

TRANSMISSION COMPANY OF NIGERIA

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

DAILY OPERATIONAL REPORT OF WEEDSDAY 27/02/2019
FOR: EVENTS OF TUESDAY 26/02/2019

1.0 EXECUTIVE OPERATIONS SUMMARY:

1.1 GENERATION PROFILE: NATIONAL STATISTICS

DETAILS	MW	HRS	DATE
PEAK DEMAND FORECAST (CONNECTED + SUPPRESSED LOAD)	23,960	21:45	26/02/2019
GENERATION CAPABILITY	6059.4	-do-	-do-
UNITS ON BAR CAPABILITY AT PEAK	5009.8	-do-	-do-
PEAK GENERATION	4813.0	-do-	-do-
LOWEST GENERATION	3138.6	04:00	26/02/2019
8-HOURLY DURATION PEAK	3800.2	0100-0800	-do-
	3665.7	0900-1600	-do-
	4813	1700-2400	-do-
PEAK GENERATION TO DATE	5375	21:30	7/2/2019
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	Ugwuaji & New Haven T/S	08:00 & 08:00
LOWEST VOLTAGE FOR THE DAY	300	Gombe T/S	14:00

1.3 FREQUENCY RANGE

DETAILS	HZ	HRS
NOMINAL FREQUENCY	50	
STATUTORY LIMITS	49.75-50.25	
HIGHEST FREQUENCY	50.45	04:32
LOWEST FREQUENCY	49.86	20:26

1.4 SYSTEM COLLAPSE UP DATE

Date of last total collapse: 20th Feb., 2019		No. of days since last total collapse: 07											
Date of last partial collapse: 12th April, 2018		No. of days since last partial collapse: 319											
Highest No of days ever attained in-between total collapses: 134		Highest No of days ever attained in-between partial collapses: 243											
	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	--	1	2	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	1	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		2		2	12
	Partial	0	0	0	1	0			0				1
2019	Total	4	1										5
	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	410	297
2 JEBBA	HYDRO	371	223
3 SHIRORO	HYDRO	282	106
4 EGBIN ST2 - 5	STEAM	464	391
5 SAPELE	STEAM	60	60
6 DELTA	GAS	278	229
7 AFAM IV-V	GAS	50	30
8 GEREGU GAS	GAS	428	115
9 OMOTOSHO GAS	GAS	137.9	137.9
10 OLORUNSOGO GAS	GAS	177.9	111.7
11 GEREGU NIPP	GAS	0	193
12 SAPELE NIPP	GAS	105.5	78.9
13 ALAQJI NIPP	GAS	110.4	0
14 OLORUNSOGO NIPP	GAS	0	0
15 OMOTOSHO NIPP	GAS	110.2	93.4
16 ODUKPANI NIPP	GAS	316.8	150.3
17 IHOVBOR NIPP	GAS	110.6	99.2
18 OKPAI	GAS	205	158
19 AFAM VI	GAS	276	110
20 IBOM POWER	GAS	87.1	87.1
21 ASCO	GAS	0	0
22 A.E.S	GAS	0	0
23 OMOKU	GAS	55.6	52.8
24 TRANS AMADI	GAS	0	19.8
25 RIVERS IPP	(GAS)	147	96
26 AZURA - EDO IPP	(GAS)	453	150
27 EGBIN ST6	(GAS)	0	0
28 PARAS ENERGY	(GAS)	69.5	60.6
29 GBARAIN NIPP	GAS	107.5	88.9
TOTAL		4813	3138.6

