

# TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF THURSDAY 08/03/2018

FOR: EVENTS OF WEDNESDAY 07/03/2018

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	22,230	23:00	07/03/2018
GENERATION CAPABILITY	7443.7	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5922.7	-do-	-do-
PEAK GENERATION	4449.1	-do-	-do-
LOWEST GENERATION	3962.1	19:00	07/03/2018
8-HOURLY DURATION PEAK	4141.9	01:00-08:00	-do-
	4213.3	09:00-16:00	-do-
	4449.1	17:00-24:00	-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	00:00-24:00	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	349	Omotosho T/S	22:00
LOWEST VOLTAGE FOR THE DAY	300	Gombe & Yola T/S	01:00 & 19:00

## 1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.549	19:11
LOWEST FREQUENCY	49.876	15:43

## 1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 1st Feb., 2018		No. of days since last total collapse: 33											
Date of last partial collapse: 17 <sup>th</sup> Oct., 2017		No. of days since last partial collapse: 134											
Highest No of days ever attained in-between total collapses:		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	1	--	--	1	1	3	4	4	3	2	--	1	20
Partial	--	--	--	--	4	3	1	1	1	2	1	--	13
2011													
Total	--	1	1	--	--	--	--	1	--	1	2	--	6
Partial	--	--	2	1	5	2	1	--	--	2	2	1	16
2012													
Total	--	--	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	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	1	0	0	6
2017													
Total	5	3	0	3	1	1	0	0	1	1	0	0	15
Partial	1	0	1	0	0	0	1	0	3	3			9
2018													
Total	5	1											6
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	391	319
2 JEBBA	HYDRO	354	324
3 SHIRORO	HYDRO	0	0
4 EGBIN ST2 - 5	STEAM	466	482
5 SAPELE	STEAM	47	46
6 DELTA	GAS	467	434
7 AFAM IV-V	GAS	62	61
8 GEREGU GAS	GAS	80	80
9 OMOTOSHO GAS	GAS	138.2	136.1
10 OLORUNSOGO GAS	GAS	161.4	161.7
11 GEREGU NIPP	GAS	120	119
12 SAPELE NIPP	GAS	188.3	150.9
13 ALAQJI NIPP	GAS	0	0
14 OLORUNSOGO NIPP	GAS	0	0
15 OMOTOSHO NIPP	GAS	108.8	90
16 ODUKPANI NIPP	GAS	275.2	211.1
17 IHOVBOR NIPP	GAS	103.1	92
18 OKPAI	GAS	319	208
19 AFAM VI	GAS	624	616
20 IBOM POWER	GAS	82.3	60.6
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	76.7	70.2
24 TRANS AMADI	GAS	44	39.6
25 RIVERS IPP	(GAS)	60	0
26 AZURA - EDO IPP	(GAS)	0	0
27 EGBIN ST6	(GAS)	112	112
28 PARAS ENERGY	(GAS)	70.2	70.2
29 GBARAIN NIPP	GAS	92.9	80.7
<b>TOTAL</b>		<b>4449.1</b>	<b>3962.1</b>

## 1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	8817.00	367.38	8799.60	366.65
2 JEBBA	HYDRO	8523.00	355.13	8499.68	354.15
3 SHIRORO	HYDRO		0.00		0.00
4 EGBIN ST2 - 5	STEAM	11570.00	482.08	10887.20	453.63
5 SAPELE	STEAM	950.00	39.58	950.00	39.58
6 DELTA	GAS	10470.54	436.27	10295.20	428.97
7 AFAM IV-V	GAS	1479.00	61.63	1474.83	61.44
8 GEREGU GAS	GAS	1679.10	69.96	1658.60	69.11
9 OMOTOSHO GAS	GAS	3284.00	136.83	3260.00	135.83
10 OLORUNSOGO GAS	GAS	3706.01	154.42	3674.89	153.12
11 GEREGU NIPP	GAS	2961.37	123.39	2946.58	122.77
12 SAPELE NIPP	GAS	4260.02	177.50	4235.15	176.46
13 ALAQJI NIPP	GAS	0.00	0.00	0.00	0.00
14 OLORUNSOGO NIPP	GAS	0.00	0.00	0.00	0.00
15 OMOTOSHO NIPP	GAS	2505.50	104.40	2485.40	103.56
16 ODUKPANI NIPP	GAS	7134.31	297.26	7094.21	295.59
17 IHOVBOR NIPP	GAS	2420.00	100.83	2402.07	100.09
18 OKPAI	GAS	4974.00	207.25	4817.00	200.71
19 AFAM VI	GAS	13650.54	568.77	13382.56	557.61
20 IBOM	GAS	1742.47	72.60	1735.00	72.29
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 AZURA - EDO IPP	GAS	0.00	0.00	0.00	0.00
23 A.E.S	GAS	0.00	0.00	0.00	0.00
24 OMOKU	GAS	1303.10	54.30	1266.32	52.76
25 TRANS AMADI	GAS	961.40	40.06	938.50	39.10
26 RIVERS IPP	GAS	1071.90	44.66	1066.51	44.44
27 EGBIN ST6	STEAM	2653.00	110.54	2507.50	104.48
28 PARAS ENERGY	GAS	1683.60	70.15	1675.40	69.81
29 GBARAIN NIPP	GAS	2065.90	86.08	2049.90	85.41
<b>TOTAL</b>		<b>99,865.76</b>	<b>4,161.07</b>	<b>98,101.90</b>	<b>4,087.58</b>

