

## List of Primary Substations

Region	Name	Capacity (MVA)	Region	Name	Capacity (MVA)	Region	Name	Capacity (MVA)	Region	Name	Capacity (MVA)	Region	Name	Capacity (MVA)
ECG (Accra)	A(Odorkor)	2 x 20 MVA	ECG (Tema)	Station A	2 x 20 MVA	ECG (Western)	Bekwai(P)	1 x 2.5 MVA	ECG (Eastern)	Akwatia	1 x 5 MVA	ECG (Central)	Sub-total	40 MVA
	B(Korle Bu)	2 x 20 MVA		Ashiaman	2 x 20 MVA		Abosol	1 x 5 MVA		Asebu	1 x 1.5 MVA			
	C(Achimota Village)	2 x 20 MVA		Asutuare	1 x 10 MVA		Amansie	1 x 10 MVA		Benso	1 x 5 MVA			
	D(Avenor)	2 x 20 MVA		Station B	1 x 20 MVA		Awaso	1 x 2.5 MVA		Cape Coast(BSP)	1 x 10 MVA			
	E(Transshipment)	2 x 20 MVA		Station D	1 x 10 MVA		Axim	1 x 2.5 MVA		Fosu	1 x 5 MVA			
	F(Kokomlemle)	1 x 20 MVA		Station E	2 x 20 MVA		Takoradi B	1 x 20 MVA		Saltpond	1 x 5 MVA			
	G(Power House)	2 x 20 MVA		Ferrofabric	2 x 20 MVA		Sub-total	397.5 MVA		Sub-total	26.5 MVA			
	H(Achimota BSP)	2 x 20 MVA		Station H(BSP)	2 x 20 MVA		(Western)			ECG (Volta)				
	J(Ofankor)	2 x 20 MVA		Juapong	1 x 5 MVA		Bibiani	1 x 5 MVA		Aflao	1 x 10 MVA			
	K(Switchback)	2 x 15 MVA		Kpong	1 x 5 MVA		Bonjun	1 x 5 MVA		Anloga	1 x 2.5 MVA			
	L(Burma Camp)	2 x 20 MVA		Steelworks	1 x 20 MVA		Bonmain	1 x 3.8 MVA		Hohoe	1 x 2.5 MVA			
	M(Legon)	2 x 20 MVA		TTL	1 x 20 MVA		Takoradi C	2 x 10 MVA		Kpandu(BSP)	1 x 5 MVA			
	N(Nsawam)	1 x 10 MVA		Wahome	2 x 15 MVA		Daboase Town	1 x 5 MVA		Kpeve(BSP)	1 x 2.5 MVA			
Mallam BSP	2 x 20 MVA	Lashibi	2 x 20 MVA	Daboase W/Works	2 x 5 MVA	Tsito	1 x 2.5 MVA							
P(Weija)	2 x 5 MVA	Sub-total	380 MVA	Damang	2 x 15 MVA	Sub-total	25 MVA							
Q(Teshie Nunqua)	2 x 10 MVA	Kumasi(BSP)	2 x 20 MVA	Gag	1 x 10 MVA	ECG Total	1761 MVA							
R(Ridge)	2 x 20 MVA	Adoato(B)	2 x 20 MVA	Inchaban	2 x 2.5 MVA	VRA-NED								
S(Kwashieman)	2 x 10 MVA	Abuakwa	2 x 20 MVA	Jejetreso	1 x 2.5 MVA	W	1 x 5 MVA							
T(Adenta)	2 x 10 MVA	Barekese	2 x 5 MVA	Sefwi	1 x 5 MVA	Navrongo	1 x 3 MVA							
U(Dodowa)	1 x 1 MVA	Airport(C)	2 x 20 MVA	Tarkwa (BSP)	1 x 5 MVA	Bawku	1 x 3 MVA							
V(Dansoman)	2 x 10 MVA	Kaase(D)	2 x 20 MVA	Teberebe1	1 x 5 MVA	Wenchi	1 x 3 MVA							
W(Mampong)	1 x 10 MVA	Magazine(E)	2 x 20 MVA	Teberebe2	1 x 10 MVA									
Y(Baatsonaa)	1 x 10 MVA	Amanfrom(F)	2 x 20 MVA	Sub-total	171.3 MVA	VRA-NED Total	19 MVA							
Z(Tokuse)	1 x 20 MVA	Kumawu(L)	1 x 5 MVA											
	1 x 10 MVA	Effiduase(M)	1 x 5 MVA											
	721 MVA	Sub-total												

## List of BSP

BSP	Transformer ID	Rated Voltage(kV)	Capacity (MVA)	BSP	Transformer ID	Rated Voltage(kV)	Capacity (MVA)	
Achimota	T1	161/34.5	33	Bogoso	T1	161/34.5	33	
	T2	161/34.5	66		T2	161/34.5	33	
	T3	161/34.5	66		Tarkwa	T1	161/11.5/3.3	20
	T4	161/34.5	66			T2	161/34.5/11.5	33
Mallam	T1	161/34.5	66	Cape Coast	T3	161/34.5	33	
	T2	161/34.5	66		T1	161/11.5/6.6	13	
New Tema	T1	161/34.5	66	Winneba	T2	161/34.5/11.5	33	
	T2	161/34.5	33		T1	161/11.5/6.6	5	
	T3	161/34.5	66		T2	161/11.5/6.6	20	
	T4	161/34.5	66		T1	69/11.5	7	
Kumasi	T1	161/11.5/13.2	13	Ho	T2	69/34.5/11.5	13	
	T2	161/11.5/13.2	13		T1	69/34.5	10	
	T3	161/34.5	66		T1	69/34.5	7	
	T4	161/34.5	66		T1	161/74.3/11.5	25	
	T5	161/34.5	33		T2	161/69/34.5	33	
Obuasi	T1	161/6.6/11.5	20	Sogakope	T1	69/34.5	15	
	T2	161/6.6/11.5	20		T1	161/34.5	33	
	T3	161/6.6/11.5	20		T2	161/34.5	33	
Konongo	T1	161/11.5/6.6	5	Sunyani	T1	161/36/11.5	20	
	T2	161/11.5/6.6	5		T2	161/36/11.5	20	
Nkawkaw	T1	161/11.5/6.6	13	Techiman	T3	161/36/11.5	33	
	T1	161/34.5	13		T1	161/36/11.5	20	
Asawinso	T1	161/11.5/6.6	5	Tamale	T1	161/36/11.5	20	
	T2	161/34.5	13		T2	161/36/11.5	20	
Dunkwa	T1	161/34.5	33	Yendi	T1	161/34.5	13	
	T2	161/11.5/6.6	13		T1	161/36/11.5	20	
Akwatia	T1	161/34.5	33	Bolgatanga	T1	161/36/11.5	13	
	T2	161/34.5	33		T1	161/36/11.5	20	
Esiama	T1	161/11.5/6.6	13	Sawla	T1	161/36	13	
	T2	161/34.5	33		Total Capacity (MVA)			1,622
Takoradi	T1	161/34.5	33					
	T3	161/34.5	33					

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ashanti Main A	33	Aobato 1 & 2	1,045	1,138	1,238	1,348	1,467	1,597	1,739	1,893	2,060	2,242	2,441
Ashanti Main A	33	Aobobo 1 & 2	887	894	901	908	915	922	929	936	943	951	958
Ashanti Main A	11	Guinness 1	103	107	111	114	118	122	126	131	135	140	144
Ashanti Main A	11	GRB	170	174	179	184	189	194	200	205	211	217	223
Ashanti Main A	11	OBR	408	427	446	466	488	510	534	558	583	610	638
Ashanti Main A	11	Ind.OHL	346	375	405	438	474	513	555	601	650	703	761
Ashanti Main A	11	Power House 1	262	269	277	285	292	301	309	317	326	335	345
Ashanti Main A	11	WAHW	144	148	152	156	161	165	170	174	179	184	189
Ashanti Main A	11	Lake Road	387	405	423	443	463	484	507	530	554	580	606
Ashanti Main A	11	Power House 2	410	431	452	475	499	525	551	578	609	640	672
Ashanti Main A	11	Rain Tree	149	153	158	162	167	171	176	181	186	191	197
Ashanti Main A	11	Guinness 2	206	211	217	223	229	236	242	249	256	263	270
Ashanti Main A	11	New Asafo	87	90	92	95	97	100	103	106	109	112	115
Ashanti Main A	11	LLL	103	106	109	112	115	118	121	125	128	132	135
Ashanti Main B	33	Manso Nkwanta	31	32	33	33	34	35	36	37	38	39	41
Ashanti Main B	33	Barekese 1	71	73	74	75	77	78	80	81	83	84	86
Ashanti Main B	33	Barekese 2	107	110	113	116	119	123	126	129	133	137	141
Ashanti Main B	11	B 11	313	322	331	340	350	359	369	380	390	401	412
Ashanti Main B	11	B 21	207	226	247	270	295	322	351	384	419	457	499
Ashanti Main B	11	B 31	113	118	125	131	138	145	152	160	169	177	187
Ashanti Main B	11	B 41	87	90	92	95	97	100	103	106	109	112	115
Ashanti Main B	11	B 61	365	386	409	434	460	487	516	547	580	615	651
Ashanti Main B	11	B 71	333	342	352	362	372	382	393	403	415	426	438
Ashanti Main B	11	B 81	332	341	351	360	370	381	391	402	413	425	437
Ashanti Main C	33	Nsuta /Kumawu	251	263	276	289	304	318	334	350	368	386	405
Ashanti Main C	11	C21	224	229	233	238	243	248	252	257	263	268	273
Ashanti Main C	11	C31	164	169	174	179	183	189	194	199	205	210	216
Ashanti Main C	11	C41	270	280	291	301	312	323	335	347	360	373	387
Ashanti Main C	11	C51	177	187	197	208	219	231	244	257	271	286	302
Ashanti Main C	11	Asokore Mampong	258	264	269	275	281	287	293	299	305	312	318
Ashanti Main C	11	Airport 1	352	360	368	376	383	392	400	408	417	426	435
Ashanti Main C	11	Airport 2	423	442	462	483	504	527	551	575	601	628	656
Ashanti Main D	33	Bekwai	101	102	102	103	104	105	105	106	107	108	109
Ashanti Main D	11	D11	170	176	182	188	194	201	207	214	221	229	236
Ashanti Main D	11	D21	371	382	394	406	418	431	444	457	471	485	500
Ashanti Main D	11	D31	421	433	445	457	470	483	497	510	525	539	554
Ashanti Main D	11	D41	185	190	195	201	206	212	218	224	230	237	243
Ashanti Main E	11	D51	185	190	195	201	206	212	218	224	230	237	243
Ashanti Main E	11	E11	292	294	297	299	301	304	306	308	311	313	315
Ashanti Main E	11	E21	273	275	278	281	284	287	290	292	295	298	301
Ashanti Main E	11	Mampong	122	124	126	127	129	130	132	133	135	137	138
Ashanti Nsuta	11	Nsuta	39	40	42	44	46	48	50	53	55	58	60
Ashanti Nsuta	33	Kumawu	130	133	137	141	145	149	153	157	161	166	170
Ashanti Nsuta	33	Nsuta	209	214	220	227	233	239	246	253	260	267	274
Ashanti Nsuta	11	Konongo	170	174	179	184	189	194	200	205	211	217	223
Ashanti Nsuta	11	Agego	98	100	103	106	109	112	115	118	122	125	128
Ashanti Nsuta	11	Odumasi	77	79	81	84	86	88	91	93	96	99	101
Ashanti Nsuta	11	Ejisu	112	115	118	122	125	128	132	136	139	143	147
Ashanti Nsuta	11	Efiduase	74	76	78	80	83	85	87	90	92	95	97
Ashanti Nsuta	11	Kakofu	71	75	81	86	92	99	106	113	121	129	138
Ashanti Nsuta	11	Pakpaka	20	20	21	21	22	22	23	24	24	25	26
Ashanti Nsuta	11	Water Works	41	43	45	47	49	51	54	56	59	61	64
Ashanti Nsuta	11	Tutuka	206	211	217	223	229	236	242	249	256	263	270
Ashanti Nsuta	11	New Edubiase	95	97	100	103	106	108	111	115	118	121	124
Ashanti Nsuta	11	Fomena	278	285	293	301	310	318	327	336	346	355	365
Ashanti Nsuta	11	Stadium	97	99	102	105	108	111	114	117	120	124	127
Ashanti Nsuta	11	WINNEBA	402	425	450	476	504	533	564	596	631	668	706
Ashanti Nsuta	11	SWEDRU 1	191	196	202	208	215	221	228	234	241	249	256
Ashanti Nsuta	11	SWEDRU 2	289	298	308	318	328	339	350	361	373	385	397
Ashanti Nsuta	11	AFAM	126	133	140	147	154	162	171	180	189	199	209

