

TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF SATURDAY 08/09/2018

FOR: EVENTS OF FRIDAY 07/09/2018

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	22,680	21:30	07/09/2018
GENERATION CAPABILITY	7636.5	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	4998.7	-do-	-do-
PEAK GENERATION	4498.1	-do-	-do-
LOWEST GENERATION	2627.6	04:00	07/09/2018
8-HOURLY DURATION PEAK	3148.7	0100-0800	-do-
	3350.7	0900-1600	-do-
	4498.1	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	355	Lokoja T/S	01:00
LOWEST VOLTAGE FOR THE DAY	300	Kumbotso, Yola & Gombe T/S	11:00, 12:00 & 12:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.98	02:07
LOWEST FREQUENCY	49.64	21:06

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 4th Sept, 2018		No. of days since last total collapse: 04												
Date of last partial collapse: 12 th April, 2018		No. of days since last partial collapse: 148												
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	--	0	2	0	3	1	0	0	1	0	0	9
	Partial	--	--	0	0	1	0	0	0	0	0	2	1	4
2015	Total	1	0	1	0	2	0	1	0	0	0	1	0	6
	Partial	--	--	1	0	2	0	0	0	0	1	0	0	4
2016	Total	--	--	2	3	6	5	0	0	1	1	2	2	22
	Partial	--	--	1	0	1	3	1	0	0	0	0	0	6
2017	Total	5	3	0	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	1	1	--	--	--	9
	Partial	0	0	0	1	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	317	240		
2 JEBBA	HYDRO	435	335		
3 SHIRORO	HYDRO	439	365		
4 EGBIN ST2 - 5	STEAM	221	221		
5 SAPELE	STEAM	50	50		
6 DELTA	GAS	507	172		
7 AFAM IV-V	GAS	62	0		
8 GEREGU GAS	GAS	163	80		
9 OMOTOSHO GAS	GAS	139.6	76.5		
10 OLORUNSOGO GAS	GAS	137.4	52.3		
11 GEREGU NIPP	GAS	0	0		
12 SAPELE NIPP	GAS	107.3	66.2		
13 ALAQJI NIPP	GAS	79.4	0		
14 OLORUNSOGO NIPP	GAS	216.5	80.5		
15 OMOTOSHO NIPP	GAS	111.5	73.8		
16 ODUKPANI NIPP	GAS	110	79.6		
17 IHOVBOR NIPP	GAS	111.8	0		
18 OKPAI	GAS	345	197		
19 AFAM VI	GAS	148	103		
20 IBOM POWER	GAS	0	0		
21 ASCO	GAS	0	0		
22 A.E.S	GAS	0	0		
23 OMOKU	GAS	54.7	35.9		
24 TRANS AMADI	GAS	23.9	21.2		
25 RIVERS IPP	(GAS)	80	70		
26 AZURA - EDO IPP	(GAS)	458	150		
27 EGBIN ST6	(GAS)	110	110		
28 PARAS ENERGY	(GAS)	71	68.6		
29 GBARAIN NIPP	GAS	0	0		
TOTAL		4498.1	2627.6		
1.6 ENERGY GENERATED/ENERGY SENT OUT:					
STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	7574.00	315.58	7558.60	314.94
2 JEBBA	HYDRO	9139.00	380.79	9118.08	379.92
3 SHIRORO	HYDRO	9650.00	402.08	9620.90	400.87
4 EGBIN ST2 - 5	STEAM	5293.00	220.54	5031.40	209.64
5 SAPELE	STEAM	1146.70	47.78	1071.80	44.66
6 DELTA	GAS	8625.90	359.41	8528.20	355.34
7 AFAM IV-V	GAS	292.00	12.17	286.06	11.92
8 GEREGU GAS	GAS	2744.30	114.35	2722.30	113.43
9 OMOTOSHO GAS	GAS	2242.00	93.42	2220.50	92.52
10 OLORUNSOGO GAS	GAS	1829.71	76.24	1808.65	75.36
11 GEREGU NIPP	GAS	0.00	0.00	0.00	0.00
12 SAPELE NIPP	GAS	1911.00	79.63	1894.85	78.95
13 ALAQJI NIPP	GAS	675.31	28.14	652.91	27.20
14 OLORUNSOGO NIPP	GAS	2892.40	120.52	2855.30	118.97
15 OMOTOSHO NIPP	GAS	2250.20	93.76	2229.00	92.88
16 ODUKPANI NIPP	GAS	2138.04	89.09	2109.24	87.89
17 IHOVBOR NIPP	GAS	1171.50	48.81	1149.95	47.91
18 OKPAI	GAS	5743.00	239.29	5612.10	233.84
19 AFAM VI	GAS	2874.11	119.75	2790.36	116.27
20 IBOM	GAS	0.00	0.00	0.00	0.00
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 AZURA - EDO IPP	GAS	5975.55	248.98	5953.10	248.05
23 A.E.S	GAS	0.00	0.00	0.00	0.00
24 OMOKU	GAS	1289.30	53.72	1260.65	52.53
25 TRANS AMADI	GAS	800.50	33.35	780.30	32.51
26 RIVERS IPP	GAS	2373.60	98.90	2348.90	97.87
27 EGBIN ST6	STEAM	2614.00	108.92	2504.40	104.35
28 PARAS ENERGY	GAS	1670.70	69.61	1663.20	69.30
29 GBARAIN NIPP	GAS	0.00	0.00	0.00	0.00
TOTAL		82,915.82	3,454.83	81,770.75	3,407.11