1.7A GENERATION POSITION AT 06:00HRS OF THURSDAY 08/03/2018

	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)	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	7	1G5, 6, 11 & 12 4	440	440	1G5, 6, 11 & 12 4	440	362	1G7 - Out on stator winding failure. 1G8 - Out due to loss of supply to the auxiliary. 1G9 - Out due to burnt 7.5MVA 33/0.415kV & 183.6MVA 16/330kV station service transformer and generator transformer. 1G10 - Shut down due to thrust bearing temperature problem. 1G11 - Generation reduced due to low head water elevation.
	JEBBA HYDRO	6	2G1, 2, 4 & 5 4	380	380	2G1, 2, 4 & 5 4	380	332	2G3 - Out on maintenance. 2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	0 0	0	0	0 0	0	0	The station is out due to turbine pit flooding.
	EGBIN STEAM	5	ST1, 2, 4 & 5 4	880	770	ST1, 2, 4 & 5 4	770	457	ST1 - Generation reduced for observation after maintenance. ST2, 4 & 5 - Generation reduced due to gas constraint. ST3 - Tripped on high vibration.
	SAPELE (STEAM)	1	ST2 1	120	45	ST2 1	45	45	ST1 - Tripped on low drum level. ST3 - Out on stator winding problem. ST4 & 5 - Awaiting major overhaul. ST6 - Tripped on gas control valve not following reference point.
	DELTA (GAS)	18	GT4, 7, 9 - 13, 15, 16 & 18 - 20 12	655	655	GT7, 9, 11 - 13, 15, 16 & 18 - 20 10	615	503	GT3 & 5 - Out due to generator winding fault. GT4 & 10 - Out due to gas constraints. GT6 & 14 - Out on major overhaul. GT15 - Generation reduced due to gas constraint. GT17 - Out on excitation trouble.
	AFAM IV & V (GAS)	8	GT18 1	75	63	GT18 1	63	63	GT1 - 12 - De-commissioned and scrapped. GT13 - 16 - Out on blade failure. GT17 - Out on fault. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT12 1	145	80	GT11 & 13 - Shut down due to gas constraint. Generation reduced due to gas constraint.
	OMOTOSHO GAS	8	GT1 - 8 8	336	304	GT1, 2, 6 & 8 4	152	141.8	GT3, 4, 5 & 7 - Out due to gas constraint.
	OLORUNSOGO GAS	8	GT1 - 8 8	336	304	GT1, 4, 5, 6 & 8 5	190	157.1	GT2, 3 & 7 - Out due to gas constraint. Generation reduced due to gas constraints.
NIPP	GEREGU NIPP	3	GT22 & 23 2	290	290	GT23 1	145	120	GT21 - Out on maintenance. GT22 - Out due to gas constraint.
	SAPELE NIPP	4	GT1 & 3 2	230	230	GT1 & 3 2	225	178.9	GT2 - Out due to high air inlet differential pressure. GT4 - Tripped on fire protection alarm.
	ALAQI NIPP GAS	4	GT1, 2 & 4 3	375	360	0 0	0	0	GT1, 2 & 4 - Tripped due to low gas pressure. GT3 - Shut down due to generator air inlet filter trouble.
	OLORUNSOGO NIPP	6	GT1 - 3 3	375	360	0 0	0	0	GT1 - 3 - Out due to gas constraint. GT4 - Out on 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	95.1	GT1 & 4 - Out due to gas constraint. GT3 - Shut down due to oil leakage on the unit.
	ODUKPANI NIPP	5	GT4 & 5 2	240	230	GT4 & 5 2	230	218.5	GT1 - Shut down due to fire alarm that refused to cancel. GT2 - Out on motor starting problem. GT3 - Tripped on heat vent gas module compartment fan motor trip.
	IHOVBOR NIPP	4	GT1 - 3 3	345	330	GT3 1	110	96.2	GT1 & 2 - Out due to gas constraint. GT4 - Out on maintenance.
	GBARAIN NIPP GAS	1	GT2 1	112.5	112.5	GT2 1	112.5	80.9	Available unit on bar.
	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	375	375	GT11, 12 & ST18 3	375	282	GT11 - Generation reduced due to gas constraint. ST18 - Generation reduced due to broken spray water valve of boiler #12.
IPP	AZURA - EDO	0	0 0	0	0	0 0	0	0	GT11 - Undergoing commissioning tests. GT12 & 13 - Awaiting commissioning.
	AFAM VI GAS/STEAM	4	GT11 - 13 & ST10 4	650	650	GT11 - 13 & ST10 4	650	627	Generation reduced on Afam management decision.
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	77.6	GT1 & 2 - Out on fault. GT3 - Generation reduced due to line constraint.
	AES	0	0 0	0	0	0 0	0	0	Out of production since 27/09/2014.
	ASCO	0	0 0	0	0	0 0	0	0	GT1 - Shut down due to leakage in the furnace.
	OMOKU GAS	6	GT1, 2, 5 & 6 4	100	80	GT1, 2, 5 & 6 4	75.9	75.9	GT3 - Out due to gas leakage. GT4 - Awaiting major overhaul.
	TRANS-AMADI	4	GT1 & 2 2	50	42.8	GT1 & 2 2	42.8	42.8	GT3 - Out on fault. GT4 - Tripped on stator differential.
	RIVERS	1	GT1 1	180	160	GT1 1	160	60	Generation reduced due to gas constraint.
	<b>SUB TOTAL</b>	<b>120</b>	<b>79</b>	<b>7469.5</b>	<b>7091.3</b>	<b>57</b>	<b>5161.2</b>	<b>4095.8</b>	Frequency = 50.43Hz.