1.6 ENERGY GENERATED/ENERGY SENT OUT:					
STATION	TURBINE	ENERGY GENERATED	AV. POWER GENERATED	ENERGY SENT OUT	AV. POWER SENT OUT
		MWH	MWHH	MWH	MWHH
1 KAINJI	HYDRO	9260.00	385.83	9242.20	385.09
2 JEBBA	HYDRO	7185.00	299.38	7162.88	298.45
3 SHIRORO	HYDRO	5403.00	225.13	5370.43	223.77
4 EGBIN ST2 - 5	STEAM	10419.00	434.13	9781.50	407.56
5 SAPELE	STEAM	1418.90	59.12	1311.60	54.65
6 DELTA	GAS	6550.10	272.92	6426.20	267.76
7 AFAM IV-V	GAS	1193.69	49.74	1188.16	49.51
8 GEREGU GAS	GAS	4810.70	200.45	4784.12	199.34
9 OMOTOSHO GAS	GAS	3310.00	137.92	3287.80	136.99
10 OLORUNSOGO GAS	GAS	3381.18	140.88	3352.84	139.70
11 GEREGU NIPP	GAS	2469.64	102.90	2454.11	102.25
12 SAPELE NIPP	GAS	2425.00	101.04	2441.82	101.74
13 ALAQJI NIPP	GAS	1347.71	56.15	1341.56	55.90
14 OLORUNSOGO NIPP	GAS	0.00	0.00	0.00	0.00
15 OMOTOSHO NIPP	GAS	2449.10	102.05	2430.80	101.28
16 ODUKPANI NIPP	GAS	4200.31	175.01	4164.71	173.53
17 IHOVBOR NIPP	GAS	2360.00	98.33	2340.75	97.53
18 OKPAI	GAS	4419.00	184.13	4295.80	178.99
19 AFAM VI	GAS	2863.53	119.31	2758.86	114.95
20 IBOM	GAS	1972.07	82.17	1963.00	81.79
21 ASCO	GAS	0.00	0.00	0.00	0.00
22 AZURA - EDO IPP	GAS	5320.45	221.69	5296.40	220.68
23 A.E.S	GAS	0.00	0.00	0.00	0.00
24 OMOKU	GAS	1382.80	57.62	1355.97	56.50
25 TRANS AMADI	GAS	237.70	9.90	231.80	9.66
26 RIVERS IPP	GAS	2709.30	112.89	2692.00	112.17
27 EGBIN ST6	STEAM	0.00	0.00	0.00	0.00
28 PARAS ENERGY	GAS	1602.80	66.78	1595.30	66.47
29 GBARAIN NIPP	GAS	2193.00	91.38	2177.50	90.73
TOTAL		90,883.98	3,786.83	89,448.11	3,727.00