1.7A GENERATION POSITION AT 06:00HRS SATURDAY 08/09/2018

	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 50.70Hz.	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	8	1G5, 6, 11 & 12 4	440	440	1G5, 6, 11 & 12 4	440	195	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	311	2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G2 - 4 3	450	450	411G2 - 4 3	450	404	411G1 - Out due to technical issues.
	EGBIN STEAM	5	ST2 & 4 2	440	400	ST2 & 4 2	221	221	ST1 - Out due to refusal to send report of tripping on 04/09/2018. ST3 - Out on high vibration since 19th June 2017. ST5 - Shut down due to boiler pump trouble.
	SAPELE (STEAM)	6	ST2 1	120	50	ST2 1	50	50	ST1 - Shut down due to alarm on inlet gas guide control trouble. 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	605	GT9 - 13, 15 & 19 7	315	281	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. GT17 - Tripped on bearing vibration more than maximum. GT16, 18 & 20 - Out due to low load demand by the Discos.
	AFAM IV & V (GAS)	8	GT18 1	75	61	GT18 1	61	61	GT1 - 12 - De-commissioned and scrapped. GT13 -16 - Out on blade failure. GT17 - Out due to technical issues. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT11 1	145	80	GT11- Generation reduced due to low load demand by the Discos. GT12 - Out due to gas constraint. GT13 - Out due to low load demand by the Discos.
	OMOTOSHO GAS	8	GT1 - 8 8	336	304	GT2, 5 & 7 3	114	108.2	GT1, 3, 4, 6 & 8 - Out due to low load demand by the Discos.
	OLORUNSOGO GAS	8	GT1 - 8 8	336	304	GT2, 4 & 6 3	114	107.8	GT1, 5, 7 & 8 - Out due to low load demand by the Discos. GT3 - Out due to gas constraint.
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	66.5	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	GT1 1	120	81.6	GT1 - Generation reduced due to low load demand by the Discos. GT2 - Out due to NGC maintenance on the gas pipeline. GT4 - Tripped on over voltage lockout relay trip.
	OLORUNSOGO NIPP	6	GT1 - 3 3	375	360	GT1 1	120	109.6	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	GT2 1	120	82.6	GT1 & 4 - Out due to low load demand by the Discos. GT3 - Out due to oil leakage on the unit.
	ODUKPANI NIPP	5	GT5 1	120	115	GT5 1	115	70.1	GT1 - Out on fault. GT2 - Out due to malfunctioning gas regulating valve. GT3 - Out on high air inlet differential pressure. GT4 - Tripped on turning gear rubber coupling failure.
	IHOVBOR NIPP	4	GT1, 2 & 4 3	337.5	337.5	GT1 1	112.5	82	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	112.5	112.5	0 0	0	0	GT2 - Out due to their host Community protest.
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	450	370	GT11, 12 & ST18 3	370	179	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 3	461	225	GT11 - 13 - Generation reduced due to low load demand by the Discos.
	AFAM VI GAS/STEAM	4	GT11 - 13 & ST10 4	650	640	GT11 1	150	103	GT12, 13 & ST10 - Out due to gas constraint.
	IBOM POWER GAS	3	0 0	0	0	0 0	0	0	GT1 & 2 - Out due to fire outbreak on the control panel. GT3 - Out on fault.
	AES	0	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	GT2 & 5 2	35.5	35.5	GT1 - Out due to low load demand by the Discos. GT3 - Tripped on over speed. GT4 - Awaiting major overhaul. GT6 - Out on maintenance.
	TRANS-AMADI	4	GT1 & 2 2	50	40	GT1 1	20	18.3	GT 2 - Out due to gas constraint. GT3 - Out on faulty. GT4 - Tripped on loss of excitation.
	RIVERS	1	GT1 1	160	160	0 0	0	0	GT1 - Out due to low gas pressure.
	SUB TOTAL	131	79	7775.5	7262.5	46	4096.5	2872.2	Frequency = 50.70Hz.

