

# TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF MONDAY 14/05/2018

FOR: EVENTS OF SUNDAY 13/05/2018

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	22,780	21:15	13/05/2018
GENERATION CAPABILITY	8082.2	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5119.2	-do-	-do-
PEAK GENERATION	4590.9	-do-	-do-
LOWEST GENERATION	2646.9	09:00	13/05/2018
8-HOURLY DURATION PEAK	3280.6	0100-0800	-do-
	3566.6	0900-1600	-do-
	4590.9	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	365	Omotosho T/S	10:00
LOWEST VOLTAGE FOR THE DAY	300	Gombe, Kumbotso & Yola T/S	13:00, 20:00 & 21:00

## 1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75 - 50.25	
HIGHEST FREQUENCY	50.73	03:04
LOWEST FREQUENCY	49.71	21:15

## 1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 1st Feb., 2018	No. of days since last total collapse: 94
Date of last partial collapse: 12 <sup>th</sup> April., 2018	No. of days since last partial collapse: 30
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	3	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	0	1	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	--	--	9
2018	Total	5	1	0	--	--	--	--	--	--	--	--	6
	Partial	0	0	0	1	--	--	--	--	--	--	--	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	198
2	JEBBA	HYDRO	330
3	SHIRORO	HYDRO	540
4	EGBIN ST2 - 5	STEAM	356
5	SAPELE	STEAM	49
6	DELTA	GAS	580
7	AFAM IV-V	GAS	0
8	GEREGU GAS	GAS	144
9	OMOTOSHO GAS	GAS	136
10	OLORUNSOGO GAS	GAS	132.2
11	GEREGU NIPP	GAS	120
12	SAPELE NIPP	GAS	216.4
13	ALAOJI NIPP	GAS	0
14	OLORUNSOGO NIPP	GAS	0
15	OMOTOSHO NIPP	GAS	109
16	ODUKPANI NIPP	GAS	0
17	IHOVBOR NIPP	GAS	104.5
18	OKPAI	GAS	264
19	AFAM VI	GAS	310
20	IBOM POWER	GAS	101.6
21	ASCO	GAS	0
22	A.E.S	GAS	0
23	OMOKU	GAS	82
24	TRANS AMADI	GAS	0
25	RIVERS IPP	(GAS)	140
26	AZURA - EDO IPP	(GAS)	462
27	EGBIN ST6	(GAS)	146
28	PARAS ENERGY	(GAS)	70.2
29	GBARAIN NIPP	GAS	0
<b>TOTAL</b>		<b>4590.9</b>	<b>2646.9</b>

## 1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT		
		MWH	MWH/H	MWH	MWH/H	
1	KAINJI	4572.00	190.50	4556.40	189.85	
2	JEBBA	5310.00	221.25	5291.32	220.47	
3	SHIRORO	7989.00	332.88	7962.88	331.79	
4	EGBIN ST2 - 5	7195.00	299.79	6813.20	283.88	
5	SAPELE	1131.00	47.13	1017.10	42.38	
6	DELTA	11575.23	482.30	11354.90	473.12	
7	AFAM IV-V	GAS	0.00	0.00	0.00	
8	GEREGU GAS	GAS	2296.90	95.70	2277.03	94.88
9	OMOTOSHO GAS	GAS	3149.00	131.21	3124.90	130.20
10	OLORUNSOGO GAS	GAS	3187.51	132.81	3160.52	131.69
11	GEREGU NIPP	GAS	2342.76	97.62	2329.99	97.08
12	SAPELE NIPP	GAS	4184.64	174.36	4165.16	173.55
13	ALAOJI 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	2267.10	94.46	2248.00	93.67
16	ODUKPANI NIPP	GAS	0.00	0.00	0.00	0.00
17	IHOVBOR NIPP	GAS	2200.00	91.67	2186.44	91.10
18	OKPAI	GAS	4447.00	185.29	4337.10	180.71
19	AFAM VI	GAS	6611.64	275.49	6489.15	270.38
20	IBOM	GAS	1858.47	77.44	1850.00	77.08
21	ASCO	GAS	0.00	0.00	0.00	0.00
22	AZURA - EDO IPP	GAS	6987.80	291.16	6975.60	290.65
23	A.E.S	GAS	0.00	0.00	0.00	0.00
24	OMOKU	GAS	1881.60	78.40	1840.85	76.70
25	TRANS AMADI	GAS	0.00	0.00	0.00	0.00
26	RIVERS IPP	GAS	3174.40	132.27	3168.49	132.02
27	EGBIN ST6	STEAM	2819.00	117.46	2656.70	110.70
28	PARAS ENERGY	GAS	1681.20	70.05	1673.00	69.71
29	GBARAIN NIPP	GAS	0.00	0.00	0.00	0.00
<b>TOTAL</b>		<b>86,861.25</b>	<b>3,619.22</b>	<b>85,478.73</b>	<b>3,561.61</b>	