1.7A GENERATION POSITION AT 06:00HRS OF WEDNESDAY 27/02/2019

	STATIONS	NO OF UNITS INSTALLED	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 50.21Hz.	REMARKS
PRIVATISED COMPANIES	KAINJI HYDRO	8	1G5, 6, 11 & 12 4	440	440	1G5, 6, 11 & 12 4	440	393	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 - 4 4	381	381	2G1 - 4 4	381	381	2G5 - Out for annual maintenance. 2G6 - Out due to burnt generator winding and AVR.
	SHIRORO HYDRO	4	411G1, 2 & 4 3	450	450	411G1 & 2 2	300	207	411G2 - Generation reduced due to low load demand by the Discos. 411G3 - Out due to radiators oil leakage. 411G4 - Out on water management.
	EGBIN STEAM	6	ST1, 2, 4 & 5 4	880	465	ST1, 2, 4 & 5 4	465	404	ST1, 2, 4 & 5 - Generation reduced due to gas constraints & low load demand by the Discos. GT3 - Out due to technical problems. GT6 - Out on gas constraints.
	SAPELE (STEAM)	6	ST3 1	120	60	ST3 1	60	41	ST1 & 2 - Tripped on high vibration. ST3 - Generation reduced due to low load demand by the Discos. ST4 - Out on fault. ST5 - Awaiting major overhaul.
	DELTA (GAS)	18	GT6, 7, 10 - 13, 16 & 20 8	330	330	GT6, 7, 10 - 13, 16 & 20 8	330	284	GT2 - Tripped on transformer differential lockout. GT3 & 5 - Out on generator winding fault. GT4 - Out on loss of excitation. GT8 & 14 - Out on major overhaul. GT17 - Tripped on bearing vibration more than maximum. GT18 - Out due to generator lockout problem. GT9, 15 & 19 - Out on gas constraints. Generation reduced due to gas constraints.
	AFAM IV & V (GAS)	8	GT18 1	70	52	GT18 1	52	52	GT11 - 12 - De-commissioned and scrapped. GT13, 14 & 16 - Out on blade failure. GT17 - Out due to gas constraint. GT19 & 20 - Awaiting major overhaul.
	GEREGU GAS	3	GT11 - 13 3	435	435	GT11 & 12 2	290	264	GT13 - Out due to low load demand by the Discos.
	OMOTOSHO GAS	8	GT2, 4, 7 & 8 4	168	152	GT2, 4, 7 & 8 4	140.2	140.2	GT1, 3, 5 & 6 - Out due to gas constraint.
	OLORUNSOGO GAS	8	GT1, 2, 4, 5, 6 & 7 6	252	228	GT2, 4, 5, 6 & 7 5	190	140.8	GT1 - Shut down due to low load demand by the Discos. GT3 & 8 - Out due to gas constraint. Generation reduced due to low load demand by the Discos.
NIPP	GEREGU NIPP	3	0 0	0	0	0 0	0	0	GT21 - 23 - Out due to gas constraints.
	SAPELE NIPP	4	GT1 1	112.5	112.5	GT1 1	112.5	95.7	GT2 - Out due to leakage on the vent line. GT3 - Out due to gas constraint. GT4 - Out due to high air inlet differential pressure.
	ALAOJI NIPP GAS	4	GT1 1	120	120	GT1 1	111.5	111.5	GT2 - Out on maintenance. GT3 - Shut down due to lack of spare part. GT4 - Tripped on over voltage lockout relay trip.
	OLORUNSOGO NIPP	6	0 GT2	0	0	0 GT2	0	0	GT1, 2 & 3 - Shut down due to low gas pressure. GT4 - Out due to ignition failure and control relay failure alarm. ST13 & ST23 - Out on maintenance.
	OMOTOSHO NIPP GAS	4	GT2 1	125	120	GT2 1	120	107.1	GT1 - Out on maintenance. GT3 & 4 - Out due to gas constraint.
	ODUKPANI NIPP	5	GT1 - 5 5	575	575	GT1 & 4 2	230	197.4	GT2, 3 & 5 - Out due to low load demand by the Discos.
	IHOVBOR NIPP	4	GT1 1	112.5	112.5	GT1 1	112.5	110.9	GT1 - On manual adjustment to frequency. GT2 - Out due to gas constraints. GT3 - Tripped on high vibration.
	GBARAIN NIPP GAS	1	GT2 1	112.5	112.5	GT2 1	112.5	95.7	Available unit on bar.
IPP	OKPAI GAS/STEAM	3	GT12 & ST18 2	220	220	GT12 & ST18 2	220	184	GT11 - Out on maintenance. ST18 - Generation reduced due to boiler problem
	AZURA - EDO	3	GT11 - 13 3	461	461	GT11 - 13 3	461	288	GT12 & 13 - Generation reduced due to low load demand by the Discos.
	AFAM VI GAS/STEAM	4	GT11 - 13 & ST10 4	640	640	GT12 & 13 2	300	244	GT11 & ST10 - Out due to low load demand by the Discos. GT12 - Generation reduced due to low load demand by the Discos.
	IBOM POWER GAS	3	GT3 1	120	115	GT3 1	115	87.6	GT1 & 2 - Out due to fire outbreak on the control panel. GT3 - Generation reduced due to line constraint
	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, 3 & 5 3	75	60	GT1, 3 & 5 3	57.4	57.4	GT2 - Tripped on high vibration. GT4 - Out on major overhaul. GT6 - Out on maintenance.
	TRANS-AMADI	4	0 0	0	0	0 0	0	0	GT1, 2 & 4 - Out due to gas constraint. GT3 - Out on fault.
	RIVERS	1	GT1 1	160	160	GT1 1	160	130	GT1 - Generation reduced due to low demand by the Discos.
	SUB TOTAL	141	62	6359.5	5801.5	54	4760.6	4016.3	Frequency = 50.21Hz.

1.7B GENERATION POSITION AT 06:00HRS OF WEDEDSDAY 27/02/2019 FOR UNITS ON BILATERAL AGREEMENT									
	PARAS ENERGY	8	GT3 - 10	70	0	0	0	0	GT3 - 10 - Out due to tripping of Ikorodu/Shagamu 132kV line.
			8			0			
	SUB TOTAL	8	8	70	0	0	0	0	
	GRAND TOTAL	149	70	6429.5	5801.5	54	4,760.60	4016.3	Frequency = 50.21Hz

