunsogo Gas GT1 - 8	304	108.1	195.9		
12	Afam VI GT11 & 12	300	0	300		
13	Geregu Gas GT13	145	0	145		
14	Okpai GT11	150	20	130		
15	Omoku GT1, 2 & 5	60	48.4	11.6		
16	Trans-Amadi GT1, 2 & 4	60	57.3	2.7		
17	Sapele NIPP GT1	42.5	0	42.5		
				0		
4.1 DUE TO WATER MANAGEMENT:						
Grand Total					3494.5	

5.0 OUTAGES:

5(A) FORCED OUTAGES (GENERATION):

- 19:12 through 24:00Hrs, Delta GT7 tripped on reverse power due to the tripping of its unit transformer on transformer protection. LHR = 5MW.

5(B) FORCED OUTAGES (TRANSMISSION):

- 06:34 – 07:18Hrs, Kaduna/Zaria 132kV line CB tripped at Zaria T/S on instantaneous and IDMT O/C. LHR = 39MW.
- 18:40 – 18:48Hrs, Kumbotso T/S 150MVA 330/132/33kV transformer T2A secondary CB tripped on O/C Red Phase. LHR = 117MW.

5(C) PLANNED OUTAGES:-

- 10:53 – 18:42Hrs, DeltaOghara 132kV line was taken out to carryout trace expansion between towers #5 & 6. Load loss = 25.5MW.
- 10:55 – 18:41Hrs, Delta/Benin 132kV line was taken out to carryout trace expansion between towers #5 & 6. Load loss = 25.1MW.

5(D) URGENT OUTAGES:-

- 03:13 – 05:52Hrs, Gbarain NIPP GT2 was shut down due to technical problem at their gas station. Load loss = 65.1MW.
- 10:59 – 12:41Hrs, Alaoji/Aba 132kV line 1 was taken out to treat hot spot on the line isolator clamp at Alaoji T/S. Load loss = 30MW.
- 12:50 - 19:55Hrs, Delta GT15 was shut down due to oil leakage. Load loss = 88MW.
- 13:30 – 16:48Hrs, Oji/Nsukka 66kV line was taken out for safe working space to allow Disco clear fault on coca cola 33kV feeder. Load loss = 4MW.
- 14:45 – 20:08Hrs, Gbarain NIPP GT2 was shut down due to low gas pressure. Load loss = 86.9MW.

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).

10 COMMUNICATION MEDIA

STATIONS	NO INSTALLED	NO. WORKING
PLC/PAX	37	28
OPTIC FIBRE	13	10
PLS	14	4

11 SCADA RTU STATUS

STATIONS	NO. INSTALLED	NO OF RTU DISTURBED	NO OF RTU WORKING
POWER STATIONS	8	5	3
330kV	19	7	12
132kV	102	83	19

5 (E) EMERGENCY OUTAGES:- NIL

5 (F) AUTOMATIC UNDER FREQUENCY OPERATION:- NIL

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

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

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

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

6 WEATHER REPORT:- No rainfall reported.

7 INTERNATIONAL LINES:-

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

Maximum load - 271MW at 20:00Hrs.
Minimum load - 194MW at 08:00Hrs.

B BIRNIN KEBBI/NIAMEY 132KV LINE

Maximum load - 106MW at 02:00Hrs.
Minimum load - 89MW at 20:00Hrs.

C KATSINA/GAZAQUA/MARADI 132KV LINE

Maximum load - 40.7MW at 21:00Hrs.
Minimum load - 26.0MW at 03:00Hrs.

8 MISCELLANEOUS:-

- 00:17Hrs, Delta GT19 was shut down due to low load demand by the Discos. Load loss = 81MW.
- 00:25 - 16:22Hrs, Sapele NIPP GT1 was shut down due to low load demand by the Discos. Load loss = 71.2MW.
- 01:35 - 18:48Hrs, Azura-Edo GT12 was shut down due to low load demand by the Discos. Load loss = 75MW.
- 01:36 - 18:52Hrs, Delta GT16 was shut down due to low load demand by the Discos. Load loss = 92MW.
- 07:50Hrs, Sapele Steam ST2 was shut down due to low load demand by the Discos. Load loss = 50MW.
- 07:53 - 19:27Hrs, Olorunsogo Gas GT5 was shut down due to low load demand by the Discos. Load loss = 26.8MW.
- 09:05 – 09:30Hrs, Osogbo T/S carried out carrier test on ccts J1H, J2H & H3G.
- 12:26Hrs, Delta GT19 was tied. The unit was out due to low load demand by the Discos.
- 15:22Hrs, Delta GT7 was tied. The unit was out on fault.

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

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

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

SHIRORO REGION:

1 Birnin Kebbi 75MX Reactor R1.

ABUJA REGION

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

KADUNA REGION:

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

BAUCHI REGION:

1 Gombe T/S -30MX Reactor R2A.

ENUGU REGION:

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

LAGOS REGION:

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

PORT HARCOURT REGION

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

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

LAGOS REGION:

1 Akangba T/S. 132kV Bus Coupler CB - Serious Air leakage.(Undergoing repair)

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 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:

1 New Haven/Yandev 132kV line CB - Faulty Red phase CB pole. Protection is transferred to the bus coupler CB.

2 Abakaliki T/S 30MVA 132/33kV transformer T1A and 60MVA 132/33kV transformer T2 primary CBs - Breakers were not provided since commissioning but the transformers are protected by Nkalagu 132kV line CB.

3 Oji River T/S 30MVA 132/33kV transformer T1A primary CB - The breaker is completely out of service and bypassed. The transformer is either protected by Onitsha/Oji 132kV line CB or New Haven/Oji 132kV line CB.

4 Oturkpo/Yandev 132kV By pass isolator - Canibalized to repair the line isolator.

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

SHIRORO REGION

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

12(D) **UNAVAILABLE CAPACITOR BANK:**

1 (i) Ogba T.S, (ii) Maiduguri T/S, (iii) Isolo T/S, (iv) Ado-Ekiti T/S, (v) Ilorin T/S, (vi) Akure T/S.

12(E) **UNAVAILABLE SKYWIRES**

LAGOS REGION

1 Omotosho/Ikeja West line (M5W) and Egbin/Ikeja West line 3 (N6W) - 21 spans.

2 Ikeja West/Olorunsogo line (cct R1W) - 80 spans.

3 330kV Ikeja West/Osogbo line. - 95 spans.

4 Ikeja West/Alimosho/Ogba 132kV lines 1 & 2 - 15 spans.

5 Ikeja West/Akangba 330kV line 2 - 1 span.

6 Ikeja West/ Ilupeju 132kV lines 1 & 2 - 8 spans.

7 Akangba/Itire 132kV lines 1 & 2 - 1 span.

8 Ikeja West/Agbara 132kV lines 1 & 2 - 61 spans.

9 Ikeja West/Otta 132kV lines 1 & 2- 17 spans.

SHIRORO REGION

1 Jebba T/S 330kV Osogbo lines 1 & 2 and Ganmo line - 9 spans

2 Minna T/S 132kV Bida line - 32 spans

3 Shiroro T/S 330kV Jebba line 2 - 28 spans

ABUJA REGION

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

12 (F) **UNAVAILABLE SYNCHROSCOPES :**

1 Ikeja West, Onitsha, Egbin, Ugwuaji, 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