1.7A GENERATION POSITION AT 06:00HRS OF MONDAY 14/05/2018

	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	8	1G5 & 6 2	240	210	1G5 & 6 2	210	195	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 - Out on maintenance. 1G12 - Shut down to replace draft tube drain valve.
	JEBBA HYDRO	6	2G1 - 3 & 5 4	380	380	2G1, 3 & 5 3	285	252	2G2 - Out on water management. 2G4 - Out on maintenance. 2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G1 - 4 4	600	600	411G1 - 4 4	600	390	411G2 & 3 - Generation reduced on frequency management.
	EGBIN STEAM	5	ST1, 2, 4 & 5 4	880	880	ST2 & 4 2	340	340	ST1 & 5 - Out on frequency management. ST3 - Tripped on high vibration since 19th June 2017.
	SAPELE (STEAM)	6	ST2 1	120	47	ST2 1	47	47	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	GT7, 9 - 13, 15, 16 & 18 - 20 11	635	635	GT7, 9 - 13, 15, 18 - 20 10	535	511	GT3 & 5 - Out due to generator winding fault. GT4 - Tripped on loss of excitation. GT6 & 14 - Out on major overhaul. GT16 - Out on frequency management. GT17 - Out on excitation trouble.
	AFAM IV & V (GAS)	8	0 0	0	0	0 0	0	0	GT1 - 12 - De-commissioned and scrapped. GT13 - 16 - Out on blade failure. GT17 - Tripped on loss of excitation. GT18 - Tripped on lube oil pressure. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT12 1	145	15	GT11 & 13 - Out due to gas constraint. GT12 - Generation reduced due to gas constraint.
	OMOTOSHO GAS	8	GT1 - 8 8	336	304	GT1, 6 - 8 4	152	140	GT2 - 5 - Out on frequency management.
	OLORUNSOGO GAS	8	GT1 - 8 8	336	304	GT1, 4, 6 & 8 4	152	135.8	GT2, 3, 5 & 7 - Out on frequency management.
	GEREGU NIPP	3	GT21 - 23 3	435	435	GT22 3	120	60	GT21 & 23 - Out due to gas constraint. GT22 - Generation reduced due to gas constraint.
	SAPELE NIPP	4	GT1 & 3 2	112.5	225	GT1 & 3 2	225	172.4	GT2 - Shut down due to air inlet differential pressure. GT4 - Tripped on fire protection.
	ALAOJI 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 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	103.3	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	0 0	0	0	GT1 - Out on fault. GT2 - Out due to malfunctioning gas regulating valve. GT3 - Tripped on high air inlet differential pressure. GT4 & 5 - Shut down due to work on gas pipe line equipment.	
IHOVBOR NIPP	4	GT3 1	112.5	112.5	GT3 1	110	104	GT1, 2 & 4 - Out on maintenance. GT3 - Removed from free governor due to gas vent problem.	
GBARAIN NIPP GAS	1	GT2 1	112.5	112.5	0 0	0	0	GT2 - Shut down due to staff on strike.	
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	375	375	GT11, 12 & ST18 3	375	299	ST18 - Generation reduced due to broken spray water valve of boiler #12.
	AZURA - EDO	3	GT11 - 13 3	459	459	GT11 - 13 3	459	414	Available units on bar.
	AFAM VI GAS/STEAM	4	GT11 - 13 & ST10 4	640	640	GT11 - 13 3	450	221	GT11 & 13 - Generation reduced for ST10 steam conditioning
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	82.7	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	1	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	84.5	GT1, 2, 5 & 6 4	84.5	84.5	GT3 - Out due to gas leakage. GT4 - Awaiting major overhaul.
	TRANS-AMADI	4	GT1 & 2 2	50	40	0 0	0	0	GT1 & 2 - Out due to line constraint since 03/04/2018. GT3 - Out on fault. GT4 - Tripped on generator differential lockout.
	RIVERS	1	GT1 1	180	160	GT1 1	160	140	Available unit on bar.
	<b>SUB TOTAL</b>	<b>130</b>	<b>81</b>	<b>8018.5</b>	<b>7863.5</b>	<b>51</b>	<b>4474.5</b>	<b>3706.7</b>	Frequency = 50.28Hz.