1.7C BILATERAL AGREEMENT UNITS DISPATCH - TUESDAY 26/02/2019							
EGBIN ST6 5MW 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
	PTC EXPRESS	ON	0100HRS		24		NIL
	SANKYO	2	0100HRS		24		NIL
	FEEDER 8	16	1000HRS		24		NIL
IKORODU	PULK IT	3	0900HRS		24		NIL
	INDUSTRIAL	9	0900HRS		24		NIL
	SPINTEX	8	2100HRS		24		NIL
	DANGOTE	2	0800HRS		24		NIL
	LAND CRAFT	21	1800HRS		24		NIL
ALAUSA	TR4 15MVA	7.8	1200HRS		24		NIL
	TR5 -15MVA	3.4	1000HRS		24		NIL
	ALAUSA	15.2	1200HRS		24		NIL
MLAND	PTC (MARYLAND)	20	1200HRS		24		NIL
	TOTAL LOAD	107.4					

BILATERAL AGREEMENT LOAD DISPATCH 60MW PARAS ENERGY GENERATION TO CEB OF TUESDAY 26/02/2019							
FEEDER	MAX LOAD (MW)	TIME (HRS)	MIN LOAD (MW)	TIME (HRS)	HOURS IN SERVICE	TOTAL (MWH)	REMARK
Ikeja West/Sakete 330kV line	70.2	18:00	60.6	04:00	24	1602.8	NIL

BILATERAL AGREEMENT MAIN STREAM ENERGY KAINJI TUESDAY 26/02/2019									
COMPANY NAME	VOL-TAGE LEVEL	CON-TRAC-TUAL LOAD (MW)	MAX LOAD (MW)	TIME	MIN LOAD (MW)	TIME	HOURS IN SERVICE	TOTAL (MWH)	REMARK
INNER GALAXY	132kV line 2	ON	44	14:00	20	06:00	24	666	ON
KAM STEEL		25.0	17	08:00	0.4	06:00	24	122.4	SUPPLY NOT INTERRUPTED
ASHAKA CEMENT		0	12.2	22:00	6.2	23:00	24	239.4	SUPPLY NOT INTERRUPTED
XING 1	33kV feeder	0	21.4	16:00	1.85	03:00	24	356.95	SUPPLY NOT INTERRUPTED
XING 2		0	0:00	18:00	0.2	02:00	24	271.45	SUPPLY NOT INTERRUPTED
KAM INTEGRATED	15	5.7	10:00	1.8	06:00	24	75.3	SUPPLY NOT INTERRUPTED	
OLAM FLOUR MILLS	3	2.3	10:00	21:36	14:00	24	39.6	SUPPLY NOT INTERRUPTED	
LORDSMITH	3	0.5	01:00	0.5	08:00	24	12	SUPPLY NOT INTERRUPTED	

1.8 HYDROLOGICAL DATA: WEDESDAY 27/02/2019

	KAINJI	JEBBA	SHIRORO
HEAD WATER ELEVATION (METERS)	141.68	103.29	372.14
TAIL WATER ELEVATION (METERS)	105.4	74.6	270.8
GROSS OPERATING HEAD (METERS)	36.28	28.69	101.34
AVERAGE TURBINE DISCHARGE (M3/SEC)	1169.00	1126.00	258.00
AVERAGE SPILLAGE (M3/SEC)	454.00	797.00	0.00
AVERAGE TOTAL STATION DISCHARGE (M3/SEC)	1623.00	1923.00	258.00
COMPUTED INFLOW (M3/SEC)	1051.00	1611.00	17.00
STORAGE DIFFERENTIAL	-572.00	-312	-241
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 TUESDAY 26/02/2019

	MAXIMUM LOAD (MW)	TIME (HRS)	ALLOCATED LOAD (MW)	MINIMUM LOAD (MW)	TIME (HRS)
ABUJA	455.7	15:00	535.02	91.5	05:00
EKO	508.5	09:00	611.76	186.7	16:00
IKEJA	539.8	20:00	697.86	295.3	16:00

