

TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF SUNDAY 07/10/2018

FOR: EVENTS OF SATURDAY 06/10/2018

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	22,780	20:30	06/10/2018
GENERATION CAPABILITY	7718.1	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5453.3	-do-	-do-
PEAK GENERATION	4869.3	-do-	-do-
LOWEST GENERATION	3248.6	04:00	06/10/2018
8-HOURLY DURATION PEAK	3586.6	0100-0800	-do-
	3616.7	0900-1600	-do-
	4869.3	1700-2400	-do-
PEAK GENERATION TO DATE	5222.3	21:00	18/12/2017
MAXIMUM AVAILABLE CAPACITY TO DATE	7652.6	06:00	14/04/2014
MAXIMUM ENERGY GENERATED (MWH) TO DATE	109,372.01	0000-2400	02/02/2016

1.2 CRITICAL VOLTAGE

DETAILS	KV	STATION	HRS
NOMINAL VOLTAGE	330		
STATUTORY LIMITS	280.5 - 346.6		
HIGHEST VOLTAGE FOR THE DAY	352	Lokoja T/S	09:00
LOWEST VOLTAGE FOR THE DAY	299	Sakete T/S	20:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.90	03:11
LOWEST FREQUENCY	50.15	19:35

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 20th Sept, 2018		No. of days since last total collapse: 16											
Date of last partial collapse: 12th April, 2018		No. of days since last partial collapse: 175											
Highest No of days ever attained in-between total collapses: 134		Highest No of days ever attained in-between partial collapses: 240											
	Jan	Feb.	Mar.	Apr.	May	Jun	Jul	Aug	Sep.	Oct	Nov	Dec	Total
2010	Total	---	3	1	--	3	3	--	2	2	1	4	22
	Partial	1	--	--	1	1	3	4	4	3	2	--	1
2011	Total	--	--	--	--	4	3	1	1	2	1	--	13
	Partial	--	1	1	--	--	--	1	--	1	2	--	6
2012	Total	--		2	1	5	2	1	--	2	2	1	16
	Partial	--		2	3	--	--	--	1	--	1	1	8
2013	Total	--	1	2	2	3	4	1	1	1	4	2	22
	Partial	--		--	--	--	--	--	2				2
2014	Total	2			2	0	3	1	0	0	1	0	9
	Partial			0	0	1	0	0	0	0	2	1	4
2015	Total	1	0	1	0	2	0	1	0	0	1	0	6
	Partial	--	--	1	0	2	0	0	0	1	0	0	4
2016	Total	--	--	2	3	6	5	0	0	1	2	2	22
	Partial	--	--	1	0	1	3	1	0	0	0	0	6
2017	Total	5	3	0	3	1	1	0	0	1	1		15
	Partial	1	0	1	0	0	0	1	0	3	3		9
2018	Total	5	1	0	0	0	1	1	0	2			10
	Partial	0	0	0	1	0			0				1

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

STATION	TURBINE	PEAK GEN. (MW)	OFF-PEAK GEN.(MW)
1 KAINJI	HYDRO	374	314
2 JEBBA	HYDRO	435	309
3 SHIRORO	HYDRO	435	413
4 EGBIN ST2 - 5	STEAM	484	394
5 SAPELE	STEAM	35	35
6 DELTA	GAS	542	279
7 AFAM IV-V	GAS	45	0
8 GEREGU GAS	GAS	123	80
9 OMOTOSHO GAS	GAS	138	111
10 OLORUNSOGO GAS	GAS	138.3	117.6
11 GEREGU NIPP	GAS	0	0
12 SAPELE NIPP	GAS	168.6	51.4
13 ALAOJI NIPP	GAS	81	0
14 OLORUNSOGO NIPP	GAS	108.9	81.5
15 OMOTOSHO NIPP	GAS	97.5	70.4
16 ODUKPANI NIPP	GAS	0	0
17 IHOVBOR NIPP	GAS	78.9	75.6
18 OKPAI	GAS	298	176
19 AFAM VI	GAS	246	102
20 IBOM POWER	GAS	80.3	61.1
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	57.3	51.6
24 TRANS AMADI	GAS	58.3	34.8
25 RIVERS IPP	(GAS)	150	85
26 AZURA - EDO IPP	(GAS)	375	150
27 EGBIN ST6	(GAS)	165	114
28 PARAS ENERGY	(GAS)	68.6	68.6
29 GBARAIN NIPP	GAS	86.6	74
TOTAL		4869.3	3248.6