1.7B GENERATION POSITION AT 06:00HRS OF SATURDAY 08/09/2018 FOR UNITS ON BILATERAL AGREEMENT

EGBIN	1	ST6 1	220	110	ST6 1	110	110	Available unit on bar.
PARAS ENERGY	8	GT2 - 9 8	67.8	67.8	GT2 - 9 8	67.8	67.8	Available units on bar.
SUB TOTAL	9	9	287.8	177.8	9	177.8	177.8	
GRAND TOTAL	140	88	8063.3	7440.3	55	4,274.30	3,050.00	Frequency = 50.70Hz.

1.7C

BILATERAL AGREEMENT UNITS DISPATCH - FRIDAY 07/09/2018.							
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	18:00		7HRS		OUTAGE ON FEEDER 2
	PTCEXPRESS	ON	18:01		7HRS		OUTAGE ON FEEDER 2
	SANKYO	ON	1:00		24HRS		NIL
	FEEDER 8	13	5:00		24HRS		NIL
IKORODU	PULK IT	2	09:00		24		NIL
	INDUSTRIAL	9	18:00		24		NIL
	SPINTEX	13	01:00		24		NIL
	DANGOTE	ON	01:00		24		SERVED AS SAFE WORKING SPACE TO CLEAR FAULT ON OWUTU 33KV FEEDER
	LAND CRAFT	14	05:00		24		NIL
ALAUZA	TR4 15MVA	5.1	18:00		24		OK
	TR5 -15MVA	4.1	18:00		18		TRIPPED AMID RAINFALL
	ALAUZA	11	18:00		24		OK
M/LAND	PTC (MARYLAND)	15	1:00		11HRS		OUT DUE TO E/F AND ARCING ON T2-60MVA 33KV BUS BAR
	TOTAL LOAD	86.2					

BILATERAL AGREEMENT LOAD DISPATCH 60MW PARAS ENERGY GENERATION TO CEB OF FRIDAY 07/09/2018							
FEEDER	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK
Ikeja West/Sakete 330kV line	71	19:00	68.6	01:00	1666	24	NIL

BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI LOAD DISPATCH TO THE FOLLOWING COMPANIES OF: FRIDAY 07/09/2018									
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	ON	ON	ON	ON	ON	ON	ON	ON
KAM STEEL		15.0	4.6	13:00	0.2	08:00	24	30	SUPPLY NOT INTERRUPTED
ASAKA CEMENT		0.0	9.8	07:00	5.3	16:00	23	180.7	LOSS OF SUPPLY
XING 1	33kV feeder	0.0	16.8	14:00	0.6	04:00	24	233.9	SUPPLY NOT INTERRUPTED
XING 2		0.0	24.5	23:00	1.0	06:00	24	359.0	SUPPLY NOT INTERRUPTED
KAM INTEGRATED		15.0	5.3	18:00	1.5	02:00	24	67.3	SUPPLY NOT INTERRUPTED
OLAM FLOUR MILLS		3.0	2.2	07:00	1.6	10:00	24	47.0	SUPPLY NOT INTERRUPTED
LORDSMITH		0	0.2	01:00	0.2	01:00	24	4.80	SUPPLY NOT INTERRUPTED