1.7B GENERATION POSITION AT 06:00HRS OF THURSDAY 08/03/2018 FOR UNITS ON BILATERAL AGREEMENT

EGBIN	1	ST6		ST6		110	110	Available unit on bar.
		1	170	170	1			
PARAS ENERGY	8	GT2-9		GT2-9		70.2	70.2	Available units on bar.
		8	70.2	70.2	8			
<b>SUB TOTAL</b>	<b>9</b>	<b>9</b>	<b>240.2</b>	<b>240.2</b>	<b>9</b>	<b>180.2</b>	<b>180.2</b>	
<b>GRAND TOTAL</b>	<b>129</b>	<b>88</b>	<b>7709.7</b>	<b>7331.5</b>	<b>66</b>	<b>5,341.40</b>	<b>4,276.00</b>	Frequency = 50.43Hz.

1.7C BILATERAL AGREEMENT UNITS DISPATCH - WEDNESDAY 07/03/2018

FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)		REMARK
Egbin ST6 120MW GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY				

	FEEDER	MAX. LOAD (MW)	TIME (HRS)		REMARK
OGBA	U-STEEL	1MW	0700HRS	22HRS	PLANNED OUTAGE
	PTCEXPRESS	12MW	1600HRS	22HRS	PLANNED OUTAGE
	SANKYO	OUT	0100HRS	NIL	TRIP ON FAULT.O/C & E/F
	FEEDER 8	17	1000HRS	24HRS	NIL
IKORODU	PULK IT	4	1500	24	NIL
	INDUSTRIAL	24	1500	24	NIL
	SPINTEX	5	0700	252	PLANNED OUTAGE
	DANGOTE	1	0100	24	NIL
	LAND CRAFT	41	0300	24	NIL
ALAUUSA	TR4 15MVA	8.3	1000hrs	23hrs	Emergency opening of 132kV lines at Ikeja West
	TR5 -15MVA	6.9	"	"	"
	ALAUUSA	18.9	"	"	"
MLAND	PTC (MARYLAND)	18	13:00	576:00:00	NIL
	<b>TOTAL LOAD</b>	<b>144.1</b>			

BILATERAL AGREEMENT LOAD DISPATCH  
60MW PARAS ENERGY GENERATION TO CEB

FEEDER	MAX	TIME	HOURS IN SERVICE	REMARK
Ikeja West/Sakete 330kV line	71	09:00	24	Nil