1.6 ENERGY GENERATED/ENERGY SENT OUT:					
STATION	TURBINE	ENERGY GENERATED		ENERGY SENT OUT	
		MWH	MWH/H	MWH	MWH/H
1 KAINJI	HYDRO	9520.00	396.67	9505.30	396.05
2 JEBBA	HYDRO	9639.00	401.63	9614.24	400.59
3 SHIRORO	HYDRO	10399.00	433.29	10365.24	431.89
4 EGBIN ST2 - 5	STEAM	9791.00	407.96	9247.80	385.33
5 SAPELE	STEAM	768.30	32.01	727.80	30.33
6 DELTA	GAS	9072.93	378.04	8985.80	374.41
7 AFAM IV-V	GAS	266.00	11.08	260.64	10.86
8 GEREGU GAS	GAS	2624.50	109.35	2604.74	108.53
9 OMOTOSHO GAS	GAS	2696.00	112.33	2675.20	111.47
10 OLORUNSOGO GAS	GAS	2923.93	121.83	2896.62	120.69
11 GEREGU NIPP	GAS	0.00	0.00	0.00	0.00
12 SAPELE NIPP	GAS	2515.61	104.82	2497.33	104.06
13 ALAOJI NIPP	GAS	445.19	18.55	440.79	18.37
14 OLORUNSOGO NIPP	GAS	2180.90	90.87	2147.70	89.49
15 OMOTOSHO NIPP	GAS	2091.20	87.13	2066.00	86.08
16 ODUKPANI NIPP	GAS	0.00	0.00	0.00	0.00
17 IHOVBOR NIPP	GAS	2006.87	83.62	1987.33	82.81
18 OKPAI	GAS	4619.00	192.46	4496.30	187.35
19 AFAM VI	GAS	3102.21	129.26	3035.75	126.49
20 IBOM	GAS	1372.32	57.18	1365.00	56.88
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 AZURA - EDO IPP	GAS	4639.10	193.30	4620.30	192.51
23 A.E.S	GAS	0.00	0.00	0.00	0.00
24 OMOKU	GAS	1319.30	54.97	1289.73	53.74
25 TRANS AMADI	GAS	1229.20	51.22	1201.20	50.05
26 RIVERS IPP	GAS	2391.50	99.65	2389.50	99.56
27 EGBIN ST6	STEAM	3026.00	126.08	2875.10	119.80
28 PARAS ENERGY	GAS	1640.60	68.36	1635.40	68.14
29 GBARAIN NIPP	GAS	1779.00	74.13	1763.20	73.47
TOTAL		92,058.66	3,835.78	90,694.01	3,778.92