1.8 HYDROLOGICAL DATA: SATURDAY 08/09/2018

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	138.22	104.44	381.65
TAIL WATER ELEVATION (METERS)	106.99	77.7	273
GROSS OPERATING HEAD (METERS)	31.23	26.74	108.85
AVERAGE TURBINE DISCHARGE (M3/SEC)	1124.00	1629.00	419.00
AVERAGE SPILLAGE (M3/SEC)	2988.00	3352.00	1206.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	4112.00	4981.00	1625.00
COMPUTED INFLOW (M3/SEC)	7385.00	5884.00	2282.00
STORAGE DIFFERENTIAL	3273.00	903	657.00
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 FRIDAY 07/09/2018

	MAXIMUM LOAD (MW)	TIME (HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD (MW)	TIME (HRS)
ABUJA	477.7	20:00	444.09	267.7	05:00
EKO	372.1	23:00	524.78	108.2	09:00
IKEJA	526.5	22:00	789.24	223.2	09:00

2.0 GAS POSITION: SATURDAY 08/09/2018

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	356	1100		331	769
DELTA (GAS)	248	915		315	600
OMOTOSHO GAS	101.5	336.8		114	222.8
OMOTOSHO NIPP	76.8	500		120	380
OLORUNSOGO (GAS)	84.4	336		114	222
OLORUNSOGO NIPP	80.4	750		120	630
SAPELE NIPP	81.4	500		112.5	387.5
SAPELE STEAM	50	720		50	670
JAFAM IV-V	0	300		61	239
JAFAM VI	103	650		150	500
GEREGU GAS	90	435		145	290
GEREGU NIPP	0	435		0	435
OKPAI (GAS/STEAM)	177	480		370	110
ALAOJI NIPP	71.2	504		120	384
IHOVBOR NIPP	85.4	450		112.5	337.5
IBOM	0	198		0	198
ODUKPANI NIPP	0	625		115	510
TOTAL	1605.1	9234.80		2350	6884.8

1 MMSCF IS EQUIVALENT TO 3.75MW

3.0 SPINNING RESERVE FOR : FRIDAY 07/09/018

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

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF SATURDAY 08/09/2018 = 0MW. FREQUENCY 50.70Hz.

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 Saturday 08/09/2018 as at 0600Hrs was = 3455.3MW.

S/NO	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNAVAILABLE GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO GAS CONSTRAINTS:					
1	Geregu Gas GT12	145	0	145	1413.5
2	Alam VI GT12, 13 & ST10	490	0	490	
3	Geregu NIPP GT22 & 23	290	0	290	
4	Olorunsogo Gas GT3 & 7	76	0	76	
5	Sapele NIPP GT4	112.5	0	112.5	
6	Alaoji NIPP GT2	120	0	120	
7	Rivers IPP GT1	160	0	160	
8	Trans-Amadi GT2	20	0	20	
				0	
				0	
				0	
				0	
IT IS ENVISAGED WITH IMPROVED PLANT AVAILABILITY AND RELIEF FROM EXISTING POWER SYSTEM NETWORK RELATED CONSTRAINTS, ADDITIONAL 1835.94MMSCF OF GAS (EQUIVALENT TO 6884.3MW WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.					
4.2 DUE TO LINE CONSTRAINTS					
				0	0
				0	0
4.3 DUE TO LOW LOAD DEMAND BY THE DISCOS					
1	Ihobor GT2 & 4	225	0	225	2041.8
2	Azura Edo GT11 - 13	461	225	236	
3	Geregu GT11	145	80	65	
4	Olorunsogo Gas GT1, 5, 7 & 8	152	0	152	
5	Delta GT16, 18 & 20	290	0	290	
6	Alaoji NIPP GT1	120	81.6	38.4	
7	Gbarain GT2	112.5	0	112.5	
8	Olorunsogo NIPP GT1 - 3	360	109.6	250.4	
9	Omotosho Gas GT1, 3, 4, 6 & 8	190	0	190	
10	Okpai GT11	150	20	130	
11	Omotosho NIPP GT1 & 4	240	0	240	
12	Sapele NIPP GT1	112.5	0	112.5	
				0	
				0	
4.1 DUE TO WATER MANAGEMENT:					
Grand Total					3455.3

