

# TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF SATURDAY 12/05/2018

FOR: EVENTS OF FRIDAY 11/05/2018

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	22,780	21:00	11/05/2018
GENERATION CAPABILITY	8194.2	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5186.2	-do-	-do-
PEAK GENERATION	4696.2	-do-	-do-
LOWEST GENERATION	3387	04:00	11/05/2018
8-HOURLY DURATION PEAK	3808.4	0100-0800	-do-
	3726.3	0900-1600	-do-
	4696.2	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		Omotosho T/S	08:00
LOWEST VOLTAGE FOR THE DAY	295	Sakete T/S	21:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75 - 50.25	
HIGHEST FREQUENCY	50.68	07:56
LOWEST FREQUENCY	49.90	21:45

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 1st Feb., 2018		No. of days since last total collapse: 92												
Date of last partial collapse: 12 <sup>th</sup> April., 2018		No. of days since last partial collapse: 28												
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	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	0	6
	Partial	--	--	1	0	2	0	--	0	0	1	0	0	4
2016	Total	--	--	2	3	6	5	0	0	1	1	2	2	22
	Partial	--	--	1	0	1	3	1	0	0	0	0	0	6
2017	Total	5	3	0	3	1	1	0	0	1	1	--	15	
	Partial	1	0	1	0	0	0	1	0	3	3	--	9	
2018	Total	5	1	0	--	--	--	--	--	--	--	--	6	
	Partial	0	0	0	0	0	0	0	0	0	0	0	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	270	188
2 JEBBA	HYDRO	331	232
3 SHIRORO	HYDRO	541	255
4 EGBIN ST2 - 5	STEAM	310	280
5 SAPELE	STEAM	47	49
6 DELTA	GAS	550	376
7 AFAM IV-V	GAS	62	0
8 GEREGU GAS	GAS	55	60
9 OMOTOSHO GAS	GAS	177.5	152.3
10 OLORUNSOGO GAS	GAS	168.6	138.9
11 GEREGU NIPP	GAS	80	91
12 SAPELE NIPP	GAS	201.9	146.7
13 ALAQJI NIPP	GAS	0	0
14 OLORUNSOGO NIPP	GAS	0	0
15 OMOTOSHO NIPP	GAS	110.6	87.8
16 ODUKPANI NIPP	GAS	0	0
17 IHOVBOR NIPP	GAS	89.6	89.6
18 OKPAI	GAS	277	156
19 AFAM VI	GAS	415	324
20 IBOM POWER	GAS	103.8	73.1
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	81.2	58.4
24 TRANS AMADI	GAS	0	0
25 RIVERS IPP	(GAS)	140	130
26 AZURA - EDO IPP	(GAS)	453	338
27 EGBIN ST6	(GAS)	167	111
28 PARAS ENERGY	(GAS)	71	70.2
29 GBARAIN NIPP	GAS	0	0
<b>TOTAL</b>		<b>4696.2</b>	<b>3387</b>