1.8 HYDROLOGICAL DATA: THURSDAY 08/03/2018

	KAINJI	JEBBA	SHRORO
HEAD WATER ELEVATION (METERS)	139.48	101.60	370.92
TAIL WATER ELEVATION (METERS)	103.78	74.10	268.60
GROSS OPERATING HEAD (METERS)	35.70	27.50	102.32
AVERAGE TURBINE DISCHARGE (M3/SEC)	1147.00	1434.00	0.00
AVERAGE SPILLAGE (M3/SEC)	0.00	0.00	0.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1147	1434	0
COMPUTED INFLOW (M3/SEC)	215.00	1399.00	0.00
STORAGE DIFFERENTIAL	-932.00	-35	0
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 WEDNESDAY 07/03/2018

DISCO	MAXIMUM LOAD(MW)	TIME(HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD(MW)	TIME(HRS)
ABUJA	488.50	05:00	532.51	360.9	22:00
EKO	589.9	22:00	559.36	393.6	05:00
IKEJA	542.6	06:00	694.58	403.3	21:00

2.0 GAS POSITION: THURSDAY 08/03/2018

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	457	1100	770	770	330
DELTA (GAS)	503	915	615	615	300
OMOTOSHO GAS	141.8	336.8	162	162	184.8
OMOTOSHO NIPP	95.1	500	120	120	380
OLORUNSOGO (GAS)	157.1	336	190	190	146
OLORUNSOGO NIPP	0	750	0	0	750
SAPELE NIPP	178.9	500	230	230	270
SAPELE STEAM	45	720	45	45	675
AFAM IV-V	63	300	63	63	237
AFAM VI	627	650	650	650	0
GEREGU GAS	80	435	145	145	290
GEREGU NIPP	120	435	145	145	290
OKPAI (GAS/STEAM)	282	480	375	375	105
ALAOJU NIPP	0	504	0	0	504
IHOVBOR NIPP	96.2	450	110	110	340
IBOM	77.6	198	115	115	83
ODUKPANI NIPP	218.5	625	230	230	395
<b>TOTAL</b>	<b>3142.2</b>	<b>9234.80</b>		<b>3855</b>	<b>5279.8</b>

1 MMSCF IS EQUIVALENT TO 3.79MW

3.0 SPINNING RESERVE FOR : WEDNESDAY 07/03/2018

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

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF THURSDAY 08/03/2018 = 0MW. FREQUENCY 50.43Hz.

S/N	POWER STATION	UNIT ON SPINNING RESERVE	CONTRACTED RESERVE	ACTUAL RESERVE (MW)	TOTAL (MW)
1	Egbin	ST2	100	0	0
		ST4		0	
		ST6		0	
		ST6		0	
2	Delta	GT16	40	0	0
		GT17	40	0	
3	Olorunsogo NIPP	GT1	40	0	0
		GT2		0	
		GT3		382.5	
		GT4		0	
4	Geregu NIPP	GT22	35	0	0
		GT1	0		
5	Omotosho NIPP	GT2	40	0	0
		GT3		0	
		GT4		0	
<b>TOTAL (MW)</b>			<b>295</b>	<b>0</b>	<b>0</b>

4.0 UNUTILIZED GENERATION CAPABILITY

The unutilized generation capability for Thursday 08/03/2018 as at 0600Hrs was = 2522.3MW.

S/NO	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNUTILIZED GENERATION CAPABILITY (MW)	SUB-TOTAL
<b>4.1 DUE TO GAS CONSTRAINTS:</b>					
1	Omotosho NIPP GT1 & 4	240	0	240	2484.9
2	Ihovbor GT1 & 2	225	0	225	
3	Alaoju NIPP GT1, 2 & 3	360	0	360	
4	Olorunsogo Gas GT1 - 8	304	157.1	146.9	
5	Olorunsogo NIPP GT1 - 3	360	0	360	
6	Omotosho Gas GT3, 4, 5 & 7	152	0	152	
7	Geregu NIPP GT22	145	0	145	
8	Geregu Gas GT11 - 13	435	80	355	
9	Rivers GT1	160	60	100	
10	Egbin ST1, 2, 4 & 5	770	457	313	
11	Okpai GT11	150	104	46	
12	Delta GT15	115	73	42	
		0	0	0	
IT IS ENVISAGED WITH IMPROVED PLANT AVAILABILITY AND RELIEF FROM EXISTING POWER SYSTEM NETWORK RELATED CONSTRAINTS, ADDITIONAL 1407.94MMSCF OF GAS (EQUIVALENT TO 5279.8MW) WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.					
<b>4.2 DUE TO LINE CONSTRAINTS</b>					
1	Ibom GT3	115	77.6	37.4	37.4
				0	
				0	
				0	
<b>4.3 DUE TO FREQUENCY MANAGEMENT OCCASIONED BY DISCOS' LOAD DEMAND</b>					
				0	0
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
<b>4.4 DUE TO WATER MANAGEMENT</b>					
				0	
<b>Grand Total</b>					<b>2522.3</b>