5.0 OUTAGES:

5 (A) FORCED OUTAGES (GENERATION):-

- 1 13:27 through 24:00Hrs, Odukpiani NIPP GT4 tripped on turning gear rubber coupling failure. LHR = 92MW

5(B) FORCED OUTAGES (TRANSMISSION):-

- 1 06:15 - 06:39Hrs, Benin/Ajaokuta 330kV line 1 (cct B11J) tripped at both ends on the following relay indications:
At Benin T/S:
ABB relay: Trip, start L1, PE, zone 2 trip, DEF-trip-trip, trip-TRL123, PHS-STFN (L1PE), ZM2-trip, EFC-CS, ZM23-start, TOC-STL1, fault location = No data, MVAJ K86, ABC flagged
At Ajaokuta T/S:
ABB relay: Trip-start L1, start PE, DEF-trip, trip-trip, trip-TRL1L2L3, PHF-FTF WL1, PHF-FTFWPE, EFC-CF, TEF-trip, fault location = No data. No load loss as 32MW was transferred to cct B12J.
- 2 22:33 – 23:02Hrs, Jos/Gombe 330kV line (cct S1E) CB tripped at Jos T/S on optimho relay – zone 2 phase A-N. LHR = 185MW

5 (C) PLANNED OUTAGES:-

- 1 10:25 – 18:56Hrs, New Haven 60MVA 132/33kV transformer T4 primary CB was taken out to service the transformer isolator. Load loss as 2 x 60MVA 132/33kV transformer TR1 & TR2 were in service.

5(D) URGENT OUTAGES:-

- 1 14:16 – 15:56Hrs, Jebba/Osogbo 330kV line 1 (cct J1H) was taken out to build up low SF6 gas pressure of the line CB to normal at Osogbo T/S. No load loss as ccts H3G & J3G were in service.
- 2 18:32 through 24:00Hrs, Ikeja-West T/S 75MX 330kV Shunt Reactor R2 was taken out service due to serious oil leakage from the silica gel compartment.
- 3 21:47 through 24:00Hrs, Trans-Amadi GT2 was shut down due to low gas pressure. Load loss = 22.5MW
- 4 22:15 through 24:00Hrs, Rivers IPP GT1 was shut down due to gas pressure. Load loss = 125MW

5 (E) EMERGENCY OUTAGES:-

The under mentioned lines were opened on frequency control.

- 1 21:05 - 21:36Hrs, Osogbo/Akure 132kV line. Load loss = 59MW. Frequency was 49.69Hz
- 2 21:06 - 21:48Hrs, Akangba/Ojo 132kV line 2. Load loss = 26MW. Frequency was 49.64Hz

5 (F) AUTOMATIC UNDER FREQUENCY OPERATION:-

5 (G) 330KV LINES THAT ARE OUT ON VOLTAGE CONTROL:- ccts A1K, K4U, U1A & A1S.

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

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

5 (J) 330KV LINES THAT ARE OUT ON LINE FAULT:- ccts J2H & N4J.

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

6 WEATHER REPORT:- Rainfall was reported at Ikeja-West, Osogbo, Ajah, Ayede, Shagamu, Katampe, Akangba, Alaoji, New Haven

7 INTERNATIONAL LINES:-

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

Maximum load - 254MW at 20:00Hrs.
Minimum load - 127MW at 03:00Hrs.

B BIRNIN KEBBI/NAMEY 132KV LINE

Maximum load - 105MW at 01:00Hrs.
Minimum load - 78MW at 13:00Hrs.

C KATSINA/GAZAOUA/MARADI 132KV LINE

Maximum load - 32.6MW at 20:00Hrs.
Minimum load - 14.7MW at 10:00Hrs.