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Central Saltpond	11	Saltpond	50	53	56	59	62	66	70	74	78	83	87
Central Saltpond	11	Mankessim	124	131	138	145	153	161	169	178	187	197	208
Central Saltpond	11	Anomabo	40	43	45	48	50	56	56	60	63	67	71
Central Cape Coast	33	PRASO	57	60	64	68	72	76	80	85	90	95	100
Central Cape Coast	33	SALTPOND/FOSU	197	209	221	234	248	263	279	296	313	332	352
Central Cape Coast	33	FOSU	118	123	130	136	143	150	157	165	173	182	191
Central Cape Coast	33	SALTPOND	91	96	102	108	114	121	128	135	143	151	160
Central Cape Coast	11	ELMINA	340	361	384	408	433	460	489	519	552	586	623
Central Cape Coast	11	RIGDES	127	134	142	150	159	168	178	188	199	211	223
Central Cape Coast	11	TOWN 1	88	92	95	99	102	106	110	114	119	123	128
Central Cape Coast	11	TOWN 2	339	347	356	366	375	385	395	405	415	426	437
Central Cape Coast	11	TOWN 3	164	169	174	179	184	189	194	199	205	211	216
Eastern Koforidua	33	Tafo - 33kV	224	233	242	251	260	270	280	291	302	313	325
Eastern Koforidua	11	11kV Incomer	585	600	615	631	648	665	682	699	718	736	755
Eastern Koforidua	11	Power House	149	153	157	162	166	171	176	181	186	191	196
Eastern Koforidua	11	Estate Junction	148	157	166	176	186	197	208	220	233	246	261
Eastern Koforidua	11	St. Joseph	67	68	69	70	71	72	73	74	75	76	77
Eastern Koforidua	11	Accra Rd	206	210	214	218	223	227	232	236	241	246	250
Eastern Koforidua	11	Old Estate	92	97	103	109	115	122	129	137	145	153	162
Eastern Oda	33	Akwatia - 33kV	177	178	178	179	180	181	182	183	184	184	185
Eastern Oda	11	11kV Incomer	376	408	442	479	519	562	609	660	715	775	840
Eastern Oda	11	Oda Town	121	123	124	126	128	129	131	132	134	136	137
Eastern Oda	11	Swamill	95	101	107	113	119	126	134	141	150	158	168
Eastern Oda	11	Achase	119	123	127	130	134	138	142	146	150	155	159
Eastern Nkwakaw	33	Nkwakaw-33kV	97	99	102	105	108	111	114	117	120	123	127
Eastern Nkwakaw	33	New Abirem	71	71	71	72	72	72	72	72	72	73	73
Eastern Nkwakaw	33	Dankrom	21	22	23	24	25	26	28	29	30	32	33
Eastern Nkwakaw	33	Enyrest	7	8	8	9	9	10	10	11	12	12	13
Eastern Nkwakaw	11	14FI	704	708	711	715	719	723	727	731	735	739	743
Eastern Nkwakaw	11	11kV Incomer	259	260	261	262	262	263	263	265	266	267	268
Eastern Nkwakaw	11	Mountains	267	284	303	323	345	368	392	418	446	476	508
Eastern Nkwakaw	11	Nkwakaw Town	202	215	228	243	258	275	292	311	330	351	373
Eastern Nkwakaw	11	Novotex	56	59	63	66	70	74	79	83	88	93	99
Eastern Akwatia	33	16F2	237	251	265	281	297	314	333	352	373	394	417
Eastern Akwatia	33	Oda	177	178	178	179	180	181	182	183	184	184	185
Eastern Akwatia	11	*16F3	138	146	154	163	172	183	193	204	216	229	242
Eastern Akwatia	11	11kV Incomer	162	171	181	192	203	215	227	241	255	269	285
Eastern Akwatia	11	Akwatia	156	159	163	166	169	173	176	180	184	187	191
Eastern Akwatia	11	Asuankese	156	164	171	179	188	197	206	216	226	236	247
Eastern Tafo	33	15F2	224	225	225	225	225	226	226	226	226	227	227
Eastern Tafo	33	Koloridua	224	233	242	251	260	270	280	291	302	313	325
Eastern Tafo	11	Asesewa	19	20	20	20	21	21	21	22	22	22	23
Eastern Tafo	11	15FI	521	544	567	591	617	643	671	700	730	761	793
Eastern Tafo	11	Tafo	264	278	293	309	326	344	363	383	404	426	450
Eastern Tafo	11	Kibi/Suhum	216	228	240	253	266	280	295	311	328	345	364
Eastern Tafo	11	Onuss	41	42	43	44	45	46	47	48	50	51	52
Tema A	33	A-L1	90	95	101	107	113	120	127	135	143	152	161
Tema A	33	A-L2	70	74	79	83	88	94	99	105	111	118	125
Tema A	11	A21	160	170	180	190	202	214	226	240	254	269	286
Tema A	11	A31	250	265	281	297	315	334	354	375	397	421	446
Tema A	11	A41	50	53	56	59	63	67	71	75	79	84	89
Tema A	11	A61	140	148	157	167	176	187	198	210	223	236	250
Tema A	11	A71	280	297	314	333	353	374	396	420	445	472	500
Tema A	11	A81	50	53	56	59	63	67	71	75	79	84	89
Tema A	11	A91	120	127	135	143	151	160	170	180	191	202	214
Tema B	11	B31	220	233	247	262	277	294	311	330	350	370	393
Tema B	11	B41/71	130	138	146	155	164	174	184	195	207	219	232
Tema B	11	B51	55	58	62	65	69	73	78	82	87	93	98
Tema B	11	B91	200	212	225	238	252	267	283	300	318	337	357
Tema B	11	B101	100	106	112	119	126	134	142	150	159	168	178

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Tema B	11	B111	300	318	337	357	378	401	425	450	477	505	535
Tema B	33	B-Y1	180	191	202	214	227	240	255	270	286	303	321
Tema B	33	B-Y2	130	138	146	155	164	174	184	195	207	219	232
Tema D	33	D-A1	290	307	326	345	366	387	410	435	461	488	518
Tema D	33	D-A2 (U/C)	0	0	0	0	0	0	0	0	0	0	0
Tema D	33	D-E1	105	111	118	125	132	140	149	157	167	177	187
Tema D	33	D-E2	101	107	113	120	127	135	143	151	161	170	180
Tema D	11	GHACEM	240	254	269	286	303	321	340	360	381	404	428
Tema D	11	AGRONA	220	233	247	262	277	294	311	330	350	370	393
Tema D	11	LUBE OIL	200	212	225	238	252	267	283	300	318	337	357
Tema D	11	F/H #1	70	74	79	83	88	94	99	105	111	118	125
Tema D	11	PFC	120	127	136	143	151	160	170	180	191	202	214
Tema D	11	F/H #2	240	254	269	286	303	321	340	360	381	404	428
Tema D	11	ASASEWA	125	132	140	149	158	167	177	187	199	211	223
Tema D	11	PSC Ship Yard	70	74	79	83	88	94	99	105	111	118	125
Tema E	33	E-G.P.H.A	17	18	19	20	21	23	24	25	27	29	30
Tema E	11	E11	110	117	124	131	139	147	156	165	175	185	196
Tema E	11	E21	320	339	359	381	403	427	453	480	509	539	571
Tema S	11	S31 (AFARIWA)	80	85	90	95	101	107	113	120	127	135	143
Tema S	11	S41 (COMMUNITY 22)	280	297	314	333	353	374	396	420	445	472	500
Tema S	11	S61 (OFFICIAL TOWN)	100	106	112	119	126	134	142	150	159	168	178
Tema S	11	S91 (NEW TOWN)	200	212	225	238	252	267	283	300	318	337	357
Tema L	11	KLAGON	117	124	131	139	147	156	166	175	186	197	209
Tema L	11	COMM.20	160	170	180	190	202	214	226	240	254	269	286
Tema L	11	NUNGUJA	293	310	329	349	369	391	415	439	466	493	523
Tema L	11	Vivian Farm	106	112	119	126	134	142	150	159	168	179	189
Tema H	33	H-A1	290	307	326	345	366	387	410	435	461	488	518
Tema H	33	H-B2	385	408	432	458	485	514	545	577	612	648	687
Tema H	33	H-E1	75	79	84	89	95	100	106	112	119	126	134
Tema H	33	H-E2	70	74	79	83	88	94	99	105	111	118	125
Tema H	33	STLWKS	90	95	101	107	113	120	127	135	143	152	161
Tema H	33	WAHOME	146	155	164	174	184	195	207	219	232	246	261
Tema H	11	Kpone Garages	150	159	168	178	189	200	212	225	238	253	268
Tema H	11	Slaughter Hse	60	64	67	71	76	80	85	90	95	101	107
Tema H	11	T.O.R	200	212	225	238	252	267	283	300	318	337	357
Tema H	11	Ernest Chemist	240	254	269	286	303	321	340	360	381	404	428
Tema H	11	Pramprom	220	233	247	262	277	294	311	330	350	370	393
Tema H	11	Nestle	320	339	359	381	403	427	453	480	509	539	571
Tema H	11	Western Casting	309	327	347	368	390	413	437	463	491	520	551
Tema H	33	H FERROFAB	150	159	168	178	189	200	212	225	238	253	268
Tema H	33	H Ashiaman1	255	270	286	303	321	341	361	382	405	429	455
Tema H	33	H Ashiaman2	0	0	0	0	0	0	0	0	0	0	0
Tema H	33	H-TTL	20	21	22	24	25	27	28	30	32	34	36
Tema K	11	Akwamuffie	60	64	67	71	76	80	85	90	95	101	107
Tema K	33	Okwenya	20	21	22	24	25	27	28	30	32	34	36
Tema K	33	Ulapong	32	34	36	38	40	43	45	48	51	54	57
Tema Asutsuare	11	Asutsuare	42	45	47	50	53	56	59	63	67	71	75
Tema Asutsuare	11	Military Camp	10	11	11	12	13	14	15	16	17	18	18
Tema Kpong	11	Krobo Area	258	273	290	307	325	345	365	387	410	434	460
Tema Kpong	11	Old Works	60	64	67	71	76	80	85	90	95	101	107
Volta Asteikpe	11		22	23	24	26	27	28	30	31	33	34	36
Volta Aflao	33	Abor-Ave Dzalele	50	53	56	58	61	65	68	71	75	79	83
Volta Aflao	33	Incomer	88	93	97	102	108	113	119	125	131	138	145
Volta Aflao	11	Denu	163	171	180	189	198	208	219	230	242	254	267
Volta Aflao	11	Aflao	42	44	46	49	51	55	57	59	62	66	69
Volta Ho	11	FI - HO POLY-SOKODE-MA TSE	138	145	152	160	168	176	185	194	204	215	226
Volta Ho	11	F2 - HO CENTRAL	172	181	190	200	210	220	232	243	256	269	282
Volta Ho	11	F3 - HO - TANYIGBE - KPEITOE	185	194	204	214	225	237	249	261	274	288	303
Volta Ho	11	F4 - REGIONAL HOSPITAL	24	25	27	28	29	31	32	34	36	38	40