1.7A GENERATION POSITION AT 06:00HRS SUNDAY 07/10/2018

	STATIONS	NO OF INSTALLED UNITS	AVAILABLE UNITS	INSTALLED CAPACITY OF AVAILABLE UNITS(MW)	GENERATION CAPABILITY OF AVAILABLE UNITS(MW)	UNITS ON BAR	CAPABILITY OF UNITS ON BAR (MW)	GENERATION AT 06:00HRS (MW) AT 50.47Hz.	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	8	1G5, 6, 11 & 12 4	440	420	1G5, 6, 11 & 12 4	420	352	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	405	2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G2 & 4 2	300	300	411G2 & 4 2	289	289	Available unit on bar. 411G1 - Out due to technical problem. 411G3 - Yet to be tied after tripping of the unit at 01:55Hrs of 07/10/2018.
	EGBIN STEAM	5	ST2, 4 & 5 3	660	491	ST2, 4 & 5 3	491	439	ST1 - Out due to undisclosed fault since 04/09/2018. ST3 - Out on high vibration since 19th June 2017. Generation reduced due to low load demand by the Discos.
	SAPELE (STEAM)	6	ST2 1	120	35	ST2 1	35	35	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	610	GT9 - 13, 15, 16, 18 & 20 9	510	452	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. GT19 - Out due to low load demand by the Discos. GT17 - Tripped on bearing vibration more than maximum.
	AFAM IV & V (GAS)	8	GT17 1	75	46	0 0	0	0	GT1 - 12 - De-commissioned and scrapped. GT13,14 & 16 - Out on blade failure. GT17 - Out due to low demand by the Discos. GT18 - Out on maintenance. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT12 1	145	120	GT11 & 13 - Out due to gas constraint.
	OMOTOSHO GAS	8	GT1 - 8 8	336	304	GT12, 6 & 8 4	152	139.7	GT3 - 5 & 7 - Out due to low load demand by the Discos. Generation reduced due to low load demand by the discos.
	OLORUNSOGO GAS	8	GT1 - 8 8	336	304	GT2, 4, 6 & 7 4	152	116.9	GT1, 3, 5 & 8 - Out due to low load demand by the Discos. Generation reduced due to low load demand by the discos.
NIPP	GEREGU NIPP	3	GT22 & 23 2	290	290	0 0	0	0	GT21 - Out on maintenance. GT22 & 23 - Out due to gas constraint.
	SAPELE NIPP	4	GT1 - 4 4	450	450	GT1 1	112.5	73.9	GT2 & 3 - Out due to low load demand by the Discos. GT4 - Out due to gas constraint.
	ALAOJI NIPP GAS	4	GT1 & 2 2	250	240	0 0	0	0	GT1 & 2 - Out due to low load demand by the Discos. GT3 - Shut down due to lack of spare part. GT4 - Tripped on over voltage lockout relay trip.
	OLORUNSOGO NIPP	6	GT1 - 3 3	375	360	GT1 1	120	111.6	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. Generation reduced due to low load demand by the Discos.
	OMOTOSHO NIPP GAS	4	GT1, 2 & 4 3	375	360	0 0	0	0	GT1, 2 & 4 - Out due to low load demand by the Discos. GT3 - Out due to oil leakage on the unit.
	ODUKPANI NIPP	5	0 0	0	0	0 0	0	0	GT1 & 2 - Out on fault. GT3 & 5 - Out due to gas leakage. GT4 - Tripped on main transformer neutral O/C and HV protection.
	IHOVBOR NIPP	4	GT1, 2 & 4 3	337.5	337.5	GT4 1	112.5	73.5	GT1 & 2 - Out due to low load demand by the Discos. GT3 - Tripped on high vibration. GT4 - On manual adjustment to frequency.
	GBARAIN NIPP GAS	1	GT2 1	115	112.5	0 0	0	0	GT2 - Out due to low load demand by Discos.
IPP	OKPAI GAS/STEAM	3	GT11, 12 & ST18 3	370	370	GT11, 12 & ST18 3	370	227	GT11 - Generation reduced due to low load demand by the Discos. ST18 - Generation reduced due to boiler problem.
	AZURA - EDO	3	GT11 - 13 3	461	461	GT11 & 13 2	306	150	GT12 - Out due to low load demand by the Discos. 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	107	GT12 & 13 - Out due to low load demand by the Discos. ST10 - Out due to gas constraint.
	IBOM POWER GAS	3	GT3 1	115	115	GT3 1	115	62.2	GT1 & 2 - Out due to fire outbreak on the control panel. GT3 - Generation reduced due to low load demand by the Discos.
	AES	9	0 0	0	0	0 0	0	0	Out of production since 27/09/2014.
	ASCO	2	0 0	0	0	0 0	0	0	ST1 - Shut down due to leakage in the furnace.
	OMOKU GAS	6	GT1, 2 & 5 3	75	60	GT1, 2 & 5 3	49.8	47.2	GT3 - Tripped on over speed. GT4 - Awaiting major overhaul. GT6 Out on maintenance. Available units on bar.
	TRANS-AMADI	4	GT 1, 2 & 4 3	75	60	GT1,2 & 4 3	60	32.5	GT3 - Out on fault. Generation reduced due to low load demand by Discos.
	RIVERS	1	GT1 1	160	160	GT1 1	160	110	GT1 - Generation reduced due to low load demand by the Discos.
	SUB TOTAL	140	81	7900.5	7411	50	4199.8	3343.5	Frequency = 50.47Hz.