1.6 ENERGY GENERATED/ENERGY SENT OUT:

STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	5548.00	231.17	5532.50	230.52
2 JEBBA	HYDRO	5758.00	239.92	5737.36	239.06
3 SHIRORO	HYDRO	8929.00	372.04	8901.94	370.91
4 EGBIN ST2 - 5	STEAM	7002.00	291.75	6526.40	271.93
5 SAPELE	STEAM	1029.30	42.89	1029.20	42.88
6 DELTA	GAS	11496.77	479.03	11250.30	468.76
7 AFAM IV-V	GAS	1032.00	43.00	1028.70	42.86
8 GEREGU GAS	GAS	1344.80	56.03	1323.70	55.15
9 OMOTOSHO GAS	GAS	3749.00	156.21	3716.70	154.86
10 OLORUNSOGO GAS	GAS	3560.59	148.36	3533.70	147.24
11 GEREGU NIPP	GAS	2094.51	87.27	2081.58	86.73
12 SAPELE NIPP	GAS	4074.69	169.78	4053.50	168.90
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	2348.40	97.85	2330.70	97.11
16 ODUKPANI NIPP	GAS	0.00	0.00	0.00	0.00
17 IHOVBOR NIPP	GAS	2150.00	89.58	2132.27	88.84
18 OKPAI	GAS	4551.00	189.63	4475.80	186.49
19 AFAM VI	GAS	7552.35	314.68	7453.06	310.54
20 IBOM	GAS	1918.42	79.93	1909.00	79.54
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 AZURA - EDO IPP	GAS	8812.00	367.17	8786.00	366.08
23 A.E.S	GAS	0.00	0.00	0.00	0.00
24 OMOKU	GAS	1635.10	68.13	1600.40	66.68
25 TRANS AMADI	GAS	0.00	0.00	0.00	0.00
26 RIVERS IPP	GAS	3308.90	137.87	3302.70	137.61
27 EGBIN ST6	STEAM	2939.00	122.46	2776.80	115.70
28 PARAS ENERGY	GAS	1671.80	69.65	1663.80	69.33
29 GBARAIN NIPP	GAS	0.00	0.00	0.00	0.00
<b>TOTAL</b>		<b>92,505.43</b>	<b>3,854.39</b>	<b>91,146.11</b>	<b>3,797.75</b>

1.7A GENERATION POSITION AT 06:00HRS OF SATURDAY 12/05/2018

	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 & 12 3	340	290	1G5, 6 & 12 3	290	186	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.
	JEBBA HYDRO	6	2G1 - 3 & 5 4	380	380	2G1, 3 & 5 3	285	237	2G2 - Out on frequency management. 2G4 - Out on maintenance. 2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G1 - 4 4	600	600	411G1, 3 & 4 3	450	323	411G1 - Generation reduced on frequency management. 411G2 - Out on frequency management.
	EGBIN STEAM	5	ST1, 2, 4 & 5 4	880	880	ST2 & 4 2	279	279	ST1 & 5 - Out on frequency management. ST3 - Tripped on high vibration since 19th June 2017.
	SAPELE (STEAM)	6	ST2 1	120	48	ST2 1	48	48	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, 10, 11, 13, 15, 16 & 18 - 20 9	595	595	GT7, 10, 11, 13, 15, & 18 - 20 8	515	420	GT3 & 5 - Out due to generator winding fault. GT4 - Tripped on loss of excitation. GT9 & 12 - Out on 125V battery bank problem. 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	50	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	122	GT2 - 5 - Out on frequency management. Generation reduced on frequency management.
	OLORUNSOGO GAS	8	GT1 - 8 8	336	304	GT1, 4, 6 & 8 4	152	122.3	GT2, 3, 5 & 7 - Out on frequency management. Generation reduced on frequency management.
NIPP	GEREGU NIPP	3	GT21 - 23 3	435	435	GT22 1	145	70	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	150.4	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	88.8	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	90.8	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 2	300	151	GT12 - Generation reduced on frequency management. ST18 - Shut down on frequency management.
	AZURA - EDO	3	GT11 - 13 3	450	450	GT11 - 13 3	450	337	GT11 - Generation reduced on frequency management.
	AFAM VI GAS/STEAM	4	GT11 - 13 & ST10 4	640	640	GT12 & 13 2	300	220	ST10 - Out due to gas constraint. GT11 - Out on frequency management.
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	81	GT1 & 2 - Out on fault.
	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	81.6	GT1, 2, 5 & 6 4	81.6	81.6	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>80</b>	<b>8069.5</b>	<b>7892.6</b>	<b>47</b>	<b>4322.6</b>	<b>3197.9</b>	Frequency = 50.53Hz.