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Volta Ho	11		0	0	0	0	0	0	0	0	0	0	0
Volta Ho	11	INCOMER	436	458	481	506	531	558	586	616	647	680	714
Volta Kpeve	33	TSITO – AMEDZOPE	50	53	56	58	61	65	68	71	75	79	83
Volta Kpeve	11	HAVE	17	18	19	19	20	22	23	24	25	26	28
Volta Kpeve	11	GWGL	82	86	90	95	99	104	110	115	121	127	133
Volta Kpeve	11	KPEVE TOWNSHIP	44	46	49	51	54	56	59	62	65	69	72
Volta Kparado	33	NKONTA	19	20	21	22	23	24	25	27	28	29	31
Volta Kparado	33	HOOHE	134	141	148	156	164	172	181	190	200	210	220
Volta Kparado	33	INCOMER	204	214	225	236	248	261	274	288	303	318	334
Volta Kparado	11	INCOMER	134	147	161	176	193	212	233	255	280	307	336
Volta Kparado	11	KPANDO	76	80	84	88	92	97	102	107	113	119	125
Volta Kparado	11	SOVIE	61	64	67	71	74	78	82	86	90	95	100
Volta Sogakope	33	ADIDOME	8	9	9	10	10	11	11	12	12	13	14
Volta Sogakope	33	ADA	49	52	55	58	61	64	67	71	75	79	83
Volta Sogakope	33	SOGAKOPE – AKATSI – KETA	172	177	183	189	194	200	207	213	219	226	233
Volta T'sito	11	TSITO – TOWNSHIP	15	15	16	17	18	19	20	21	22	23	24
Volta T'sito	11	ADULT COLLEGE	2	2	2	2	3	3	3	3	3	3	3
Volta T'sito	11	PEKI	74	77	81	85	90	94	99	104	109	115	120
Volta T'sito	11	INCOMING	80	84	88	93	97	102	107	113	119	125	131
Western sub	33	SEKONDI	1,007	1,046	1,086	1,128	1,171	1,217	1,263	1,312	1,362	1,415	1,469
Western sub	33	TARKWA	909	944	980	1,018	1,057	1,097	1,140	1,183	1,229	1,276	1,325
Western sub	33	ASAWINSO	493	512	532	552	574	596	619	642	667	693	719
Western sub	33	ESIAMA	115	124	133	144	155	166	179	193	207	223	240
Western sub	33	BOGOSO	90	91	91	91	91	92	92	92	92	92	92
Western stn A	33	VRA 1	552	574	596	619	642	667	693	720	747	776	806
Western stn A	33	VRA 2	497	517	536	557	578	601	624	648	673	699	725
Western stn A	33	TDI 2 (CCT 1)	415	431	448	465	483	502	521	541	562	583	606
Western stn A	33	TDI 2 (CCT 2)	242	245	249	252	255	258	262	265	269	272	276
Western stn A	33	TDI 3 (CCT 5)	277	288	299	311	322	335	348	361	375	389	404
Western stn A	33	DABOASE (CCT 3)	0	0	0	0	0	0	0	0	0	0	0
Western stn A	33	DABOASE (CCT 4)	0	0	0	0	0	0	0	0	0	0	0
Western stn A	11	A09	79	82	85	88	92	95	99	103	107	111	115
Western stn A	11	A10	291	302	314	326	338	351	365	379	393	408	424
Western stn A	11	A13	197	205	213	221	229	238	247	257	277	288	298
Western stn A	11	A31	343	356	370	384	399	414	430	446	463	481	500
Western stn A	11	A41	332	345	358	372	386	401	417	433	449	467	485
Western stn A	11	A44	135	140	146	151	157	163	169	176	183	190	197
Western stn A	11	A55	275	302	332	365	402	442	486	534	588	646	710
Western stn A	11	A57	102	106	110	114	118	123	128	133	138	143	148
Western stn B	11	B01	10	11	11	12	12	13	13	14	14	15	15
Western stn B	11	B09	114	119	123	128	133	138	143	149	154	160	167
Western stn B	11	B11	114	119	123	128	133	138	143	149	154	160	167
Western stn B	11	B21	280	291	302	314	326	339	352	365	379	394	409
Western stn B	11	B32	498	518	538	558	580	602	625	649	674	700	727
Western stn B	11	B41	218	226	235	244	254	263	273	284	295	306	318
Western stn B	11	B51	294	321	349	381	415	452	493	537	585	638	695
Western stn B	11	B52	312	324	336	349	362	376	391	406	421	438	454
Western stn B	11	B67	130	135	140	145	151	157	163	169	176	182	189
Western stn B	11	B71	182	189	196	204	211	219	228	237	246	255	265
Western stn B	11	B87	228	237	246	256	266	276	287	298	309	321	333
Western stn C	33	AGONA	48	51	54	57	60	63	66	70	74	78	82
Western stn C	11	C01	270	280	291	302	314	326	339	352	365	379	394
Western stn C	11	C08	145	151	157	163	169	176	182	189	197	204	212
Western stn C	11	C10	228	237	246	256	266	276	287	298	309	321	333
Western stn C	11	C10	296	307	319	331	344	357	371	385	400	416	432
Western	33	Aboso1	262	272	283	293	305	316	329	341	354	368	382
Western	33	Aboso2	294	305	317	329	342	355	369	383	398	413	429
Western	33	Tamso	50	53	56	59	62	65	68	71	74	77	80
Western	33	Teberabe1	241	250	260	270	280	291	302	314	326	339	352
Western	33	Teberabe2	120	125	129	134	140	145	151	156	162	169	175

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Western	11	Manganese	300	312	324	336	349	362	376	391	406	421	438
Western	11	Town1	30	247	920	625	424	288	195	133	90	61	41
Western	11	Town2	190	197	205	213	221	230	238	248	257	267	277
Western	33	Line1	246	255	265	276	286	297	309	320	333	346	359
Western	33	Line2	294	305	317	329	342	355	369	383	398	413	429
Western	11	Abooso Town	57	439	2,238	1,516	1,027	695	471	319	216	146	99
Western	11	Power House	11	11	12	12	13	13	14	14	15	15	16
Western	11	Court Area/Hospital	89	92	96	100	104	108	112	116	120	125	130
Western	11	Line1	85	88	92	95	99	103	107	111	115	119	124
Western	33	Line1	98	102	106	110	114	118	123	128	133	138	143
Western	11	Line1	241	250	260	270	280	291	302	314	326	339	352
Western	11	Line1	241	250	260	270	280	291	302	314	326	339	352
Western	11	Line1	177	184	191	198	206	214	222	231	239	249	258
Western	33	Half Assini	71	74	77	80	83	86	89	92	96	100	104
Western	33	NKROFUL/Station C	35	36	38	39	41	42	44	46	47	49	51
Western	11	Avoso Town	152	158	164	170	177	184	191	198	206	214	222
Western	11	Power House	70	596	3,368	2,328	1,609	1,112	769	531	367	254	175
Western	11	Kakokrom	88	91	95	99	102	106	110	115	119	124	128
Western	33	Chirano Mines	126	131	136	141	147	152	158	164	170	177	184
Western	33	Bibiani	166	172	179	186	193	201	208	216	225	233	242
Western	33	Wiaso/Avaso	153	159	165	171	178	185	192	199	207	215	223
Western	33	Denkyera Obuasi	7	7	8	8	8	8	9	9	9	10	10
Western	33	Jejireso	4	4	4	4	5	5	5	5	5	6	6
Western	11	Line1	1	1	1	1	1	1	1	1	1	1	1
Western	11	Line1	1	1	1	1	1	1	1	1	1	1	1
Western	11	Old Town	72	514	2,929	1,964	1,317	883	592	397	266	179	120
Western	11	Pit Site	34	35	37	38	40	41	43	44	46	48	50
Western	11	Gyedi/town	72	75	78	81	84	87	90	94	97	101	105
Accra West	11	A16	164	172	180	189	198	208	218	229	240	252	264
Accra West	11	A01	498	516	535	555	576	597	619	642	666	691	717
Accra West	11	A120	501	530	560	592	626	662	700	741	783	828	876
Accra West	11	A61	489	499	508	518	528	538	549	559	570	581	592
Accra West	11	A18	95	100	105	110	116	121	127	133	140	147	154
Accra West	11	A13	265	278	292	306	321	337	354	371	389	408	428
Accra West	11	B19	350	361	371	383	394	406	418	431	444	457	470
Accra West	11	B15	355	370	386	403	421	439	458	478	499	520	543
Accra West	11	B20	215	226	237	248	260	273	287	301	315	331	347
Accra West	11	B24	311	311	312	313	314	314	315	316	316	317	318
Accra West	11	B28	363	386	410	437	464	494	525	559	594	632	673
Accra West	11	B27	356	384	415	447	483	521	562	607	655	707	762
Accra West	11	B25	273	286	300	315	330	346	363	381	400	419	440
Accra West	11	B42	287	300	314	329	344	361	378	395	414	433	453
Accra West	11	B35	210	220	231	242	254	266	280	293	308	323	338
Accra West	11	ABC 1	83	87	91	96	100	105	110	116	121	127	134
Accra West	11	ABC 2	372	393	417	441	467	494	523	554	587	621	658
Accra West	11	ABC 3	302	303	305	307	308	310	312	314	315	317	319
Accra West	11	C80	336	352	369	387	405	425	446	467	490	514	539
Accra West	11	C20	352	374	397	422	449	477	507	539	573	609	647
Accra West	11	CD51	351	364	378	393	408	423	440	457	474	492	511
Accra West	11	C13	360	365	371	376	381	387	392	398	404	410	415
Accra West	11	C140	371	387	404	421	439	456	478	498	520	542	565
Accra West	11	D01	280	294	308	323	339	356	373	391	411	431	452
Accra West	11	D114	341	341	342	342	343	343	344	344	345	346	346
Accra West	11	D103	388	396	404	412	420	429	438	447	456	465	474
Accra West	11	D101	395	405	416	428	440	452	464	477	490	503	517
Accra West	11	Panel 10	367	385	404	424	445	466	489	513	538	565	592
Accra West	11	D16	428	465	504	548	595	646	701	762	827	898	975
Accra West	11	D123	294	308	323	339	356	373	391	410	431	452	474
Accra West	11	D24	253	265	278	292	306	321	337	353	371	389	408
Accra West	11	D150	283	297	312	327	343	360	377	396	415	436	457