1.7B GENERATION POSITION AT 06:00HRS OF MONDAY 14/05/2018 FOR UNITS ON BILATERAL AGREEMENT

FEEDER	UNIT	ST6		ST6		150	150	Available unit on bar.
		1	220	150	1			
EGBIN	1	1	220	150	1	150	150	Available unit on bar.
PARAS ENERGY	8	GT2 - 9	69.4	69.4	GT2 - 9	69.4	69.4	Available units on bar.
		8			8			
<b>SUB TOTAL</b>		<b>9</b>	<b>289.4</b>	<b>219.4</b>	<b>9</b>	<b>219.4</b>	<b>219.4</b>	
<b>GRAND TOTAL</b>		<b>139</b>	<b>8307.9</b>	<b>8082.9</b>	<b>60</b>	<b>4,693.90</b>	<b>3,926.10</b>	Frequency = 50.28Hz.

1.7C BILATERAL AGREEMENT UNITS DISPATCH - SUNDAY 13/05/2018

FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)		REMARK	
Egbin ST6 120MW GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY					
OGBA	U-STEEL	ON	0100HRS	24	NIL
	PTCEXPRESS	8	1300HRS	24	NIL
	SANKYO	ON	0100HRS	24	NIL
	FEEDER 8	8	1300HRS	24	NIL
IKORODU	PULK IT	4	1900HRS	24	NIL
	INDUSTRIAL	16	200HRS	24	NIL
	SPINTEX	9	0100HRS	24	NIL
	DANGOTE	3	1900HRS	24	NIL
ALAUUSA	LAND CRAFT	16	0300HRS	24	NIL
	TR4 15MVA	4.3	2100HRS	24	NIL
	TR5 -15MVA	3.6	1100HRS	24	NIL
MLAND	ALAUSA	9.9	1500HRS	24	NIL
	PTC (MARYLAND)	16	1100HRS	24	NIL
	LORDSMITH (PAPALANTO)	0.2	2300HRS	4HRS	BROKEN HT POLE REPLACED
<b>TOTAL LOAD</b>		<b>98</b>			

BILATERAL AGREEMENT LOAD DISPATCH  
60MW PARAS ENERGY GENERATION TO CEB

FEEDER	MAX	TIME	HOURS IN SERVICE	REMARK
Ikeja West/Sakete 330kV line	71.8	20:00	24	Nii

BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI LOAD DISPATCH TO THE FOLLOWING COMPANIES OF SUNDAY - 13/05/2018

COMPANY NAME	VOLTAGE LEVEL	EXPECTED CONTRACTUAL LOAD (MW)	MAX	TIME	HOUR IN SERVICE	REMARK
INNER GALAXY	132kV line	25	On	On	24	On soak.
KAM STEEL		15	3.7	16:00	24	NIL
OLAM FLOUR MILLS	33kV feeder	3	1.8	13:00	24	NIL
LORDSMITH		3	0.2	23:00	4	Broken HT pole.

**1.8 HYDROLOGICAL DATA: MONDAY 14/05/2018**

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	133.36	99.85	365.86
TAIL WATER ELEVATION (METERS)	102.2	74.1	271.00
GROSS OPERATING HEAD (METERS)	<b>31.16</b>	<b>25.75</b>	<b>94.86</b>
AVERAGE TURBINE DISCHARGE (M3/SEC)	667.00	941.00	396.00
AVERAGE SPILLAGE (M3/SEC)	245.00	0.00	0.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	<b>912</b>	<b>941</b>	<b>396</b>
COMPUTED INFLOW (M3/SEC)	0.00	1045.00	126.00
STORAGE DIFFERENTIAL	<b>-912.00</b>	<b>104</b>	<b>-270</b>
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 SUNDAY 13/05/2018**