1.7B GENERATION POSITION AT 06:00HRS OF SATURDAY 12/05/2018 FOR UNITS ON BILATERAL AGREEMENT

FEEDER	UNIT	ST6		ST6		MAX	TOTAL	REMARK
		1	8	1	8			
EGBIN	1	1	220	100	100	100	100	Available unit on bar.
PARAS ENERGY	8	8	69.4	69.4	69.4	69.4	69.4	Available units on bar.
<b>SUB TOTAL</b>	<b>9</b>	<b>9</b>	<b>289.4</b>	<b>169.4</b>	<b>9</b>	<b>169.4</b>	<b>169.4</b>	
<b>GRAND TOTAL</b>	<b>139</b>	<b>89</b>	<b>8358.9</b>	<b>8062</b>	<b>56</b>	<b>4,492.00</b>	<b>3,367.30</b>	Frequency = 50.53Hz.

1.7C BILATERAL AGREEMENT UNITS DISPATCH - FRIDAY 11/05/2018

FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)		REMARK	
Egbin ST6 120MW GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY					
OGBA	U-STEEL	ON	100	24	NIL
	PTCEXPRESS	10	1100	24	NIL
	SANKYO	ON	100	24	NIL
	FEEDER 8	12	1200	24	NIL
IKORODU	PULK IT	5	1000	24	NIL
	INDUSTRIAL	22	2000	24	NIL
	SPINTEX	14	0100	24	NIL
	DANGOTE	ON	0100	24	NIL
ALAUUSA	LAND CRAFT	15	0600	24	NIL
	TR4 15MVA	6.3	1400	24	NIL
	TR5 -15MVA	4.6	1200	24	NIL
MLAND	ALAUSA	11.9	2000	24	NIL
	PTC (MARYLAND)	16	2000	2400	NIL
	LORDSMITH [PAPALANTO]	0.3	2100	15	T2 PRY CB AIR COMPRESSOR REPAIRS
	<b>TOTAL LOAD</b>	<b>117.1</b>			

BILATERAL AGREEMENT LOAD DISPATCH  
60MW PARAS ENERGY GENERATION TO CEB

FEEDER	MAX	TIME	HOURS IN SERVICE	REMARK
Ikeja West/Sakete 330kV line	71	21:00	24	Nil

BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI LOAD DISPATCH TO THE FOLLOWING COMPANIES OF THURSDAY 10/05/2018

COMPANY NAME	VOLTAGE LEVEL	EXPECTED CONTRACTUAL LOAD (MW)	MAX	TIME	HOUR IN SERVICE	REMARK
INNER GALAXY	132kV line	25	On	On	On	On soak.
KAM STEEL		15	4.7	02:00	24	Nil
OLAM FLOUR MILLS	33kV feeder	3	1.7	01:00	24	Nil
LORDSMITH		3	0.4	01:00	24	Nil

**1.8 HYDROLOGICAL DATA: SATURDAY 12/05/2018**

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	133.57	99.88	366.14
TAIL WATER ELEVATION (METERS)	102.02	74.0	271.00
GROSS OPERATING HEAD (METERS)	<b>31.55</b>	<b>25.88</b>	<b>95.14</b>
AVERAGE TURBINE DISCHARGE (M3/SEC)	815.00	1043.00	446.00
AVERAGE SPILLAGE (M3/SEC)	92.00	0.00	0.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	<b>907</b>	<b>1043</b>	<b>446</b>
COMPUTED INFLOW (M3/SEC)	0.00	997.00	238.00
STORAGE DIFFERENTIAL	<b>-907.00</b>	<b>-46</b>	<b>-208</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 FRIDAY 11/05/2018**

DISCO	MAXIMUM LOAD(MW)	TIME(HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD(MW)	TIME(HRS)
ABUJA	493.80	23:00	621.61	306.1	03:00
EKO	426.20	21:00	694.58	332.6	11:00
IKEJA	596.6	22:00	1020.8	395.2	14:00