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Accra West	11	A/W - Region	52	55	58	61	64	67	70	73	77	81	85
Accra West	11	E08	328	341	355	370	385	401	418	435	453	471	490
Accra West	11	E07	357	374	392	412	432	452	475	498	523	548	575
Accra West	11	EG14	281	303	327	353	381	412	444	480	518	559	603
Accra West	11	E20	226	237	248	260	273	286	300	315	331	347	364
Accra West	11	E26	153	161	169	177	185	195	204	214	225	236	247
Accra West	11	E41	73	77	81	85	89	93	98	103	108	113	118
Accra West	11	ABL 1	105	110	115	121	127	134	140	147	154	161	169
Accra West	11	ABL 2	98	102	107	113	118	124	130	136	143	150	157
Accra West	11	E150	283	297	312	327	343	360	377	396	415	436	457
Accra West	11	F11	210	220	231	242	254	266	280	293	308	323	338
Accra West	11	F01	241	253	265	278	292	306	321	337	354	371	389
Accra West	11	G25	325	341	358	375	394	413	433	454	477	500	525
Accra West	11	G32	190	199	209	219	230	241	253	265	278	292	306
Accra West	11	G56	252	264	277	291	305	320	335	352	369	387	406
Accra West	11	G05	168	176	185	194	203	213	224	235	246	256	271
Accra West	11	GE19	231	242	254	266	279	293	307	323	338	355	372
Accra West	11	Nsawm-Accra	273	286	300	315	330	346	363	381	400	419	440
Accra West	11	Township	77	80	84	88	93	97	102	107	112	118	124
Accra West	11	Adoagyiri	241	253	265	278	292	306	321	337	354	371	389
Accra West	11	R13	178	187	196	206	216	226	238	249	261	274	288
Accra West	11	R12	299	309	319	330	340	351	363	375	387	400	413
Accra West	11	R11	294	308	323	339	356	373	391	410	431	452	474
Accra West	11	R10	78	81	85	90	94	99	103	108	114	119	125
Accra West	11	R05	179	188	197	207	217	228	239	251	263	276	289
Accra West	11	R04	161	168	176	183	192	200	209	219	228	239	249
Accra West	11	R03	210	220	231	242	254	266	280	293	308	323	338
Accra West	11	S02	215	226	237	248	260	273	287	301	315	331	347
Accra West	11	S03	309	324	339	356	373	390	409	429	449	471	493
Accra West	11	S04	222	233	245	257	269	282	296	311	326	342	359
Accra West	11	S10 and S11	415	421	426	432	438	444	449	455	461	467	474
Accra West	11	S11	173	182	191	200	210	220	231	242	254	266	279
Accra West	11	V02	291	305	320	335	352	369	387	406	426	447	469
Accra West	11	V03	263	276	290	304	319	334	351	368	386	405	425
Accra West	11	V04	170	178	187	196	206	216	226	237	249	261	274
Accra West	11	V10	477	501	527	555	584	614	646	679	715	752	791
Accra West	11	V11	275	288	302	317	333	349	366	384	403	423	443
Accra West	11	Tuba	210	220	231	242	254	266	280	293	308	323	338
Accra West	11	Radio	414	435	456	478	502	526	552	579	607	637	668
Accra West	33	Dansoman	463	486	511	537	564	593	623	655	689	724	761
Accra West	33	Awoshie 1	517	552	589	628	671	716	764	816	871	929	992
Accra West	33	Bubuashie	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Awoshie 2	517	552	589	628	671	716	764	816	871	929	992
Accra West	33	Laterbiokoshie	613	671	733	801	876	958	1,047	1,145	1,251	1,368	1,495
Accra West	33	Korle bu	396	407	419	431	443	456	469	482	496	510	525
Accra West	33	Mataheko	409	423	437	451	466	482	498	514	532	549	567
Accra West	33	Bubuashie	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Achimota 2	669	702	737	773	811	850	892	936	981	1,030	1,080
Accra West	33	Quarry 2	277	291	305	320	335	352	369	387	406	426	447
Accra West	33	Achimota 1	664	696	730	766	804	844	884	928	973	1,021	1,071
Accra West	33	Nsawam	443	458	474	489	506	523	540	558	577	596	616
Accra West	33	Quarry 1	289	303	318	333	349	367	384	403	423	444	466
Accra West	33	Avenor 2	635	666	699	733	769	806	846	887	931	976	1,024
Accra West	33	Avenor 1	641	672	705	739	776	814	854	895	939	985	1,033
Accra West	33	Alejo 1	1,108	1,162	1,219	1,279	1,342	1,407	1,476	1,549	1,624	1,704	1,788
Accra West	33	Alejo 2	1,085	1,138	1,194	1,252	1,314	1,378	1,446	1,516	1,591	1,669	1,750
Accra West	33	Kokomlemle	646	709	779	855	938	1,030	1,130	1,241	1,362	1,495	1,641
Accra West	33	Laterbiokoshie	739	775	813	853	894	938	984	1,032	1,083	1,136	1,192
Accra West	33	Kotobabi 2	639	701	768	842	922	1,011	1,108	1,214	1,331	1,459	1,599



LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Accra West	33	Kotobabi 1	570	614	663	715	771	831	897	967	1,043	1,125	1,214
Accra West	33	Okleshie 1	460	482	504	527	551	577	603	631	660	691	722
Accra West	33	Adabraka	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Avenor 1	528	563	600	640	682	728	776	827	882	940	1,003
Accra West	33	Avenor 2	487	514	542	571	602	635	669	706	744	785	827
Accra West	33	Okleshie 2	434	451	468	486	504	524	544	565	586	609	632
Accra West	33	Kokomlemle	597	648	704	764	829	900	977	1,060	1,151	1,249	1,356
Accra West	33	Adabraka	185	194	203	213	224	235	246	258	271	284	298
Accra West	33	Okleshie 1	434	451	468	486	504	524	544	565	586	609	632
Accra West	33	Ringway	473	495	519	544	570	597	626	656	687	720	754
Accra West	33	Korle-Bu	312	327	343	360	377	396	415	436	457	479	503
Accra West	33	Okleshie 2	540	576	615	656	700	746	796	850	907	967	1,032
Accra West	33	Kinbu	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Achimota 1	693	726	762	799	839	880	923	968	1,015	1,065	1,117
Accra West	33	Achimota 2	635	666	699	733	769	806	846	887	931	976	1,024
Accra West	33	Alajo 1	1,108	1,162	1,219	1,279	1,342	1,407	1,476	1,549	1,624	1,704	1,788
Accra West	33	Alajo 2	1,097	1,150	1,207	1,266	1,328	1,393	1,461	1,533	1,608	1,686	1,769
Accra West	33	Mamobi 1	585	635	689	748	812	881	956	1,037	1,126	1,222	1,326
Accra West	33	Mamobi 2	623	654	686	719	755	792	830	871	914	959	1,005
Accra West	33	Mamobi	1,131	1,187	1,245	1,306	1,370	1,437	1,507	1,581	1,658	1,740	1,825
Accra West	33	Legon	600	653	712	776	845	921	1,004	1,094	1,192	1,299	1,415
Accra West	33	Adenta	693	726	762	799	839	880	923	968	1,015	1,065	1,117
Accra West	33	Kotobabi 1	640	701	769	843	925	1,014	1,112	1,219	1,337	1,466	1,608
Accra West	33	Kotobabi 2	669	702	737	773	811	850	892	936	981	1,030	1,080
Accra West	33	Airport 1	1,039	1,090	1,143	1,199	1,258	1,319	1,384	1,452	1,523	1,598	1,676
Accra West	33	Airport 2	791	829	870	913	957	1,004	1,053	1,105	1,159	1,216	1,275
Accra West	33	Cantoment 1	388	397	406	416	425	435	445	455	465	476	487
Accra West	33	Ringway	408	420	433	446	459	473	487	502	517	532	548
Accra West	33	Mamobi 2	434	451	469	487	506	526	547	568	590	613	637
Accra West	33	Mamobi 1	693	726	762	799	839	880	923	968	1,015	1,065	1,117
Accra West	33	Mamobi 3	515	548	583	621	660	702	747	795	846	900	958
Accra West	33	Cantoment 2	375	382	389	396	403	410	418	425	433	441	449
Accra West	33	Ridge	289	303	318	333	349	367	384	403	423	444	466
Accra West	33	T-Nungua 2	343	345	347	348	350	352	354	356	358	360	362
Accra West	33	Cantoment 2	380	387	393	399	406	413	420	427	434	441	448
Accra West	33	Cantoment 1	393	401	410	419	427	436	445	455	464	474	484
Accra West	33	T-Nungua 1	380	386	393	399	405	412	419	426	432	439	447
Accra West	33	Airport City 1	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Airport City 2	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Legon	595	644	696	753	815	882	954	1,032	1,116	1,207	1,306
Accra West	33	Old Mampong	1	1	1	1	1	1	1	1	1	2	2
Accra West	33	Nsawam to C	185	194	203	213	224	235	246	258	271	284	298
Accra West	33	Weija 1	1	1	1	1	1	1	1	1	1	2	2
Accra West	33	Weija 2	75	79	83	87	91	95	100	105	110	115	121
Accra West	33	Teshie Nungua 1	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Teshie Nungua 2	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Baatsona 1	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Baatsona 2	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Ridge	597	649	704	765	830	901	978	1,062	1,153	1,252	1,360
Accra West	33	Kinbu	231	242	254	266	280	293	308	323	338	355	372
Accra West	33	Kwashieman 1	462	485	508	533	560	587	616	646	678	711	746
Accra West	33	Quarry 1	277	291	305	320	335	352	369	387	406	426	447
Accra West	33	Quarry 2	277	291	305	320	335	352	369	387	406	426	447
Accra West	33	Kwashieman 2	462	485	509	534	561	589	618	649	681	715	750
Accra West	33	Adenta	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Mampong	173	182	191	200	210	220	231	242	254	266	279
Accra West	33	Old Mampong	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Dansoman	426	434	442	450	458	467	475	484	493	502	511
Accra West	33	Mathakko	323	339	356	373	391	410	431	452	474	497	521

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Accra West	33	Mampong to T	185	194	203	213	224	235	246	258	271	284	298
Accra West	33	Tema 1	405	413	422	431	440	450	459	469	479	489	500
Accra West	33	Tema 2	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Baatsona 1	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Baatsona 2	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Kasoa	238	249	262	274	288	302	317	332	349	366	384
Accra West	33	Weija 1	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Awoshie 1	533	561	591	622	665	689	726	764	804	847	891
Accra West	33	Awoshie 2	573	610	649	690	734	781	830	883	939	999	1,063
Accra West	33	Kwashie 1	196	206	216	226	238	249	261	274	288	302	317
Accra West	33	Kwashie 2	193	193	212	222	233	245	257	269	283	296	311
Accra West	33	Weija 1	323	339	356	373	391	410	431	452	474	497	521
Accra West	33	Weija 2	76	80	84	88	92	97	101	106	112	117	123
Accra East	33	Kokomlemle (F)	493	517	543	569	597	626	657	689	723	758	795
Accra East	33	Adabraka (F)	356	373	391	410	431	452	474	497	521	547	574
Accra East	33	Okashie 1 (G)	399	418	439	460	483	506	531	557	584	613	643
Accra East	33	Ringway (G)	538	590	646	708	776	850	931	1,021	1,118	1,225	1,343
Accra East	33	Korle-Bu (G)	365	365	365	365	365	365	366	366	366	366	366
Accra East	33	Okashie 2 (G)	418	442	467	494	523	553	585	619	654	692	732
Accra East	33	Kinbu (G)	377	395	414	435	456	478	502	526	552	579	607
Accra East	33	Achimota 1 (H)	624	648	674	700	728	757	787	818	850	884	918
Accra East	33	Achimota 2 (H)	514	539	566	593	622	653	685	718	754	790	829
Accra East	33	Alajo 1 (H)	1,259	1,320	1,385	1,453	1,524	1,599	1,677	1,759	1,845	1,936	2,031
Accra East	33	Alajo 2 (H)	1,112	1,166	1,224	1,283	1,346	1,412	1,481	1,554	1,630	1,710	1,794
Accra East	33	Mamobi 1 (H)	948	995	1,043	1,095	1,148	1,204	1,263	1,325	1,390	1,458	1,530
Accra East	33	Mamobi 2 (H)	623	654	686	719	755	792	830	871	914	959	1,005
Accra East	33	Mamobi 3 (H)	1,131	1,187	1,245	1,306	1,370	1,437	1,507	1,581	1,658	1,740	1,825
Accra East	33	Legon (H)	621	651	683	717	752	789	827	868	910	955	1,002
Accra East	33	Adenta (H)	624	668	716	767	822	881	943	1,011	1,083	1,160	1,243
Accra East	33	Kotobabi 1 (H)	561	605	653	704	760	819	884	954	1,029	1,110	1,197
Accra East	33	Kotobabi 2 (H)	462	484	508	533	559	586	615	645	677	710	745
Accra East	33	Airport 1 (H)	892	935	981	1,029	1,080	1,132	1,188	1,246	1,307	1,371	1,438
Accra East	33	Airport 2 (H)	710	765	823	886	953	1,026	1,105	1,189	1,280	1,377	1,483
Accra East	33	Cantonment 1 (K)	319	335	351	368	386	405	425	446	468	490	514
Accra East	33	Ringway (K)	246	251	253	253	256	259	261	264	267	270	273
Accra East	33	Mamobi 2 (K)	433	448	464	480	497	514	532	551	570	590	611
Accra East	33	Mamobi 1 (K)	849	890	934	980	1,028	1,078	1,131	1,186	1,244	1,305	1,369
Accra East	33	Mamobi 3 (K)	513	544	576	611	648	686	728	771	817	866	918
Accra East	33	Cantonment 2 (K)	371	390	409	429	450	472	495	519	544	571	599
Accra East	33	Ridge (K)	397	404	412	420	427	435	443	451	460	468	477
Accra East	33	T-Nungua 2 (L)	367	374	382	389	397	405	413	421	429	438	447
Accra East	33	Cantonment 2 (L)	291	303	315	327	340	354	368	382	397	413	430
Accra East	33	Cantonment 1 (L)	472	495	519	545	572	600	629	660	692	726	761
Accra East	33	T-Nungua 1 (L)	304	319	335	351	368	386	405	425	446	468	491
Accra East	33	Airport City 1 (L)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Airport City 2 (L)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Legon (M)	605	635	666	699	733	769	806	846	887	931	976
Accra East	33	Old Mampong (M)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Teshie Nungua 1 (Q)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Teshie Nungua 2 (Q)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Baatsona 1 (Q)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Baatsona 2 (Q)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Adenta (T)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Mampong (T)	338	354	372	390	409	429	450	472	495	519	545
Accra East	33	Old Mampong (T)	330	347	364	381	400	420	440	462	484	508	533
Accra East	33	Mampong to T (W)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Tema 1 (Y)	396	426	459	494	531	572	615	662	712	766	825
Accra East	33	Tema 2 (Y)	433	454	477	500	523	550	577	605	635	666	699
Accra East	33	Baatsona 1 (Y)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Baatsona 2 (Y)	0	0	0	0	0	0	0	0	0	0	0
Accra East	11	FI5(FK02)	331	348	365	383	401	421	442	463	486	510	535