5.0 **OUTAGES:**

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

- 13:37 - 15:53Hrs, Gbarain P/S GT2 tripped on E/F alarm. LHR = 100MW
- 18:29 – 19:59Hrs, Rivers IPP GT1 tripped due to system surge. LHR = 50MW.

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

- 13:49 – 14:12Hrs, Mando/Zaria 132kV line CB tripped at Mando T/S on optimho relay – zone 2CA, location = 153.3km. Back up trip relay 86TE – Blue phase. LHR = 46MW

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

- 10:40 – 14:19Hrs, Yola T/S 150MVA 330/132/33kV transformer T1 was taken out of service to enable maintenance crew carry out annual preventive maintenance on the transformer and its associated equipment. Load loss = 33MW.
- 10:40 – 14:19Hrs, Yola T/S 150MVA 330/132/33kV transformer T2 was taken out of service to enable maintenance crew carry out annual preventive maintenance on the transformer and its associated equipment. Load loss = 33MW.
- 11:07 - 15:37Hrs, Osogbo/Ikeja West 330kV line (cct H1W) was taken out to enable LMD crew secure the dangling sky wire and optic fibre cable between towers #275 & 277, 299 & 300. No load loss as ccts B5M, M5W, H2A, R2A & R1W were in service.
- 11:47 – 18:00Hrs, Afam 1 T/S 132kV main and reserve buses were taken out to enable power system contractor reconnect jumper to the main bus. Load loss = 68.8MW.
- 11:50 – 13:55Hrs, Ikorodu T/S 60MVA 132/33kV transformer T2 was taken out for annual preventive maintenance. Load loss = 28MW.

5(D) **URGENT OUTAGES:**

- 08:58 – 15:35Hrs, Ihovbor/Okada 132kV line 1 was taken out to enable LMD crew cut dangerous trees between towers #47- 63. Load loss = 5MW.
- 08:59 – 13:36Hrs, Ihovbor/Okada 132kV line 2 was taken out to enable LMD crew cut dangerous trees between towers #47-63. Load loss = 6MW.
- 11:34 - 18:03Hrs, Odukpai NIPP GT5 was shut down to enable maintenance crew work on the gas inlet pressure filter. Load loss = 58.7MW.
- 15:33 – 16:08Hrs, Jebba/Osogbo 330kV line 1 (cct J1H) was opened due to low gas pressure on the line CB at Osogbo T/S. No load loss as ccts J2H, J3G & H3G were in service.

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 GENERATOR UNITS IDENTIFIED TO BE ON FREE GOVERNOR CONTROL.
- GROUP 3 - OTHER UNITS IDENTIFIED TO BE OFFERING REGULATORY RESERVE.
- GROUP 4 - OTHER UNITS OFFERING SPINNING RESERVE (THE POWER PLANTS CONTACTED FOR THE ANCILLARY SERVICE)
- GROUP 5 - ALL PLANTS DISPATCHED SUBJECT TO TRANSMISSION CONSTRAINT (NOT YET IDENTIFIED).
- GROUP 6 - ALL PLANTS PROVIDING VOLTAGE SUPPORT ABOVE STATUTORY LIMIT (NOT YET IDENTIFIED).
- GROUP 7 - ALL OTHER PLANTS.

11 (A) **COMMUNICATION MEDIA**

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

The under mentioned lines were opened on frequency control:-

- 05:27 - 06:38Hrs, 09:19 - 09:54Hrs, Akangba/Ojo 132kV line 2. Load loss = 36MW & 35MW respectively. Frequency was 49.96Hz & 50.00Hz respectively.
- 05:27 - 05:42Hrs & 09:20 - 09:56Hrs, Akangba/tire 132kV line 2. Load loss = 28MW & 19MW respectively. Frequency was 49.96Hz & 50.00Hz respectively.

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

5 (G) **330KV LINES THAT ARE OUT ON VOLTAGE CONTROL:-** ccts A1S & K3U.