**2.0 GAS POSITION: SATURDAY 12/05/2018**

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	379	515	721
DELTA (GAS)	420	915	515	400	400
OMOTOSHO GAS	122	336.8	152	184.8	184.8
OMOTOSHO NIPP	88.8	500	120	380	380
OLORUNSOGO (GAS)	122.3	336	152	184	184
OLORUNSOGO NIPP	0	750	0	750	750
SAPELE NIPP	150.4	500	225	275	275
SAPELE STEAM	48	720	48	672	672
AFAM I/V	0	300	0	300	300
AFAM VI	220	650	300	350	350
GEREGU GAS	50	435	145	290	290
GEREGU NIPP	70	435	145	290	290
OKPATIGAS/STEAM	151	480	300	180	180
ALACUJI NIPP	0	504	0	504	504
IHOVBOR NIPP	90.8	450	112.5	337.5	337.5
IBOM	81	198	115	83	83
ODUKPANI NIPP	0	625	0	625	625
<b>TOTAL</b>	<b>1884.3</b>	<b>9234.80</b>	<b>2708.5</b>	<b>2708.5</b>	<b>6526.3</b>

1 MMSCF IS EQUIVALENT TO 3.78MW

**3.0 SPINNING RESERVE FOR : FRIDAY 11/05/2018**

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

**3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF SATURDAY 12/05/2018 0MW, FREQUENCY 50.53Hz.**

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	
<b>TOTAL (MW)</b>			<b>295</b>	<b>0</b>	<b>0</b>

**4.0 UNAVAILABLE GENERATION CAPABILITY**

The unavailable generation capability for Saturday 12/05/2018 as at 0600Hrs was = 3231MW.

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	2107
2	Alacji NIPP GT1, 2 & 4	360	0	360	
3	Geregu NIPP GT21 - 23	435	70	365	
4	Olorunsogo NIPP GT1 - 3	360	0	360	
5	Geregu Gas GT11 - 13	360	50	310	
6	Odjukpani NIPP GT4 & 5	230	0	230	
7	Afam VI ST10	190	0	190	
8	Afam IV GT18	52	0	52	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
IT IS ENVISAGED WITH IMPROVED PLANT AVAILABILITY AND RELIEF FROM EXISTING POWER SYSTEM NETWORK RELATED CONSTRAINTS, ADDITIONAL 1740.34MMSCF OF GAS (EQUIVALENT TO 6526.3MW) 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	40
				0	
				0	
				0	
<b>4.3 DUE TO FREQUENCY MANAGEMENT OCCASIONED BY DISCOS' LOAD DEMAND</b>					
1	Azura GT11	150	75	75	1084
2	Jebba 2G2	95	0	95	
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 411G1 & 2	300	210	90	
7	Okpai GT12 & ST18	225	50	175	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
<b>4.4 DUE TO WATER MANAGEMENT</b>					
				0	0
<b>Grand Total</b>					<b>3231</b>

5.0 **OUTAGES:**

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

- 1 21:35 through 24:00Hrs, Afam IV P/S GT18 tripped on lube oil pressure less than minimum turbine trip. LHR = 62MW.

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

- 1 18:14 – 18:29Hrs, Kankia/Katsina 132kV line 1 CB tripped at Kankia T/S on O/C Blue Phase relay. LHR = 30MW.
- 2 18:58 – 19:06Hrs, Birnin-Kebbi/Niamey 132kV line CB tripped at Birnin-Kebbi T/S on distance protection Red, Yellow & Blue Phase zone 1. LHR = 91MW.
- 3 22:20 – 23:04Hrs, Kankia/Katsina 132kV line 1 CB tripped at Kankia T/S on O/C Blue Phase. LHR = 25MW. 22:35Hrs, trial reclosure failed on O/C Blue Phase & E/F.

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

- 1 10:13 – 14:02Hrs, Ikeja West/Oworonsoki 132kV lines 1 & 2 were taken out for annual preventive maintenance on their line CBs and associated equipment at Ikeja West T/S. No load loss as Alagbon/Akoka 132kV line 2 was in service.
- 2 14:20 – 18:36Hrs, Ayede/Shagamu 132kV line was taken out for test on the terminal equipment of McPherson 132kV T/S 40MVA 132/33kV Mobitra T1. Load loss = 36MW.