DISCO	MAXIMUM LOAD(MW)	TIME(HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD(MW)	TIME(HRS)
ABUJA	447.30	19:00	583.52	244.7	10:00
EKO	417.40	23:00	658.15	250	09:00
IKEJA	573.8	21:00	761.12	362.5	11:00

**2.0 GAS POSITION: MONDAY 14/05/2018**

STATION	SIGNED ACQ Annual Contracted Quantity MMSCFD	INSTALLED CAPACITY OF THERMAL STATIONS (MW)	PREVIOUS DAY OFF-TAKE (MMSCFD)	CAPABILITY OF UNITS ON BAR OF THERMAL STATIONS (MW)	DIFFERENCE (MW)
EGBIN P/S	270	1100		430	610
DELTA (GAS)	420	915		535	380
OMOTOSHO GAS	122	336.8		152	184.8
OMOTOSHO NIPP	88.8	500		120	380
OLORUNSOGO (GAS)	122.3	336		152	184
OLORUNSOGO NIPP	0	750		0	750
SAPELE NIPP	150.4	500		225	275
SAPELE STEAM	48	720		47	673
AFAM IV-V	0	300		0	300
AFAM VI	220	650		450	200
GEREGU GAS	50	435		145	290
GEREGU NIPP	70	435		145	290
ORPATIGAS/STEAM	151	480		375	105
ALACUJI NIPP	0	504		0	504
IHOVBOR NIPP	90.8	450		110	340
IBOM	81	198		115	83
ODUKPANI NIPP	0	625		0	625
<b>TOTAL</b>	<b>1884.3</b>	<b>9236.63</b>		<b>3061</b>	<b>6173.8</b>

1 MMSCF IS EQUIVALENT TO 3.78MW

**3.0 SPINNING RESERVE FOR : SUNDAY 13/05/2018**

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

**3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF MONDAY 14/05/2018 0MW FREQUENCY 50.28Hz.**

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	Geragu NIPP	GT22	35	0	0
5	Omotosho NIPP	GT1	40	0	0
		GT2		0	
		GT3		0	
		GT4		0	
<b>TOTAL (MW)</b>			<b>295</b>	<b>0</b>	<b>0</b>

**4.0 UNAVAILABLE GENERATION CAPABILITY**

The unavailable generation capability for Monday 14/05/2018 as at 0600Hrs was = 3364.3MW.

S/NO	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNAVAILABLE GENERATION CAPABILITY (MW)	SUB-TOTAL
<b>4.1 DUE TO GAS CONSTRAINTS:</b>					
1	Omotosho NIPP GT1 & 4	240	0	240	2027
2	Alacji NIPP GT1, 2 & 4	360	0	360	
3	Geragu NIPP GT21 - 23	435	60	375	
4	Olorunsogo NIPP GT1 - 3	360	0	360	
5	Geragu Gas GT11 - 13	435	15	420	
6	Odukpiani NIPP GT4 & 5	230	0	230	
7	Alam VI GT18	42	0	42	
IT IS ENVISAGED WITH IMPROVED PLANT AVAILABILITY AND RELIEF FROM EXISTING POWER SYSTEM NETWORK RELATED CONSTRAINTS, ADDITIONAL 1646.34MMSCF OF GAS (EQUIVALENT TO 6173.8MW) WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.					
<b>4.2 DUE TO LINE CONSTRAINTS</b>					
1	Trans-Amadi GT1 & 2	40	0	40	72.3
2	Ikom GT3	115	82.7	32.3	
				0	
<b>4.3 DUE TO FREQUENCY MANAGEMENT OCCASIONED BY DISCOS' LOAD DEMAND</b>					
1	Delta GT16	80	0	80	1170
2	Alam VI GT11 & ST10	340	90	250	
3	Olorunsogo Gas GT2 - 3, 5 & 7	152	0	152	
4	Omotosho Gas GT2 - 5	152	0	152	
5	Egbin ST1 & 5	345	0	345	
6	Shiroro 411G2 & 3	300	109	191	
<b>4.4 DUE TO WATER MANAGEMENT</b>					
1	Jebba 2G2	95	0	95	95
<b>Grand Total</b>					<b>3364.3</b>

5.0 **OUTAGES:**

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

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

- 1 01:33 – 01:41Hrs, Ayede/Shagamu 132kV line CB tripped at Ayede T/S On Optimho relay – location – 15.73km. On Micom relay – O/C Yellow Phase. LHR = 31MW.
- 2