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Accra East	11	F11(FD19)	352	373	395	417	442	467	495	523	554	586	620
Accra East	11	F10(FD42)	253	268	283	298	315	333	351	371	392	414	437
Accra East	11	F06(F11)	210	220	231	242	254	266	280	293	308	323	338
Accra East	11	F05(F01)	241	253	265	278	292	306	321	337	354	371	389
Accra East	11	F04(FD48)	264	277	291	305	320	336	352	369	388	407	426
Accra East	11	F03(FD38)	273	286	300	315	330	346	363	381	400	419	440
Accra East	11	F13(FK01)	114	120	126	132	138	145	152	160	168	176	184
Accra East	11	G21(G25)	325	341	358	375	394	413	433	454	477	500	525
Accra East	11	G19(G60)	315	330	346	363	381	400	419	440	461	484	508
Accra East	11	G18(G32)	190	199	209	219	230	241	253	265	278	292	306
Accra East	11	G06(G64)	283	297	312	327	343	360	377	396	415	436	457
Accra East	11	G12(G47)	296	302	308	314	320	326	333	339	346	353	360
Accra East	11	G02(G33)	273	286	300	315	330	346	363	381	400	419	440
Accra East	11	G07(G06)	226	237	248	260	273	286	300	315	331	347	364
Accra East	11	G13(G36)	252	264	277	291	305	320	335	352	369	387	406
Accra East	11	G05	168	176	185	194	203	213	224	235	246	256	271
Accra East	11	G04(G351)	252	264	277	291	305	320	335	352	369	387	406
Accra East	11	G03(GE19)	231	242	254	266	279	293	307	323	338	355	372
Accra East	11	G11(G13)	262	275	289	303	318	333	349	367	384	403	423
Accra East	11	H02(H351)	401	415	430	446	462	479	514	532	552	571	588
Accra East	11	H04(H07)	278	292	306	321	337	353	370	388	408	427	448
Accra East	11	H05(H06)	319	335	351	368	386	405	425	446	468	490	514
Accra East	11	H07(H85)	257	270	283	297	311	326	342	359	377	395	415
Accra East	11	H08(H24)	295	309	324	340	357	374	393	412	432	453	476
Accra East	11	H10(H10)	294	308	323	339	356	373	391	410	431	452	474
Accra East	11	K03(K09)	220	231	242	254	267	280	293	308	323	339	355
Accra East	11	K04(K10)	299	314	329	345	362	380	398	418	438	460	482
Accra East	11	K06(K60)	312	319	326	333	341	348	356	364	373	381	389
Accra East	11	K10(K61)	208	218	229	240	251	264	277	290	304	319	335
Accra East	11	K11(K06)	304	319	335	351	368	386	405	425	446	468	491
Accra East	11	K12(K07)	244	256	269	282	296	310	326	342	358	376	394
Accra East	11	K13(K13)	283	297	312	327	343	360	377	396	415	436	457
Accra East	11	K05(K130)	367	389	413	438	465	493	524	555	589	625	663
Accra East	11	L13(Burma Camp 1)	320	336	352	369	387	406	426	447	469	492	516
Accra East	11	L12(Burma Camp 3)	194	204	214	224	235	246	259	271	285	298	313
Accra East	11	L11(L01)	273	286	300	315	330	346	363	381	400	419	440
Accra East	11	L10(L22)	215	226	237	248	260	273	287	301	315	331	347
Accra East	11	L05(Burma Camp 2)	304	319	335	351	368	386	405	425	446	468	491
Accra East	11	L04(L03)	231	242	254	266	279	293	307	323	338	355	372
Accra East	11	L03(L02)	294	308	323	339	356	373	391	410	431	452	474
Accra East	11	L06(L12)	289	309	331	354	379	406	435	465	498	533	571
Accra East	11	M01(Old Legon 1)	380	390	400	411	421	432	444	455	467	480	492
Accra East	11	M02(Workshop)	42	44	46	48	51	53	56	59	62	65	68
Accra East	11	M03(University 1)	241	253	265	278	292	306	321	337	354	371	389
Accra East	11	M05(Old Legon 2)	294	308	323	339	356	373	391	410	431	452	474
Accra East	11	M07(Madina)	473	511	553	598	647	700	757	819	886	956	1,037
Accra East	11	M08(Kwabanya)	471	485	499	514	529	544	560	577	594	611	629
Accra East	11	M10(University 2)	219	230	241	253	265	278	291	305	320	336	352
Accra East	11	Q01(Old Spintex)	262	275	289	303	318	333	349	367	384	403	423
Accra East	11	Q03(Teshie 1)	502	527	553	580	608	638	669	702	737	773	811
Accra East	11	Q07(Teshie 2)	386	405	425	446	467	490	514	539	566	594	623
Accra East	11	Q06(Teshie 3)	378	396	416	436	457	480	503	528	554	581	609
Accra East	11	R13	178	187	196	206	216	226	238	249	261	274	288
Accra East	11	R12	301	313	325	337	350	364	378	393	408	423	440
Accra East	11	R11	294	308	323	339	356	373	391	410	431	452	474
Accra East	11	R10	78	81	85	90	94	99	103	108	114	119	125
Accra East	11	R05	179	188	197	207	217	228	239	251	263	276	289
Accra East	11	R04	157	160	163	166	169	172	175	178	181	184	188
Accra East	11	R03	210	220	231	242	254	266	280	293	308	323	338
Accra East	11	R02	281	295	309	324	340	357	375	393	412	432	454
Accra East	11	T03(Adenta Est. 1)	435	457	479	502	527	553	580	608	638	669	702
Accra East	11	T04(Redco)	435	457	479	502	527	553	580	608	638	669	702

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Accra East	11	T09(Apogba)	386	412	440	470	502	536	573	612	654	698	746
Accra East	11	T10(Dodowa)	215	225	235	246	256	270	282	295	309	324	339
Accra East	11	T11(Pantang)	271	282	292	304	316	328	340	354	367	381	396
Accra East	11	T02(Adenta Est 2)	0	0	0	0	0	0	0	0	0	0	0
Accra East	11	Akropong W03	178	187	196	206	216	226	238	249	261	274	288
Accra East	11	Peduaase	131	138	144	151	159	167	175	183	192	202	212
Accra East	11	Tetteh Quashie	0	0	0	0	0	0	0	0	0	0	0
Accra East	11	Y11(Spintex)	485	504	523	544	565	587	609	633	658	683	710
Accra East	11	Y03(J & Z)	309	325	341	357	375	393	412	432	454	476	499
Accra East	11	Y04(Johnson Wax)	458	481	504	529	555	582	611	641	672	705	739
Accra East	11	Y09(Coca Cola)	305	311	316	322	328	334	340	346	352	358	365
Accra East	11	Y10(Texpo)	493	523	548	575	603	633	664	698	730	766	804
Accra East	11	Y02(Old Spintex)	259	272	285	299	314	329	345	362	380	398	418
Accra East	11	Y12	0	0	0	0	0	0	0	0	0	0	0

ECG Feeder Demand Forecast

Unit: A

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ashanti Main A	33	Aobato 1 & 2	1,055	1,159	1,273	1,398	1,536	1,687	1,853	2,036	2,237	2,457	2,699
Ashanti Main A	33	Aobobo 1 & 2	937	998	1,062	1,131	1,204	1,282	1,365	1,453	1,547	1,647	1,754
Ashanti Main A	11	Guinness 1	106	113	120	128	136	145	154	164	174	185	197
Ashanti Main A	11	GRB	176	187	199	212	226	240	256	272	290	309	329
Ashanti Main A	11	OBR	418	449	482	517	565	595	639	686	736	789	847
Ashanti Main A	11	Ind.OHL	349	382	417	455	487	542	592	647	706	771	842
Ashanti Main A	11	Power House 1	265	275	285	296	307	319	331	343	356	369	383
Ashanti Main A	11	WAHW	145	151	156	162	169	175	181	188	195	203	211
Ashanti Main A	11	Lake Road	405	443	484	530	579	634	693	758	830	907	993
Ashanti Main A	11	Power House 2	415	442	471	501	534	568	605	644	686	730	777
Ashanti Main A	11	Rain Tree	151	156	162	168	175	181	188	196	203	211	219
Ashanti Main A	11	Guinness 2	213	227	241	257	274	291	310	330	352	374	399
Ashanti Main A	11	New Asafo	90	96	103	109	116	124	132	140	149	159	169
Ashanti Main A	11	LLL	104	108	112	116	120	125	130	135	140	145	150
Ashanti Main B	33	Manso Nkwanta	32	34	36	39	41	44	47	50	53	56	60
Ashanti Main B	33	Barekese 1	72	74	76	78	80	83	85	88	90	93	95
Ashanti Main B	33	Barekese 2	111	118	126	134	142	151	161	172	183	195	207
Ashanti Main B	11	B 11	317	328	341	354	367	381	395	410	426	442	459
Ashanti Main B	11	B 21	209	231	254	280	309	340	375	413	455	501	552
Ashanti Main B	11	B 31	114	121	129	137	146	156	166	177	188	200	213
Ashanti Main B	11	B 41	90	96	103	109	116	124	132	140	149	159	169
Ashanti Main B	11	B 61	370	398	428	461	496	534	574	618	665	715	769
Ashanti Main B	11	B 71	342	361	381	402	424	447	472	498	525	554	585
Ashanti Main B	11	B 81	335	348	361	375	389	403	419	435	451	468	486
Ashanti Main C	33	Nsuta /Kumawu	253	267	282	299	316	334	353	373	395	417	441
Ashanti Main C	11	C21	225	230	235	241	246	252	257	263	269	275	282
Ashanti Main C	11	C31	170	181	193	206	219	233	248	264	281	299	319
Ashanti Main C	11	C41	273	286	299	313	327	343	359	375	393	411	430
Ashanti Main C	11	C51	179	190	203	216	230	245	261	277	295	314	335
Ashanti Main C	11	Asokore Mampong	261	269	277	286	295	304	313	323	333	343	354
Ashanti Main C	11	Airport 1	355	365	376	387	398	409	421	433	446	459	472
Ashanti Main C	11	Airport 2	431	459	489	521	555	591	629	670	714	760	810
Ashanti Main D	33	Bekwai	103	107	109	112	115	118	121	125	128	132	136
Ashanti Main D	11	D11	176	186	199	212	226	240	256	272	290	309	329
Ashanti Main D	11	D21	375	390	405	422	439	456	475	494	514	534	556
Ashanti Main D	11	D31	437	465	495	527	561	597	636	677	721	767	817
Ashanti Main D	11	D41	189	198	208	219	229	241	253	265	278	292	307
Ashanti Main D	11	D51	192	204	217	231	246	262	279	297	316	337	359
Ashanti Main E	11	E11	309	329	350	373	397	422	450	479	510	543	578
Ashanti Main E	11	E21	273	277	280	284	287	291	294	298	301	305	309
Ashanti Nsuta	11	Mampong	124	126	129	132	135	138	141	144	147	151	154
Ashanti Nsuta	11	Nsuta	39	41	43	45	48	50	53	55	58	61	64
Ashanti Agona	33	Kumawu	134	143	152	162	172	184	195	208	222	236	251
Ashanti Agona	33	Nsuta	216	230	245	261	278	296	315	335	357	380	405
Ashanti Kongo	11	Konongo	174	183	193	203	214	225	237	250	263	277	292
Ashanti Kongo	11	Agego	103	111	120	130	141	153	165	179	194	210	227
Ashanti Kongo	11	Odumasi	82	91	99	109	120	132	145	159	175	192	211
Ashanti Efiduase	11	Ejisu	116	124	132	140	149	160	169	180	192	204	217
Ashanti Efiduase	11	Efiduase	78	85	92	100	109	118	128	139	151	164	178
Ashanti Kokofu	11	Kokofu	71	77	82	89	96	103	111	120	129	139	149
Ashanti Kokofu	11	Package	20	21	22	24	25	27	28	30	31	33	35
Ashanti Kokofu	11	Water Works	41	43	45	48	50	53	56	59	62	65	68
Ashanti Obuasi	11	Tutuka	213	227	241	257	274	291	310	330	352	374	399
Ashanti Obuasi	11	New Edubiase	98	104	111	118	126	134	143	152	162	172	183
Ashanti Obuasi	11	Fomena	287	306	326	347	369	393	419	446	475	505	538
Ashanti Obuasi	11	Stadium	100	107	113	121	129	137	146	155	165	176	187
Central Winneba	11	WINNEBA	406	433	463	494	528	564	602	643	687	733	783
Central Winneba	11	SWEDRU 1	200	208	217	226	235	244	254	265	275	287	301
Central Winneba	11	SWEDRU 2	298	317	338	360	383	408	434	462	492	524	558
Central Winneba	11	APAM	130	142	154	168	182	198	215	234	254	277	301