1.7B GENERATION POSITION AT 06:00HRS OF SUNDAY 07/10/2018 FOR UNITS ON BILATERAL AGREEMENT

EGBIN	1	ST6	220	143	ST6	143	143	Available unit on bar.
		1			1			
PARAS ENERGY	8	GT2 - 9	68.9	68.9	GT2 - 9	68.9	68.9	Available units on bar.
		8			8			
SUB TOTAL	9	9	288.9	211.9	9	211.9	211.9	
GRAND TOTAL	149	90	8189.4	7622.9	59	4,411.70	3,555.40	Frequency = 50.47Hz

1.7C

BILATERAL AGREEMENT UNITS DISPATCH - SATURDAY 06/10/2018.							
EGBIN ST6 120MW GENERATION TO IKEJA ELECTRICITY DISTRIBUTION COMPANY							
FEEDERS NAME	MAX. LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HRS IN SERVICE	TOTAL (MWH)	REMARK
OGBA	U-STEEL	ON	0100HRS		24		NIL
	PTCEXPRESS	ON	0100HRS		24		NIL
	SANKYO	ON	0100HRS		24		NIL
	FEEDER 8	15	1100HRS		24		NIL
IKORODU	PULK IT	3	1500HRS		24		NIL
	INDUSTRIAL	7	0100HRS		24		NIL
	SPINTEX	11	0500HRS		24		NIL
	DANGOTE	ON	0100HRS		24		NIL
	LAND CRAFT	35	1700HRS		24		NIL
ALAUSA	TR4 15MVA	4.6	1000HRS		24		NIL
	TR5 -15MVA	4.6	1400HRS		24		NIL
	ALAUSA	10.3	1100HRS		24		NIL
M/LAND	PTC (MARYLAND)	15	1400HRS		23		PLANNED OUTAGE ON T2 60MVA 132/33KV PRIMARY CB.
	TOTAL LOAD	105.5					

BILATERAL AGREEMENT LOAD DISPATCH 60MW PARAS ENERGY GENERATION TO CEB OF SATURDAY 06/10/2018							
FEEDER	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK
Ikeja West/Sakete 330kV line	70.2	19:00	66.2	08:00	24	1636.8	Nil.

BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI LOAD DISPATCH TO THE FOLLOWING COMPANIES OF: SATURDAY 06/10/2018									
COMPANY NAME	VOLTAGE LEVEL	CONTRACTUAL LOAD (MW)	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK
INNER GALAXY	132kV line 2	0	ON	ON	ON	ON	24	ON	SUPPLY NOT INTERRUPTED
KAM STEEL		15.0	0.2	01:00	0.1	07:00	24	4.6	SUPPLY NOT INTERRUPTED
ASAKA CEMENT		0.0	8.4	09:00	3.7	15:00	24	147.6	SUPPLY NOT INTERRUPTED
XING 1	33kV feeder	0.0	21.9	05:00	1.5	14:00	24	371.8	SUPPLY NOT INTERRUPTED
XING 2		0.0	26	09:00	14.25	21:00	24	480.8	SUPPLY NOT INTERRUPTED
KAM INTEGRATED		15.0	4.8	09:00	1.5	06:00	24	61	SUPPLY NOT INTERRUPTED
OLAM FLOUR MILLS		3.0	2.5	01:00	0.1	10:00	21	28.7	SUPPLY NOT INTERRUPTED
LORDSMITH		0	0.2	01:00	0.2	04:00	24	0.8	SUPPLY NOT INTERRUPTED

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF SUNDAY 07/10/2018 = 0MW. FREQUENCY 50.47Hz.