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

- 1 09:42 – 13:00Hrs, Omotosho/Ikeja West and Egbin/Ikeja West 330kV lines (ccts M5W & N6W) were taken out for annual preventive maintenance on their tie CB and isolators at Ikeja West T/S. No load loss as ccts K7W, K8W, N7K, N8K, B5M and B6N were in service.
- 2 10:32 – 13:36Hrs, Shagamu/Ijebu-Ode 132kV line was taken out of service to enable maintenance crew replace corroded Yellow Phase insulators on tower #114. Load loss = 18MW.

5(D) **URGENT OUTAGES: NIL**

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 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).

11 (A) **COMMUNICATION MEDIA**

STATIONS	NO INSTALLED	NO. WORKING
PLC/PAX	37	32
OPTIC FIBRE	13	10
PLS	14	0

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	79	23

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

The under mentioned line was opened on frequency control.

- 1 20:15 - 20:17Hrs, Osogbo/Akure 132kV line. Load loss = 50MW. Frequency was 49.71Hz

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

5 (G) **330KV LINES THAT ARE OUT ON VOLTAGE CONTROL:-** ccts A2K, U2A & 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 K3U & S5B.

5 (K) **330KV LINES THAT ARE ON SOAK:-** ccts N4J, J2H & F1K.

6 **WEATHER REPORT:-** NIL

7 **INTERNATIONAL LINES:-**

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

Maximum load - 276MW at 21:00Hrs.

Minimum load - 165MW at 10:00Hrs.

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

Maximum load - 104MW at 15:00Hrs.

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

Maximum load - 42.0MW at 22:00Hrs.

Minimum load - 28.0MW at 04:00Hrs.

8 **MISCELLANEOUS:-**

- 1 00:07 - 19:53Hrs, Afam VI P/S GT11 was shut down on frequency management. Load loss = 117MW.
- 2 00:30 - 18:48Hrs, Shiroro 411G1 was shut down on frequency management. Load loss = 55MW.

3 00:52 - 16:03Hrs, Jebba 2G3 was shut down on frequency management. Load loss = 72MW.

4 03:55 – 13:15Hrs, Jebba/Shiroro 330kV line 1 (cct J3R) was taken out on voltage control. V/P = At Shiroro T/S: 351/350kV and at Jebba T/S: 354/346kV.

5 04:05 – 13:18Hrs, Benin/Ajaokuta 330kV line 1 (cct B11J) was taken out on voltage control. V/P At Benin T/S = 345/341kV and at Ajaokuta T/S 342/340kV.

6 09:31 - 18:15Hrs, Delta P/S GT20 was shut down on frequency management. Load loss = 77MW.

7 12:40 – 18:44Hrs of 12/05/2018, Abakaliki T/S 60MVA 132/33kV transformer T2 was taken out to enable maintenance crew install a new primary isolator for the transformer . Load loss = 2.MW.

8 15:23Hrs, Jebba G/S 2G2 was tied. The unit was out on frequency management.

9 16:08Hrs, Shiroro P/S 411G3 was tied. The unit was out on frequency management.

10 17:42Hrs, Delta P/S GT16 was tied. The unit was out on frequency management.

11 18:47Hrs, Delta GT19 was tied. The unit was out on frequency management.

12 19:03Hrs, Azura-Edo GT13 was tied. The unit was out on frequency management.

13 19:14Hrs, Okpai IPP ST18 was tied. The unit was out on frequency management.

14 19:26Hrs, Katampe T/S 75MX 330kV Shunt Reactor R1 was switched off on voltage control. V/P = 321/331kV

15 19:52Hrs, Delta G/S GT9 was tied. The unit was out on 125V battery bank problem.

\*\*\*\*\* **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 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.

**12(C) LAGOS REGION**

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

**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.

**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/Iire 132kV lines 1 & 2 - 1 span.
- 8 Ikeja West/Agbara 132kV lines 1 & 2 - 61 spans.
- 9 Ikeja West/Otta 132kV lines 1 & 2- 17 spans.

**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 (E) UNAVAILABLE SYNCHROSCOPES :**

- 1 Benin, Ikeja West, Onitsha, Egbin, Ugwuaji, 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