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Central Saltpond	11	Saltpond	50	54	57	61	65	70	74	79	85	90	96
Central Saltpond	11	Mankessim	125	133	142	151	160	170	181	192	204	217	231
Central Saltpond	11	Anomabo	40	43	45	48	51	54	58	61	65	69	73
Central Cape Coast	33	PRASO	57	61	65	69	73	78	83	88	93	99	105
Central Cape Coast	33	SALTPOND/FOSU	199	212	227	242	258	276	295	315	336	359	383
Central Cape Coast	33	FOSU	119	127	136	145	155	165	176	188	201	214	228
Central Cape Coast	33	SALTPOND	92	98	104	111	119	127	135	144	154	164	175
Central Cape Coast	11	ELMINA	343	368	395	423	454	487	522	560	600	644	691
Central Cape Coast	11	RIGDES	127	135	143	151	160	170	180	191	202	214	227
Central Cape Coast	11	TOWN 1	91	97	103	110	117	125	134	143	152	162	173
Central Cape Coast	11	TOWN 2	354	380	407	436	468	502	538	577	619	664	712
Central Cape Coast	11	TOWN 3	171	182	194	207	221	236	252	269	287	306	326
Eastern Koforidua	33	Tafo - 33kV	225	234	243	253	263	274	285	297	309	321	334
Eastern Koforidua	11	11kV Incomer	590	612	634	656	680	704	730	756	783	811	840
Eastern Koforidua	11	Power House	155	165	176	188	201	214	229	244	261	278	297
Eastern Koforidua	11	Estate Junction	149	159	170	182	194	207	221	236	252	269	287
Eastern Koforidua	11	St. Joseph	70	75	80	86	91	98	104	111	119	127	135
Eastern Koforidua	11	Accra Rd	209	216	223	230	238	245	254	262	271	280	289
Eastern Koforidua	11	Old Estate	93	99	106	113	121	129	137	147	156	167	178
Eastern Oda	33	Akwatia - 33kV	182	188	194	201	208	214	222	229	237	245	253
Eastern Oda	11	11kV Incomer	380	415	454	497	543	594	650	711	777	850	930
Eastern Oda	11	Oda Town	122	124	126	128	130	132	134	136	138	141	143
Eastern Oda	11	Suamill	96	103	109	117	125	133	142	152	162	173	184
Eastern Oda	11	Achase	121	127	133	139	146	153	160	167	175	183	192
Eastern Nkwakaw	33	Nkwakaw-33kV	98	103	108	113	118	123	129	135	141	148	154
Eastern Nkwakaw	33	New Abirem	72	73	74	75	76	77	78	79	80	81	82
Eastern Nkwakaw	33	Dankrom	21	22	24	25	26	28	30	31	33	35	37
Eastern Nkwakaw	33	Enyrest	7	8	9	9	10	10	11	12	13	14	14
Eastern Nkwakaw	11	14FI	707	714	720	727	734	741	748	756	763	770	778
Eastern Nkwakaw	11	11kV Incomer	261	265	269	272	276	279	283	287	291	295	299
Eastern Nkwakaw	11	Mountains	269	290	312	336	361	389	419	451	485	523	563
Eastern Nkwakaw	11	Nkwakaw Town	204	219	235	252	271	291	312	335	359	386	414
Eastern Nkwakaw	11	Novotex	57	60	65	69	74	79	84	90	96	102	109
Eastern Akwatia	33	16F2	239	256	273	292	311	333	355	380	406	433	463
Eastern Akwatia	33	Oda	182	188	194	201	208	214	222	229	237	245	253
Eastern Akwatia	11	*16F3	139	148	158	169	180	192	205	219	234	249	266
Eastern Akwatia	11	11kV Incomer	163	174	186	199	212	226	241	258	275	294	313
Eastern Akwatia	11	Akwatia	157	161	165	170	174	179	183	188	193	198	203
Eastern Akwatia	11	Asuankese	158	168	178	188	199	211	224	237	251	266	282
Eastern Tafo	33	15F2	239	255	272	291	310	331	353	377	403	430	459
Eastern Tafo	33	Koloridua	225	234	243	253	263	274	285	297	309	321	334
Eastern Tafo	11	15FI	20	20	21	21	22	23	23	24	25	25	26
Eastern Tafo	11	15FI	526	554	584	614	647	681	717	755	795	837	881
Eastern Tafo	11	Tafo	264	279	295	311	329	347	367	388	409	432	457
Eastern Tafo	11	Kibi/Sumum	217	230	243	257	273	289	305	323	342	362	384
Eastern Tafo	11	Onuss	41	43	44	46	47	49	51	52	54	56	58
Tema A	33	A-L1	90	96	103	110	118	127	135	145	155	166	178
Tema A	33	A-L2	70	75	80	86	92	98	105	113	121	129	138
Tema A	11	A21	160	171	183	196	210	225	241	258	276	296	316
Tema A	11	A31	250	268	287	307	328	352	376	403	431	462	494
Tema A	11	A41	50	55	60	65	71	78	85	93	102	111	121
Tema A	11	A61	140	150	160	172	184	197	211	226	242	259	277
Tema A	11	A71	280	300	321	344	368	394	422	451	483	517	554
Tema A	11	A81	50	54	57	61	66	70	75	81	86	92	99
Tema A	11	A91	120	128	138	147	158	169	181	193	207	222	237
Tema B	11	B31	220	236	252	270	289	309	331	355	380	406	435
Tema B	11	B41/71	130	139	149	160	171	183	196	210	224	240	257
Tema B	11	B51	55	59	63	67	72	77	83	89	95	102	109
Tema B	11	B91	200	214	229	245	263	281	301	322	345	369	395
Tema B	11	B101	100	107	115	123	131	141	151	161	173	185	198

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Tema B	11	B111	300	321	344	368	394	422	452	483	518	554	593
Tema B	33	B-Y1	180	193	206	221	236	253	271	290	311	332	356
Tema B	33	B-Y2	130	139	149	160	171	183	196	210	224	240	257
Tema D	33	D-A1	290	310	332	356	381	408	437	467	500	536	573
Tema D	33	D-A2 (U/C)	0	0	0	0	0	0	0	0	0	0	0
Tema D	33	D-E1	105	112	120	129	138	148	158	169	181	194	208
Tema D	33	D-E2	101	108	116	124	133	142	152	163	174	187	200
Tema D	11	GHACEM	240	257	275	294	315	337	361	387	414	443	475
Tema D	11	AGRONA	220	236	252	270	289	309	331	355	380	406	435
Tema D	11	LUBE OIL	200	214	229	245	263	281	301	322	345	369	395
Tema D	11	F/H #1	70	75	80	86	92	98	105	113	121	129	138
Tema D	11	PFC	120	128	138	147	158	169	181	193	207	222	237
Tema D	11	F/H #2	240	257	275	294	315	337	361	387	414	443	475
Tema D	11	ASASEWA	125	134	143	153	164	176	188	201	216	231	247
Tema D	11	PSC Ship Yard	170	181	192	204	218	234	251	269	289	310	333
Tema E	33	E-G.P.H.A	17	18	19	21	22	24	26	27	29	31	34
Tema E	11	E11	110	118	126	135	144	155	166	177	190	203	218
Tema E	11	E21	320	343	367	393	420	450	482	516	552	591	633
Tema S	11	S31 (AFARIWA)	80	87	96	104	114	125	136	149	163	178	194
Tema S	11	S41 (COMMUNITY 22)	280	300	321	344	368	394	422	451	483	517	554
Tema S	11	S61 (OFFICIAL TOWN)	100	107	115	123	131	141	151	161	173	185	198
Tema S	11	S91 (NEW TOWN)	200	214	229	245	263	281	301	322	345	369	395
Tema L	11	KLAGON	117	125	134	144	154	165	176	189	202	216	231
Tema L	11	COMM.20	160	171	183	196	210	225	241	258	276	296	316
Tema L	11	NUNGUJA	293	314	336	359	385	412	441	472	506	541	579
Tema L	11	Vivian Farm	108	113	121	130	139	149	160	171	183	196	210
Tema H	33	H-A1	290	310	332	356	381	408	437	467	500	536	573
Tema H	33	H-B1	370	396	424	454	486	520	557	596	638	683	732
Tema H	33	H-B2	385	412	441	472	506	541	580	620	664	711	761
Tema H	33	H-E1	75	80	86	92	99	105	113	121	129	139	148
Tema H	33	H-E2	70	75	80	86	92	98	105	113	121	129	138
Tema H	33	STLWKS	90	96	103	110	118	127	135	145	155	166	178
Tema H	33	WAHOME	146	156	167	179	192	205	220	235	252	270	289
Tema H	11	Knoce Garages	150	161	172	184	197	211	226	242	259	277	297
Tema H	11	Slaughter Hse	60	64	69	74	79	84	90	97	104	111	119
Tema H	11	T.O.R	200	214	229	245	263	281	301	322	345	369	395
Tema H	11	Ernest Chemist	240	257	275	294	315	337	361	387	414	443	475
Tema H	11	Pramprom	220	236	252	270	289	309	331	355	380	406	435
Tema H	11	Nestle	320	343	367	393	420	450	482	516	552	591	633
Tema H	11	Western Casting	309	331	354	379	406	435	465	498	533	571	611
Tema H	33	H FERROFAB	150	161	172	184	197	211	226	242	259	277	297
Tema H	33	H Ashiaman1	255	273	292	313	335	359	384	411	440	471	504
Tema H	33	H Ashiaman2	0	0	0	0	0	0	0	0	0	0	0
Tema H	33	H-TTL	20	21	23	25	26	28	30	32	35	37	40
Tema K	11	Akwamuffie	60	64	69	74	79	84	90	97	104	111	119
Tema K	33	Okwenya	20	21	23	25	26	28	30	32	35	37	40
Tema K	33	Ulapong	32	34	37	39	42	45	48	52	55	59	63
Tema Asutsuare	11	Asutsuare	42	45	48	52	55	59	63	68	72	78	83
Tema Asutsuare	11	Military Camp	10	11	12	12	13	14	15	16	17	19	20
Tema Kpong	11	Krobo Area	258	276	296	317	339	363	388	416	445	477	510
Tema Kpong	11	Old Works	60	64	69	74	79	84	90	97	104	111	119
Volta Asietkpe	11		22	24	25	27	29	30	32	34	36	39	41
Volta Aflao	33	Abor-Ave Dzalele	51	54	58	61	65	69	74	78	83	89	94
Volta Aflao	33	Incomer	89	95	101	107	114	121	129	137	146	155	165
Volta Aflao	11		165	175	186	198	211	224	238	253	269	286	304
Volta Aflao	11	Denu	122	130	138	147	156	166	177	188	200	212	226
Volta Aflao	11	Aflao	43	45	48	51	54	58	61	65	69	74	78
Volta Ho	11	FI - HO POLY-SOKODE-MA TSE	139	148	157	167	178	189	201	214	227	242	257
Volta Ho	11	F2 - HO CENTRAL	180	197	215	236	258	282	309	338	370	405	444
Volta Ho	11	F3 - HO - TANYIGBE - KPEITOE	187	199	211	225	239	254	270	287	305	325	345
Volta Ho	11	F4 - REGIONAL HOSPITAL	24	26	27	29	31	33	35	37	39	41	44