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

1.8 HYDROLOGICAL DATA: SUNDAY 07/10/2018

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	140.98	103.11	382.66
TAIL WATER ELEVATION (METERS)	105.25	76.0	272.2
GROSS OPERATING HEAD (METERS)	35.73	27.11	110.46
AVERAGE TURBINE DISCHARGE (M3/SEC)	1236.00	1658.00	444.00
AVERAGE SPILLAGE (M3/SEC)	480.00	999.00	389.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1716.00	2657.00	833.00
COMPUTED INFLOW (M3/SEC)	2561.00	2726.00	1076.00
STORAGE DIFFERENTIAL	845.00	69	243
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 SATURDAY 06/10/2018

	MAXIMUM LOAD (MW)	TIME (HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD (MW)	TIME (HRS)
ABUJA	544.7	23:00	495.00	312.9	04:00
EKO	0.0	0	0.00	0	0
IKEJA	639.8	21:00	881.4	426.8	16:00

2.0 GAS POSITION: SUNDAY 07/10/2018

STATION	SIGNED ACQ Annual Contracted Quantity MMSCF/D	INSTALLED CAPACITY OF THERMAL STATIONS (MW)	PREVIOUS DAY OFF-TAKE (MMSCF/D)	CAPABILITY OF UNITS ON BAR OF THERMAL STATIONS (MW)	DIFFERENCE (MW)
EGBIN P/S	439	1100		491	609
DELTA (GAS)	452	915		510	405
OMOTOSHO GAS	139.7	336.8		152	184.8
OMOTOSHO NIPP	0	500		0	500
OLORUNSOGO (GAS)	116.9	336		152	184
OLORUNSOGO NIPP	111.6	750		120	630
SAPELE NIPP	73.9	500		112.5	387.5
SAPELE STEAM	35	720		35	685
AFAM IV-V	0	300		0	300
AFAM VI	107	650		150	500
GEREGU GAS	120	435		145	290
GEREGU NIPP	0	435		0	435
OKPAI (GAS/STEAM)	227	480		370	110
ALAOJI NIPP	0	504		0	504
IHOVBOR NIPP	73.5	450		112.5	337.5
IBOM	62.2	198		115	83
ODUKPANI NIPP	0	625		0	625
TOTAL	1957.8	9234.80		2465	6769.8

1 MMSCF IS EQUIVALENT TO 3.75MW

3.0 SPINNING RESERVE FOR : SATURDAY 06/10/018

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

4.0 UNAVAILABLE GENERATION CAPABILITY

The unavailable generation capability for Sunday 07/10/2018 as at 0600Hrs = 3700.2MW.					
6	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNAVAILABLE GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO GAS CONSTRAINTS:					
1	Geregu Gas GT11 & 13	290	0	290	892.5
2	Afam VI ST10	200	0	200	
3	Geregu NIPP GT22 & 23	290	0	290	
4	Sapele NIPP GT4	112.5	0	112.5	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
				0	
IT IS ENVISAGED WITH IMPROVED PLANT AVAILABILITY AND RELIEF FROM EXISTING POWER SYSTEM NETWORK RELATED CONSTRAINTS, ADDITIONAL 1805.28MMSCF OF GAS (EQUIVALENT TO 6769.8MW) WILL BE REQUIRED WHEN ALL THERMAL UNITS ARE ON BAR.					
4.2 DUE TO LINE CONSTRAINTS					
		0	0	0	0
		0	0	0	0
		0	0	0	0
4.3 DUE TO LOW LOAD DEMAND BY THE DISCOS					
1	Ihovbor GT1 & 2	225	0	225	2642.4
2	Azura Edo GT11 - 13	461	150	311	
3	Egbin ST2, 4 & 5	491	439	52	
4	Rivers IPP GT1	160	110	50	
5	Delta GT15, 16 & 19	315	157	158	
6	Alaoji NIPP GT1 & 2	240	0	240	
7	Omotosho NIPP GT1, 2 & 4	360	0	360	
8	Olorunsogo NIPP GT2 & 3	290	0	290	
9	Omotosho Gas GT1 - 8	304	139.7	164.3	
10	Olorunsogo Gas GT1 - 8	304	116.9	187.1	
12	Afam VI GT12 & 13	300	0	300	
13	Sapele NIPP GT2 & 3	225	0	225	
14	Okpai GT11	150	70	80	
15	Gbarain GT2	112.5	0	112.5	
16	Ibom GT3	115	62.2	52.8	
				0	
				0	
4.1 DUE TO WATER MANAGEMENT:					
Grand Total					3700.2

5.0 **OUTAGES:**

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

- 16:07 - 18:21Hrs, Okpai GT11 tripped on loss of excitation. LHR = 50MW.