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 S5B & U1A.

5 (K) **330KV LINES THAT ARE ON SOAK:-** ccts N4J, A2K & F1K.

6 **WEATHER REPORT:-** Rainfall reported at Osogbo & Ayede.

7 **INTERNATIONAL LINES:-**

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

Maximum load - 305MW at 20:00Hrs.

Minimum load - 222MW at 14:00Hrs.

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

Maximum load - 103MW at 24:00Hrs.

Minimum load - 76MW at 08:00Hrs.

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

Maximum load - 36.5MW at 21:00Hrs.

Minimum load - 29.0MW at 09:00Hrs.

8 **MISCELLANEOUS:-**

- 07:40 - 18:13Hrs, Shiroro T/S placed Hold Off Tag (OF12) on cct J7R for the continuation of sky wire job.
- 08:10 through 24:00Hrs, Delta GT10 was shut down due to gas constraint. Load loss = 20MW.
- 08:20 - 16:15Hrs, Benin T/S placed Hold Off Tags (OF12) on ccts B6N & B5M for the continuation of corroded insulators replacement.
- 11:15 – 18:29Hrs, Rivers IPP GT1 went on island operation feeding Port Harcourt complex due to outage on Afam 1 T/S 132kV main and reserve buses. Generation reduced from 50MW to 40MW.
- 11:20Hrs, Omoku P/S GTs 1, 2, 5 & 6 went on island operation feeding Port Harcourt complex due to outage on Afam 1 T/S 132kV main and reserve buses. Generation reduced from 55.7MW to 40MW.  
18:52Hrs – GT5 was tied, 18:54 – GT6 was tied, 18:56Hrs – GT1 was tied, 18:59Hrs – GT2 was tied.
- 11:32Hrs, Delta GT15 was tied. The unit was out on gas constraint
- 11:36Hrs, Olorunsogo Gas GT8 was tied to swap with GT2.
- 11:52 through 24:00Hrs, Olorunsogo Gas GT2 was shut down after its 29.8MW has been transferred to GT8

STATIONS	NO INSTALLED	NO. WORKING
PLC/PAX	37	33
OPTIC FIBRE	13	10
PLS	14	5

11 (B) SCADA RTU STATUS

STATIONS	NO. INSTALLED	NO OF RTU DISTURBED	NO OF RTU WORKING
POWER STATIONS	8	6	2
330kV	19	7	12
132kV	102	77	25

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.

- 9 13:36Hrs of 06/03/2018 to 14:58Hrs, Akoka T/S 40MVA 132/33kV transformer T3 was taken out to top up low oil level on the transformer OLTC tank to normal. Load loss = 9MW. On restoration at 14:21Hrs of 06/03/2018, the transformer primary CB tripped on differential relay. LHR = 0.1MW.
- 10 13:59Hrs, Odukpai NIPP declared unit GT3 unavailable.
- 11 18:21Hrs, Okpai GT12 was tied. The unit was out on maintenance.
- 12 18:11 through 24:00Hrs, Odukpai GT2 was shut down due to low gas pressure. Load loss = 18.2MW.
- 13 **LACK OF REACTOR AND UNRELIABLE STATION SERVICE SUPPLY AT IKOT-EKPENE T/S ARE HINDERING SMOOTH OPERATION.**
- 14 **THE SCADA COVERAGE OF ONLY LIMITED AREAS IS NOT GOOD FOR THE SMOOTH OPERATION OF THE GRID.**

12(D) LAGOS REGION

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

12(E) UNAVAILABLE CAPACITOR BANK:

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

12 (F) LINES WITH MISSING SKY WIRE

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

**ENUGU REGION:**

- 1 New Haven/Yandev 132kV line CB - Faulty Red phase CB pole. Protection is transferred to the bus coupler CB.
- 2 Abakaliki T/S 30MVA 132/33kV transformer T1A and 60MVA 132/33kV transformer T2 primary CBs - Breakers were not provided since commissioning but the transformers are protected by Nkalagu 132kV line CB.
- 3 Oji River T/S 30MVA 132/33kV transformer T1A primary CB - The breaker is completely out of service and bypassed. The transformer is either protected by Onitsha/Oji 132kV line CB or New Haven/Oji 132kV line CB.
- 4 Oturkpo/Yandev 132kV By pass isolator - Canibalized to repair the line isolator.

**SHIRORO REGION**

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

**PORT HARCOURT REGION**

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

**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 (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) - 08056002757, CUG: 08129458475