8 MISCELLANEOUS:-

- 1 00:11Hrs, Delta P/S GT16 was shut down due to low load demand by the Discos. Load loss = 70MW
- 2 00:48Hrs, Olorunsogo NIPP GT1 was shut down due to low load demand by the Discos. Load loss = 80MW
- 3 00:52 - 19:18Hrs, Delta P/S GT20 was shut down due to low load demand by the Discos. Load loss = 65MW
- 4 01:16Hrs, Lokoja/Gwagwalada 330kV line 2 (cct L7G) was taken out for voltage control. V/P =353/350kV (Lokoja T/S) and 350/345kV (Gwagwalada T/S)
- 5 01:37Hrs, Kumbotso T/S 75MX 330kV Shunt Reactor was switched on to service for voltage control. V/P = 343/315kV
- 6 01:38Hrs, Mando T/S 75MX 330kV Shunt Reactor was switched on to service for voltage control. V/P = 342/335kV
- 7 01:46Hrs, Azura-Edo IPP GT1 was shut down due to low load demand by the Discos. Load loss = 75MW

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	33
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	7	1
330kV	19	13	6
132kV	102	87	15

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:**

- 8 02:02 - 10:54Hrs, Omoku P/S GT1 was shut down due to low load demand by the Discos. Load loss = 14.8MW
- 9 02:23 - 19:26Hrs, Delta P/S GT18 was shut down due to low load demand by the Discos. Load loss = 69MW
- 10 02:26 - 18:50Hrs, Olorunsogo Gas GT4 was shut down due to low load demand by the Discos. Load loss = 27.3MW
- 11 02:31 - 19:32Hrs, Olorunsogo Gas GT8 was shut down due to low load demand by the Discos. Load loss = 22.6MW
- 12 02:31 - 14:17Hrs, Ihovbor NIPP GT2 was shut down due to low load demand by the Discos. Load loss = 95.3MW
- 13 02:40 - 18:17Hrs, Alaoji NIPP GT1 was shut down due to low load demand by the Discos. Load loss = 80.1MW
- 14 02:52Hrs, Omotosho Gas GT6 was shut down due to low load demand by the Discos. Load loss = 30.5MW
- 15 08:09Hrs, Azura-Edo GT12 was tied. The unit was out due to low load demand by the Discos.
- 16 11:32 through 24:00Hrs, Commissioning of Gombe/Damaturu 330kV line failed on Siemens relay- general trip 3 phases, distance = 86km.
- 17 12:24Hrs, Odukpai NIPP GT5 was tied for test.
- 18 13:27Hrs, Odukpai NIPP GT4 was shut down after transferring 84.4MW to GT5.
- 19 13:43Hrs, Geregu GT13 was tied. The unit was out on gas constraint.
- 20 16:17Hrs, Bui/Damboia/Maiduguri 132kV line was restored. The line tripped at 08:07Hrs of 04/09/2018.
- 21 18:30Hrs, Afam IV P/S GT18 was tied. The unit was out due to lube oil high temperature.
- 22 18:55Hrs, Olorunsogo NIPP GT2 was tied. The unit was out due to low load demand by the Discos.
- 23 19:32Hrs, Omotosho P/S GT8 was tied. The unit was out due to low load demand by the Discos.
- 24 21:11Hrs, Delta P/S GT15 was tied. The unit was out due to low load demand by the Discos.
- **** 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(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.

1 Gombe T/S -30MX Reactor R2A.

ENUGU REGION:

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

LAGOS REGION:

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

PORT HARCOURT REGION

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

12 (B) UNAVAILABLE BREAKERS/ISOLATORS

LAGOS REGION:

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

2 Egbin/Aja 330kV line 2 (cct N4J) - faulty breaker at Aja T/S

3 Otta/Ogba 132kV line isolator - defective control shaft.

4 Osogbo/Ikeja West and Olorunsogo/Ikeja West tie CB at Ikeja West T/S - defective pole .

5 Oke-Aro/Ikeja West 330kV lines 1 & 2 tie CB at Ikeja West T/S - Defective pole.

6 Jebba G.S/Jebba T.S 330kV line 2 CB at Jebba T/S.

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

BENIN REGION:

1 Omotosho 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.

SHIRORO REGION

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

PORT HARCOURT REGION

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

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 Benin, Ikeja West, Onitsha, Egbin, Uguwaji, 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