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Volta Ho	11		0	0	0	0	0	0	0	0	0	0	0
Volta Ho	11	INCOMER	441	469	489	530	564	599	637	677	720	766	814
Volta Kpeve	33	TSITO – AMEDZOPE	51	54	58	61	65	69	74	78	83	89	94
Volta Kpeve	11	HAVE	17	18	19	20	22	25	26	28	30	32	31
Volta Kpeve	11	GWGL	83	88	94	100	106	113	120	127	135	144	153
Volta Kpeve	11	KPEVE TOWNSHIP	45	47	50	54	57	61	64	69	73	77	82
Volta Kparado	33	NKONTA	19	20	22	23	24	26	28	29	31	33	35
Volta Kparado	33	HOOHE	136	144	153	162	172	182	193	205	217	231	245
Volta Kparado	33	INCOMER	204	214	225	237	249	262	275	289	304	320	336
Volta Kparado	11	INCOMER	135	149	165	183	202	224	248	274	304	336	372
Volta Kparado	11	KPANDO	77	81	87	92	98	104	111	118	125	133	141
Volta Kparado	11	SOVIE	62	66	70	74	79	84	89	95	101	107	114
Volta Sogakope	33	ADIDOME	9	10	11	12	13	14	15	17	18	20	22
Volta Sogakope	33	ADA	50	53	56	62	66	69	73	78	82	87	87
Volta Sogakope	33	SOGAKOPE – AKATSI – KETA	174	181	188	196	204	212	221	230	239	249	259
Volta T'sito	11	TSITO – TOWNSHIP	15	16	17	18	19	20	21	23	24	26	27
Volta T'sito	11	ADULT COLLEGE	2	2	2	3	3	3	3	3	3	4	4
Volta T'sito	11	PEKI	74	79	84	89	95	101	107	114	121	129	137
Volta T'sito	11	INCOMING	81	86	91	97	103	110	117	124	132	140	149
Western sub	33	SEKONDI	1,013	1,058	1,105	1,154	1,206	1,259	1,315	1,374	1,435	1,499	1,565
Western sub	33	TARKWA	914	955	997	1,041	1,088	1,136	1,186	1,239	1,294	1,352	1,412
Western sub	33	ASAWINSO	496	518	541	565	590	617	644	673	703	734	766
Western sub	33	ESIAMA	117	128	141	154	169	185	203	222	243	266	292
Western sub	33	BOGOSO	91	92	93	94	95	97	98	99	100	101	102
Western stn A	33	VRA 1	556	580	606	633	661	691	721	753	787	822	858
Western stn A	33	VRA 2	500	523	546	570	595	622	649	678	709	740	773
Western stn A	33	TDI 2 (CCT 1)	418	436	456	476	497	519	542	566	592	618	645
Western stn A	33	TDI 2 (CCT 2)	245	250	256	262	268	274	280	287	294	300	307
Western stn A	33	TDI 3 (CCT 5)	279	291	304	318	332	347	362	378	395	412	431
Western stn A	33	DABOASE (CCT 3)	0	0	0	0	0	0	0	0	0	0	0
Western stn A	33	DABOASE (CCT 4)	0	0	0	0	0	0	0	0	0	0	0
Western stn A	11	A09	79	83	87	90	94	99	103	108	112	117	123
Western stn A	11	A10	292	305	319	333	348	363	380	397	414	433	452
Western stn A	11	A13	199	219	230	241	252	265	277	291	305	320	320
Western stn A	11	A31	345	360	376	393	410	428	447	467	488	510	532
Western stn A	11	A41	334	349	365	381	398	415	434	453	473	494	516
Western stn A	11	A44	138	146	155	165	175	186	197	209	222	235	250
Western stn A	11	A55	277	308	342	379	421	467	518	574	637	707	785
Western stn A	11	A57	102	107	112	117	122	127	133	139	145	151	158
Western stn B	11	B01	10	11	11	12	12	13	14	14	15	15	16
Western stn B	11	B09	115	121	127	133	139	146	153	161	168	177	185
Western stn B	11	B11	115	120	125	131	137	143	149	156	163	170	177
Western stn B	11	B21	283	297	311	326	342	359	376	394	413	433	454
Western stn B	11	B32	501	524	547	571	597	623	651	680	710	742	775
Western stn B	11	B41	219	229	239	250	261	273	285	297	311	324	339
Western stn B	11	B51	297	327	359	395	434	478	525	578	635	699	769
Western stn B	11	B52	320	342	365	390	417	445	475	507	542	578	618
Western stn B	11	B67	131	137	144	151	158	166	174	183	191	201	210
Western stn B	11	B71	420	453	488	526	567	611	659	710	765	825	889
Western stn B	11	B81	191	209	228	250	273	298	326	356	389	425	464
Western stn B	11	B87	230	240	251	262	273	286	298	312	325	340	355
Western stn C	33	AGONA	49	52	56	60	63	68	72	77	82	88	93
Western stn C	11	C01	272	284	296	309	323	338	353	368	385	402	420
Western stn C	11	C02	148	157	166	176	186	197	208	221	234	247	262
Western stn C	11	C08	230	240	251	262	273	286	298	312	325	340	355
Western stn C	11	C10	299	313	328	344	361	379	397	416	436	457	480
Western	33	Aboso1	262	169	189	218	253	293	339	393	451	528	611
Western	33	Aboso2	294	307	321	335	350	365	382	399	416	435	454
Western	33	Tamso	50	52	55	57	60	62	65	68	71	74	77
Western	33	Teberabe1	241	252	263	275	287	300	313	327	341	356	372
Western	33	Teberabe2	120	125	131	137	143	149	156	163	170	177	185



LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Western	11	Manganese	300	313	327	342	357	373	389	407	425	444	463
Western	11	Town1	30	31	33	34	36	37	39	41	42	44	46
Western	11	Town2	190	116	118	132	148	165	185	207	232	259	290
Western	33	Line1	246	150	164	187	213	242	276	314	357	407	463
Western	33	Line2	294	307	321	335	350	365	382	399	416	435	454
Western	11	Aboso Town	57	61	65	69	74	79	84	90	96	102	109
Western	11	Power House	11	11	12	13	13	14	14	15	16	16	17
Western	11	Court Area/Hospital	89	93	97	101	106	111	116	121	126	132	137
Western	11	Line1	85	89	93	97	101	106	110	115	120	126	131
Western	33	Line1	98	102	107	112	117	122	127	133	139	145	151
Western	11	Line1	241	252	263	275	287	300	313	327	341	356	372
Western	11	Line1	241	252	263	275	287	300	313	327	341	356	372
Western	11	Line1	177	186	195	204	214	224	235	247	259	271	284
Western	33	Half Assini	71	74	77	81	84	88	92	96	101	105	110
Western	33	NKROFUL/Station C	35	37	38	42	42	44	45	47	50	52	54
Western	11	Avoso Town	152	159	166	173	181	189	197	206	215	225	235
Western	11	Power House	70	77	86	95	105	116	128	142	157	174	192
Western	11	Kakokrom	88	92	96	100	105	109	114	119	125	130	136
Western	33	Chirano Mines	126	132	139	145	152	160	167	176	184	193	202
Western	33	Bibiani	166	173	181	189	198	206	215	225	235	246	256
Western	33	Wiaso/ Awaso	153	160	167	174	182	190	199	207	217	226	236
Western	33	Denkyera Obuasi	7	7	8	8	8	9	9	9	10	10	11
Western	33	Jejireso	4	4	4	5	5	5	5	5	6	6	6
Western	11	Line1	1	1	1	1	1	1	1	1	1	1	2
Western	11	Line1	1	1	1	1	1	1	1	1	1	1	2
Western	11	Old Town	72	76	81	86	92	97	103	110	117	124	132
Western	11	Pit Site	34	36	37	39	40	42	44	46	48	50	53
Western	11	Gyedi/town	72	75	79	82	86	89	93	98	102	106	111
Accra West	11	A16	165	175	185	196	208	220	233	247	261	277	293
Accra West	11	A01	504	529	536	584	613	644	677	711	746	784	823
Accra West	11	A120	505	539	574	612	653	696	742	791	843	899	958
Accra West	11	A61	510	542	576	612	651	692	735	781	830	882	938
Accra West	11	A18	97	104	112	119	128	137	147	157	168	180	192
Accra West	11	A13	269	286	304	323	343	365	387	412	438	465	494
Accra West	11	B19	361	384	408	434	461	490	521	553	588	625	664
Accra West	11	B15	361	384	408	434	461	490	521	553	588	625	664
Accra West	11	B20	218	232	246	262	278	295	314	334	355	377	400
Accra West	11	B24	329	350	372	395	420	447	475	504	536	570	605
Accra West	11	B28	366	393	422	453	487	522	561	602	647	694	746
Accra West	11	B27	359	391	426	464	506	551	600	653	711	775	844
Accra West	11	B25	276	294	312	332	352	375	398	423	450	478	508
Accra West	11	B42	297	322	350	379	412	446	484	525	570	618	671
Accra West	11	B35	213	226	240	255	271	288	306	325	346	368	391
Accra West	11	ABC 1	84	89	95	101	107	114	121	129	137	145	154
Accra West	11	ABC 2	373	396	421	448	476	506	537	571	607	645	686
Accra West	11	ABC 3	319	339	360	383	407	432	459	488	519	551	586
Accra West	11	C80	340	361	384	408	434	461	490	521	553	588	625
Accra West	11	C20	355	381	409	438	470	505	541	581	623	669	717
Accra West	11	CD51	364	393	423	456	491	530	571	615	663	715	770
Accra West	11	C13	386	420	457	497	541	588	640	696	757	824	896
Accra West	11	C140	378	402	427	454	483	513	545	579	616	654	695
Accra West	11	D01	284	302	320	341	362	385	409	434	462	491	521
Accra West	11	D114	353	367	381	395	411	427	443	460	478	496	515
Accra West	11	D103	409	440	474	510	549	591	636	684	736	792	853
Accra West	11	D101	410	438	468	500	534	571	610	651	696	743	794
Accra West	11	Panel 10	372	395	420	446	474	504	536	570	605	643	684
Accra West	11	D16	432	473	519	568	623	682	748	820	898	984	1,079
Accra West	11	D123	298	316	336	357	380	403	429	456	484	515	547
Accra West	11	D24	256	272	289	307	327	347	369	392	417	443	471
Accra West	11	D150	287	305	324	344	366	389	413	439	467	496	527