2.0 GAS POSITION: WEDESDAY 27/02/2019

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	404	1100		580	520
DELTA (GAS)	284	915		284	631
OMOTOSHO GAS	140.2	336.8		140.2	196.6
OMOTOSHO NIPP	107.1	500		120	380
OLORUNSOGO (GAS)	140.8	336		190	146
OLORUNSOGO NIPP	0	0		0	750
SAPELE NIPP	96.7	500		112.5	387.5
SAPELE STEAM	41	720		60	660
AFAM IV-V	52	300		52	248
AFAM VI	244	650		300	350
GEREGU GAS	264	435		300	135
GEREGU NIPP	0	435		0	435
OKPAI (GAS/STEAM)	184	480		220	260
ALAOJI NIPP	111.5	504		111.5	392.5
IHOVBOR NIPP	110.9	337.5		112.5	225
IBOM	87.6	198		115	83
ODUKPANI NIPP	197.4	625		230	395
TOTAL	2464.2	9122.30		2927.7	6194.6

1 MMSCF IS EQUIVALENT TO 3.75MW

3.0 SPINNING RESERVE FOR : TUESDAY 26/02/2019

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

3.1 SYSTEM SPINNING RESERVE AS AT 0600HRS OF WEDNESDAY 27/02/2019 = 0MW. FREQUENCY Hz.

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	
TOTAL (MW)			295	0	0

4.0 UNAVAILABLE GENERATION CAPABILITY

The unavailable generation capability for Wednesday 27/02/2019 as at 0600Hrs was = 1551.3MW.

S/N	STATION	ACTUAL GENERATION CAPABILITY (MW)	GENERATION AT 0600HRS (MW)	UNAVAILABLE GENERATION CAPABILITY (MW)	SUB-TOTAL
4.1 DUE TO LINE CONSTRAINTS					
1	Ibom GT3	115	82.7	32.3	102.3
2	Paras Energy GT3 - 10	70	0	70	
				0	
4.2 DUE TO LOW LOAD DEMAND BY THE DISCOS					
1	Egbin ST1, 2, 4 & 5	465	404	61	1449
2	Geragu Gas GT13	145	0	145	
3	Azura-Edo GT12 & 13	306	150	156	
4	Shiroro 411G2	150	60	90	
5	Olorunsogo Gas GT1, 2, 4 - 7	190	140.6	49.4	
6	Rivers GT1	160	130	30	
7	Odukpani GT1 - 5	575	197.4	377.6	
8	Afam GT11, 12 & ST10	500	110	390	
				0	
				0	
				0	
				0	
4.3 DUE TO WATER MANAGEMENT:					
1	Shiroro 411G4	150	0	150	150
Grand Total					1551.3

5.0 OUTAGES:

5 (A) FORCED OUTAGES (GENERATION): Nil

5 (B) FORCED OUTAGES (TRANSMISSION):

- 1 00:46 - 00:54Hrs, Calabar T/S 60MVA 132/33kV transformer T4 primary & secondary CBs tripped at Calabar T/S on instantaneous E/F. Load loss = 17.2MW.
- 2 12:08 through 24:00Hrs, Ondo T/S 30MVA 132/33kV transformer T2 primary CB tripped on Buchholz alarm. No load loss as the transformer was on soak.
- 3 13:35 - 15:32Hrs, Akangba T/S 60MVA 132/33kV transformer 10T3A primary CB tripped on E/F. Load loss = 15.7MW
- 4 13:35 - 14:40Hrs, Ikeja West/Akangba 330kV line 1 (cct W3L) CB tripped at both ends on the following relay indications:
At Ikeja West T/S: Micom Relay: General trip, Red phase fault. Red, yellow and Blue phases fault, distance = Z1 trip, started phases C-N Trip phases ABC, O/C start R>23, E/F, start IN>1, O/C trip I>3, Fault Duration = 106ms, Relay trip time = 79.48km. Fault Zone: No Data, distance No Data
At Akangba T/S: NARI Relay: O/C timed relay 50/51 P4, trip ABC. No load loss as cct W4L was in service.
- 5 13:36 - 14:04Hrs, Osogbo/Ayede 330kV line (cct H2A) CB tripped at both ends on the following relay indications:
At Osogbo T/S: Ohmega Relay: DEF forward and O/C Blue phase relay
At Ayede T/S: Ohmega Relay – Zone 2 trip, O/C & E/F, Location = 43.69km. No load loss as ccts R1W & R2A were in service.