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

- 15:11 – 15:34Hrs, Sapele/Delta 330kV line (cct S4G) CBs tripped at both ends on the following relay indications:
At Sapele T/S: SEL relay; Phase C – N, location = 13.54km.
At Delta T/S: Siprotec relay – Phase B – N, zone 2, PU L3E, PU time= 592ms, trip time = 532ms and distance = 58.21km.
 No load loss as ccts G3B, S3B, S4B & S5B were in service.

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

- 11:12 – 12:15Hrs, Yola/Jalingo 132kV line was taken out to carry out annual preventive maintenance on the CB and its associated equipment at Yola T/S. Load loss = 60MW.
- 12:51 - 18:49Hrs, Eket/Uyo 132kV line was taken out to cut bamboo trees between towers # 160 and 167. Load loss = 28MW.

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

- 10:58 – 12:30Hrs, Ilesha T/S 40MVA 132/33kV transformer T1 was taken out to treat hot spot on Red & Blue Phases secondary isolator clamps. Load loss = 0.1MW.

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	26
OPTIC FIBRE	13	10
PLS	14	4

11 **SCADA RTU STATUS**

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

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

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

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

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

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

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

6 **WEATHER REPORT:-** Rainfall reported at Ayede, New Haven, Kaduna, Alaoji, Akangba, Ikeja West and Mando.

7 **INTERNATIONAL LINES:-**

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

Maximum load - 268MW at 20:00Hrs.
 Minimum load - 110MW at 15:00Hrs.

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

Maximum load - 107MW at 24:00Hrs.
 Minimum load - 84MW at 08:00Hrs.

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

Maximum load - 40MW at 21:00Hrs.
 Minimum load - 27MW at 18:00Hrs.

8 **MISCELLANEOUS:-**

- 00:47 - 19:40Hrs, Azura-Edo GT11 was shut down due to low load demand by Discos. Load loss = 75MW.
- 01:31 - 20:19Hrs, Alaoji NIPP GT2 was shut down due to low load demand by Discos. Load loss = 112.1MW.
- 14:44Hrs, Maryland T/S 60MVA 132/33kV transformer T2 was restored. The transformer was out on fault.
- 17:18Hrs, Delta GT16 was tied. The unit was out due to low load demand by Discos.
- 18:39 - 19:05Hrs, Ibom Power GT3 was on island operation to feed Eket, its load dropped from 28MW to 17MW to facilitate the job on Eket/Uyo 132kV line.
- 19:05Hrs, Delta GT15 was tied. The unit was out due to low load demand by Discos.
- 20:01Hrs, Afam VI GT11 was tied. The unit was out due to low load demand by Discos.
- 20:05Hrs, Sapele NIPP GT3 was tied. The unit was out due to low load demand by Discos.
- 20:30Hrs, Delta GT19 was tied. The unit was out due to low load demand by Discos.
- 23:28Hrs, Delta GT19 was shut down due to low load demand by Discos. Load loss = 50MW.

**** **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/SOLATORS**

LAGOS REGION:

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

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

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

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

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

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

BENIN REGION:

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

ENUGU REGION:

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

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

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

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

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

SHIRORO REGION

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

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

12(E) **UNAVAILABLE SKYWIRES**

LAGOS REGION

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

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

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

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

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

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

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

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

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

SHIRORO REGION

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

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

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

ABUJA REGION

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

12 (F) **UNAVAILABLE SYNCHROSCOPES :**

1 Ikeja West, Onitsha, Egbin, 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