5(D) **URGENT OUTAGES:**

- 1 04:56 – 14:43Hrs, Jebba/Osogbo 330kV line 1 (cct J1H) was taken out due to low SF6 gas alarm that came up on the line CB at Osogbo T/S. No load loss as ccts H3G & J3G were in service.
- 2 09:52 – 10:52Hrs, Omotosho P/S 5th series 330kV GCB #3352 tie CB to cct M5W was taken out to top low hydraulic oil level to normal. No load loss as line CB was in service
- 3 13:06 – 13:14Hrs, Mando T/S 60MVA 132/13.8kV transformer T2A primary CB was taken out to remove 330kV 75MX Reactor 3R3 from service on voltage control. No load loss as the transformer was on soak. Voltage profile: 309/317kV.

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

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

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:-** Rainfall was reported at Osogbo T/S.

7 **INTERNATIONAL LINES:-**

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

Maximum load - 279MW at 20:00Hrs.  
Minimum load - 190MW at 07:00Hrs.

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

Maximum load - 105MW at 24:00Hrs.  
Minimum load - 74MW at 20:00Hrs.

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

Maximum load - 42.0MW at 22:00Hrs.  
Minimum load - 1.5MW at 18:00Hrs.

8 **MISCELLANEOUS:-**

- 1 00:01 - 18:41Hrs, Jebba 2G2 was shut down on frequency management. Load loss – 70MW.
- 2 01:25Hrs, Okpai P/S reduced generation by 50MW on frequency management.
- 3 03:23Hrs, Azura –Edo IPP reduced generation by 60MW on frequency management.
- 4 07:28 - 18:04Hrs, Shiroro T/S placed Hold Off Tag (OF 12) on Jebba/Shiroro 330kV line 2(cct J7R) for the continuation of optic fibre cable up grade on the line.
- 5 08:40 - 10:27Hrs, Jebba 2G5 was shut down on frequency management. Load loss – 75MW.
- 6 09:04Hrs, Benin/Ajaokuta 330kV line 1 (cct B11J) was restored. The line was taken out on voltage control.
- 7 09:23 - 18:43Hrs, Afam VI P/S GT11 was shut down on frequency management. Load loss = 113MW.
- 8 09:55Hrs, Jebba T/S 330kV 75MX shunt Reactor 2R2 was taken out on voltage control. V/P = 326/328kV.
- 9 10:28 – 14:43Hrs, Jebba 2G3 was shut down on frequency management. Load loss = 73MW
- 10 10:47Hrs, Afam IV GT18 was tied. The unit tripped on low gas pressure
- 11 11:18Hrs, Shiroro 411G3 was declared available.
- 12 11:40Hrs, Alimosho T/S 100MVA 132/33kV transformer T2A was restored. The transformer tripped on fault since 09:44Hrs of 08/05/2018.
- 13 12:06Hrs, Lokoja/Gwagwalada 330kV line 2 (cct L7G) was restored. The line was out on voltage control.
- 14 12:26Hrs, Omoku GT6 was tied. The unit was out on maintenance.
- 15 14:43Hrs, Jebba 2G3 was tied. The unit was out on frequency management.

11 (B) SCADA RTU STATUS

STATIONS	NO. INSTALLED	NO OF RTU DISTURBED	NO OF RTU WORKING
POWER STATIONS	8	6	2
330kV	19	6	13
132kV	102	79	23

- 16 18:30Hrs, Delta GT11 was tied. The unit was out due to 125V battery bank problem.
- 17 18:31Hrs, Delta GT13 was tied. The unit was out due to 125V battery bank problem.
- 18 18:38Hrs, Shiroro 411G3 was tied. The unit was out on maintenance.
- 19 19:23Hrs, Jebba/Shiroro 330kV line 2 (cct J7R) was restored. The line was out on voltage control. Voltage profile: 328/330kV.
- 20 20:16Hrs, Osogbo T/S 330kV 75MX Reactor 4R1 was switched off on voltage control. Voltage profile: 321/323kV.
- 21 20:55Hrs, Delta GT10 was tied. The unit was out due to 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