5 (C) PLANNED OUTAGES:- Nil

5 (D) URGENT OUTAGES:-

- 1 03:02 through 24:00Hrs, Delta GT15 was shut down due to gas constraint. Load loss = 60MW
- 2 07:15 through 24:00Hrs, Geregu NIPP GT22 was shut down due to low gas pressure. Load loss = 80MW
- 2 07:47 - 18:07Hrs, Odukpani NIPP GT4 was shut down for maintenance crew to attend to the 125V DC E/F alarm on the battery. Load loss = 74MW
- 3 10:37 - 10:53Hrs, Sapele/Delta 330kV line (cct S4G) was taken out for maintenance crew to build up low SF6 gas pressure to normal level on the line CB. No load loss as cct G3B was in service.
- 3 11:58 through 24:00Hrs, Trans-Amadi P/S GT1 was shut down due to low gas pressure. Load loss = 19.5MW.
- 4 11:58 through 24:00Hrs, Trans-Amadi P/S GT1 was shut down due to low gas pressure. Load loss = 19.5MW.
- 5 14:02 - 16:46Hrs, Lokoja/Gwagwalada 330kV line 2 (cct L7G) was taken out of service to treat hot spot on Blue phase jumper at tower #362. No load loss as cct L6G was in service
- 6 15:36 – 19:45Hrs, Akangba T/S 150MVA 330/132/33kV transformer 5T4B was taken out of service for maintenance crew to work on the transformer secondary CB which failed to close on SCADA and Mimic panel. No load loss as the transformer was out of service.
- 7 15:42 through 24:00Hrs, Geregu NIPP GT21 was shut down due to low gas pressure. Load loss = 90.0MW.
- 8 16:56 – 17:34Hrs, Osogbo T/S 60MVA 132/33kV transformer 4T3 was taken out to top up low oil level in the conservator tank to normal. Load loss = 16.5MW.

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 WITH EFFECTIVE POWER PURCHASE AGREEMENT (PPA)

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

5 (E) EMERGENCY OUTAGES:-

The under mentioned line was opened on frequency control.

- 1 20:26 – 20:44Hrs, Osogbo/Akure/Ado-Ekiti 132kV line CB. Load loss = 46MW. Frequency was 49.86Hz.

5 (F) AUTOMATIC UNDER FREQUENCY OPERATION:-

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

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

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

5 (J) 330KV LINES THAT ARE OUT ON LINE FAULT:- ccts D3T, J2H & K4U

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

6 WEATHER REPORT:- Rainfall reported at Akangba & Ikeja West.

7 INTERNATIONAL LINES:-

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

Maximum load - 264MW at 17:00Hrs.
Minimum load - 208MW at 08:00Hrs.

B BIRNIN KEBBI/NIAMEY 132KV LINE

Maximum load - 108MW at 15:00Hrs.
Minimum load - 46.0MW at 06:00Hrs.

C KATSINA/GAZAOUA/MARADI 132KV LINE

Maximum load - 33.2MW at 21:00Hrs.
Minimum load - 16.5MW at 12:00Hrs.

8 MISCELLANEOUS:-

- 1 00:07 - 11:16Hrs, Jebba 2G2 was shut down due to low load demand by the Discos. Load loss = 90MW
- 2 01:03 - 19:20Hrs, Odukpani NIPP GT3 was shut down due to low load demand by the Discos. Load loss = 97.3MW
- 3 03:21 - 10:42Hrs, Alaoji NIPP GT2 was shut down due to low load demand by the Discos. Load loss = 70.9MW
- 4 07:38Hrs, Osogbo T/S 330kV 75MX Shunt Reactor was placed in service on voltage control. V/P = 344/328kV
- 5 11:16Hrs, Jebba 2G2 was tied to swap with 2G1.
- 6 11:17 - 15:39Hrs, Jebba GT1 was shut down and 96MW was transferred to GT2.
- 7 12:37Hrs, Shiroro 411G4 was tied. The unit was out on water management.
- 8 13:57 - 16:37Hrs, Alaoji NIPP GT1 was shut down due to low load demand by the Discos. Load loss = 75MW.
- 9 14:13 through 24:00Hrs, Afam VI GT11 was shut down due to low load demand by the Discos. Load loss = 110MW.
- 10 16:17Hrs, Geregu Gas GT11 was tied. The unit was out due to low load demand by the Discos.
- 11 16:37Hrs, Alaoji NIPP GT1 was tied. The unit was out due to low load demand by the Discos.
- 12 17:39Hrs, Shiroro 411G1 was shut down due to low load demand by the Discos. Load loss = 50MW.

STATIONS	NO INSTALLED	NO. WORKING
PLC/PAX	38	33
OPTIC FIBRE	13	12
PLS	14	4

11 **SCADA RTU STATUS**

STATIONS	NO. INSTALLED	NO OF RTU DISTURBED	NO OF RTU WORKING
POWER STATIONS	8	4	4
330kV	19	8	11
132kV	102	82	20

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 reactor installed.

12 (B) **UNAVAILABLE BREAKERS/ISOLATORS**

LAGOS REGION:

- Akangba T/S. 132kV Bus Coupler CB - Serious Air leakage.(Undergoing repair)
- Egbin/Aja 330kV line 2 (cct N4J) - faulty breaker at Aja T/S
- Otta/Ogba 132kV line isolator - defective control shaft.
- Osogbo/Ikeja West and Olorunsogo/Ikeja West tie CB at Ikeja West T/S - defective pole .
- Oke-Aro/Ikeja West 330kV lines 1 & 2 tie CB at Ikeja West T/S - Defective pole.
- Omotosho/Ikeja West 330kV line CB at Ikeja West T/S.
- Egbin/Oke-Aro 330kV line 2 (N8K) Defective. Needs replacement.
- Egbin/Ikeja-West Tie CB Defective. Needs replacement.
- Egbin/Aja 330kV line 3 (cct N3J) - Tie CB defective.Needs replacement.

BENIN REGION:

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

PORT HARCOURT REGION:

cct A1K CB

ENUGU REGION:

- New Haven/Yandev 132kV line CB - Faulty Red phase CB pole. Protection is transferred to the bus coupler CB.
- Abakaliki T/S 30MVA 132/33kV transformer T1A and 60MVA 132/33kV transformer T2 primary CBs - Breakers were not provided since commissioning but the
- 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.
- Oturkpo/Yandev 132kV By pass isolator - Canibalized to repair the line isolator.
- 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.

- 17:59Hrs, Olorunsogo Gas GT5 was tied. The unit was out due to low load demand by the Discos.
- 18:32Hrs, Geregus Gas GT13 was tied. The unit was out due to tripping of 330kV cct B12J.
- 19:34Hrs, Azura-Edo GT12 was tied. The unit was out due to low load demand by the Discos.
- 21:02Hrs, Afam VI GT12 was tied. The unit was out due to low load demand by the Discos.
- 17:07Hrs, Oji River/Nsukka 66kV line was restored. The line was out on fault at 16:38Hrs of 25/02/2019.
- 22:31 – 22:55Hrs, Mando T/S 90MVA 330/132/13.8kV/75MX Shunt Reactor 3R3 common primary CB was opened to take out 330kV 75MX Reactor 3R3 on voltage control. Voltage profile: 307/315kV.
- THE SCADA COVERAGE OF ONLY LIMITED AREAS IS NOT GOOD FOR THE SMOOTH OPERATION OF THE GRID.**
- LACK OF REACTOR AND UNRELIABLE STATION SERVICE SUPPLY AT IKOT-EKPENE T/S ARE HINDERING SMOOTH OPERATION.**

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

- Omotosho/Ikeja West line (M5W) and Egbin/Ikeja West line 3 (N6W) - 21 spans.
- Ikeja West/Olorunsogo line (cct R1W) - 80 spans.
- 330kV Ikeja West/Osogbo line. - 95 spans.
- Ikeja West/Alimosho/Ogba 132kV lines 1 & 2 - 15 spans.
- Ikeja West/Akangba 330kV line 2 - 1 span.
- Ikeja West/Ilupeju 132kV lines 1 & 2 - 8 spans.
- Akangba/Iire 132kV lines 1 & 2 - 1 span.
- Ikeja West/Agbara 132kV lines 1 & 2 - 61 spans.
- Ikeja West/Otta 132kV lines 1 & 2 - 17 spans.

SHIRORO REGION

- Jebba T/S 330kV Osogbo lines 1 & 2 and Ganmo line - 9 spans
- Minna T/S 132kV Bida line - 32 spans
- Shiroro T/S 330kV Jebba line 2 - 28 spans

ABUJA REGION

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

12 (F) **UNAVAILABLE SYNCHROSCOPES :**

- 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) - 08105894708, CUG: 07016228668