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Accra West	11	A/W - Region	53	56	60	64	68	72	77	81	86	92	98
Accra West	11	E08	335	356	378	402	427	454	482	513	545	579	615
Accra West	11	E07	381	404	428	453	479	506	534	563	593	623	659
Accra West	11	EG14	283	309	336	366	399	435	474	516	563	613	668
Accra West	11	E20	228	241	255	270	286	303	321	340	360	381	404
Accra West	11	E26	155	165	179	186	198	210	224	238	252	268	285
Accra West	11	E41	74	79	84	89	95	101	107	114	121	129	137
Accra West	11	ABL 1	106	112	119	126	133	141	149	158	167	177	188
Accra West	11	ABL 2	99	105	112	119	126	134	142	151	161	171	182
Accra West	11	E150	287	305	324	344	366	389	413	439	467	496	527
Accra West	11	F11	213	226	240	255	271	288	306	325	346	368	391
Accra West	11	F01	244	260	276	293	312	331	352	374	398	423	449
Accra West	11	G25	329	350	372	395	420	447	475	504	536	570	605
Accra West	11	G32	192	204	217	231	245	261	277	295	313	333	354
Accra West	11	G56	252	264	277	291	305	320	336	352	370	388	407
Accra West	11	G05	169	179	190	201	213	226	239	253	268	284	301
Accra West	11	GE19	234	248	264	281	298	317	337	358	380	404	430
Accra West	11	Nsawm-Accra	282	307	333	362	393	427	463	503	546	593	644
Accra West	11	Township	78	82	88	93	99	105	112	119	126	134	143
Accra West	11	Adoagyiri	244	260	276	293	312	331	352	374	398	423	449
Accra West	11	R13	181	192	204	217	230	245	260	277	294	312	332
Accra West	11	R12	306	322	340	358	378	398	420	442	466	491	518
Accra West	11	R11	297	314	333	352	373	395	418	443	469	497	526
Accra West	11	R10	78	83	88	93	99	104	111	117	124	131	139
Accra West	11	R05	181	192	203	215	228	241	255	270	286	303	321
Accra West	11	R04	162	171	181	191	201	212	224	236	249	263	277
Accra West	11	R03	213	226	240	255	271	288	306	325	346	368	391
Accra West	11	S02	217	230	243	258	273	289	306	324	343	364	385
Accra West	11	S03	314	333	354	376	400	425	452	480	510	542	576
Accra West	11	S04	227	244	261	280	300	322	345	370	396	425	456
Accra West	11	S10 and S11	422	435	447	460	474	488	502	517	532	548	564
Accra West	11	S11	175	185	196	208	220	233	247	261	276	293	310
Accra West	11	V02	293	311	329	348	369	391	414	438	464	491	520
Accra West	11	V03	266	282	299	317	336	357	378	401	425	451	478
Accra West	11	V04	172	183	194	207	220	233	248	264	280	298	316
Accra West	11	V10	478	505	533	563	595	628	663	701	740	781	825
Accra West	11	V11	278	296	314	334	355	377	401	426	453	482	512
Accra West	11	Tuba	213	226	240	255	271	288	306	325	346	368	391
Accra West	11	Radio	420	446	474	504	535	569	605	643	683	726	772
Accra West	33	Dansoman	465	490	517	546	576	608	642	677	715	755	796
Accra West	33	Awoshie 1	522	562	605	652	703	757	816	879	947	1,020	1,099
Accra West	33	Bubuashie	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Awoshie 2	522	562	605	652	703	757	816	879	947	1,020	1,099
Accra West	33	Laterbiokoshie	619	683	753	831	917	1,012	1,116	1,231	1,358	1,498	1,653
Accra West	33	Korle bu	406	428	450	475	500	527	555	585	616	649	684
Accra West	33	Mataheko	418	440	464	489	515	543	572	603	636	670	706
Accra West	33	Bubuashie	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Achimota 2	676	716	768	803	850	900	953	1,009	1,069	1,132	1,199
Accra West	33	Quarry 2	280	296	314	332	352	372	394	418	442	468	496
Accra West	33	Achimota 1	670	710	751	796	843	892	942	1,001	1,060	1,122	1,188
Accra West	33	Nsawam	452	476	502	529	557	587	619	652	687	724	763
Accra West	33	Quarry 1	291	308	327	346	366	388	411	435	461	488	517
Accra West	33	Avenor 2	641	679	719	761	806	854	904	957	1,014	1,073	1,137
Accra West	33	Avenor 1	647	685	725	768	813	861	912	966	1,023	1,083	1,147
Accra West	33	Alejo 1	1,119	1,185	1,255	1,328	1,407	1,490	1,578	1,671	1,769	1,874	1,984
Accra West	33	Alejo 2	1,095	1,160	1,228	1,301	1,378	1,459	1,545	1,636	1,732	1,835	1,943
Accra West	33	Kokomlemle	852	886	922	960	992	1,028	1,067	1,109	1,154	1,201	1,251
Accra West	33	Laterbiokoshie	746	790	836	886	938	993	1,052	1,114	1,180	1,249	1,323
Accra West	33	Kotababi 2	645	713	789	873	965	1,068	1,181	1,306	1,444	1,597	1,767

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Accra West	33	Kotobabi 1	575	626	681	742	807	879	957	1,041	1,134	1,234	1,343
Accra West	33	Okleshie 1	464	490	517	545	575	607	640	675	712	751	792
Accra West	33	Adabraka	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Avenor 1	533	574	617	664	715	769	828	891	959	1,032	1,111
Accra West	33	Avenor 2	488	515	544	574	606	639	675	712	752	794	838
Accra West	33	Okleshie 2	441	465	490	517	545	574	605	638	673	709	748
Accra West	33	Kokomlemle	603	660	723	792	868	951	1,041	1,141	1,250	1,369	1,500
Accra West	33	Adabraka	186	197	209	221	234	248	278	308	342	381	424
Accra West	33	Okleshie 1	441	465	490	517	545	574	605	638	673	709	748
Accra West	33	Ringway	476	502	530	559	590	622	656	692	730	771	813
Accra West	33	Korle-Bu	315	333	353	374	396	419	444	470	498	527	558
Accra West	33	Okleshie 2	545	587	632	681	733	789	850	916	986	1,062	1,143
Accra West	33	Kinbu	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Achimota 1	699	740	784	830	879	931	986	1,044	1,106	1,171	1,240
Accra West	33	Achimota 2	641	679	719	761	806	854	904	957	1,014	1,073	1,137
Accra West	33	Alajo 1	1,119	1,185	1,255	1,328	1,407	1,490	1,578	1,671	1,769	1,874	1,984
Accra West	33	Alajo 2	1,107	1,172	1,241	1,315	1,392	1,474	1,561	1,653	1,751	1,854	1,964
Accra West	33	Mamobi 1	591	647	708	776	850	931	1,019	1,116	1,222	1,339	1,466
Accra West	33	Mamobi 2	629	666	706	747	791	838	887	940	995	1,054	1,116
Accra West	33	Mamobi	1,142	1,209	1,281	1,356	1,436	1,521	1,611	1,706	1,806	1,913	2,026
Accra West	33	Legon	605	665	732	805	885	973	1,070	1,177	1,294	1,423	1,565
Accra West	33	Adenta	699	740	784	830	879	931	986	1,044	1,106	1,171	1,240
Accra West	33	Kotobabi 1	645	714	790	874	968	1,071	1,185	1,311	1,451	1,605	1,777
Accra West	33	Kotobabi 2	676	716	768	803	850	900	953	1,009	1,069	1,132	1,199
Accra West	33	Airport 1	1,049	1,111	1,176	1,245	1,319	1,397	1,479	1,566	1,659	1,757	1,860
Accra West	33	Airport 2	798	845	895	948	1,004	1,063	1,126	1,192	1,262	1,337	1,416
Accra West	33	Cantoment 1	400	421	443	467	492	518	545	574	605	637	670
Accra West	33	Ringway	417	440	463	488	514	542	571	602	634	668	704
Accra West	33	Mamobi 2	441	465	490	517	545	574	606	639	673	710	749
Accra West	33	Mamobi 1	699	740	784	830	879	931	986	1,044	1,106	1,171	1,240
Accra West	33	Mamobi 3	520	558	600	644	692	743	798	857	920	989	1,062
Accra West	33	Cantoment 2	388	408	430	453	476	502	528	556	585	616	648
Accra West	33	Ridge	291	308	327	346	366	388	411	435	461	488	517
Accra West	33	T-Nungua 2	359	377	397	417	439	461	485	510	537	564	594
Accra West	33	Cantoment 2	394	414	436	459	483	508	535	563	593	624	657
Accra West	33	Cantoment 1	405	427	449	473	498	525	552	581	612	644	679
Accra West	33	T-Nungua 1	394	414	436	459	483	508	535	563	593	624	656
Accra West	33	Airport City 1	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Airport City 2	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Legon	601	656	716	782	853	932	1,017	1,110	1,212	1,323	1,445
Accra West	33	Old Mampong	1	1	1	1	1	1	2	2	2	2	2
Accra West	33	Nsawam to C	186	197	209	221	234	248	263	278	295	312	331
Accra West	33	Weija 1	1	1	1	1	1	1	2	2	2	2	2
Accra West	33	Weija 2	76	80	85	90	95	101	107	113	120	127	134
Accra West	33	Teshie Nungua 1	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Teshie Nungua 2	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Baatsona 1	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Baatsona 2	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Ridge	603	661	724	793	869	952	1,043	1,143	1,253	1,372	1,504
Accra West	33	Kinbu	233	247	261	277	293	310	329	348	369	390	413
Accra West	33	Kwashieman 1	464	490	517	546	576	608	641	676	714	753	795
Accra West	33	Quarry 1	280	296	314	332	352	372	394	418	442	468	496
Accra West	33	Quarry 2	280	296	314	332	352	372	394	418	442	468	496
Accra West	33	Kwashieman 2	464	490	517	546	576	608	641	677	714	754	795
Accra West	33	Adenta	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Mampong	175	185	196	208	220	233	247	261	276	293	310
Accra West	33	Old Mampong	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Dansoman	440	463	487	513	540	568	597	629	662	696	733
Accra West	33	Mathakko	326	346	366	387	410	435	460	487	516	546	579

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Accra West	33	Mampong to T	186	197	209	221	234	248	263	278	295	312	331
Accra West	33	Tema 1	417	439	462	487	512	539	568	598	629	662	697
Accra West	33	Tema 2	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Baatsona 1	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Baatsona 2	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Kasoa	240	254	269	285	302	320	339	359	380	402	426
Accra West	33	Weija 1	0	0	0	0	0	0	0	0	0	0	0
Accra West	33	Awoshie 1	534	563	595	627	662	698	737	777	820	865	913
Accra West	33	Awoshie 2	579	621	667	716	769	826	886	952	1,022	1,097	1,178
Accra West	33	Kwashie 1	198	210	222	235	249	264	279	296	313	332	351
Accra West	33	Kwashie 2	195	206	218	231	245	259	274	291	308	326	345
Accra West	33	Weija 1	327	348	370	393	418	444	472	501	533	566	602
Accra West	33	Weija 2	79	87	95	103	113	123	135	147	161	176	192
Accra East	33	Kokomlemlle (F)	499	531	564	600	637	677	720	765	813	864	918
Accra East	33	Adabraka (F)	360	383	407	432	460	488	519	552	586	623	662
Accra East	33	Okashie 1 (G)	404	429	456	485	515	547	582	618	657	698	742
Accra East	33	Ringway (G)	543	600	664	734	812	898	992	1,097	1,214	1,342	1,484
Accra East	33	Korle-Bu (G)	388	412	438	466	495	528	569	594	631	671	713
Accra East	33	Okashie 2 (G)	420	446	474	504	535	569	605	643	683	726	772
Accra East	33	Kinbu (G)	382	405	431	458	487	517	550	584	621	660	701
Accra East	33	Achimota 1 (H)	638	678	720	765	813	864	919	976	1,038	1,103	1,172
Accra East	33	Achimota 2 (H)	521	553	588	625	664	706	750	797	847	901	957
Accra East	33	Alajo 1 (H)	1,275	1,355	1,440	1,531	1,627	1,729	1,837	1,953	2,075	2,205	2,344
Accra East	33	Alajo 2 (H)	1,127	1,197	1,272	1,352	1,437	1,527	1,623	1,725	1,833	1,948	2,070
Accra East	33	Mamobi 1 (H)	961	1,021	1,085	1,153	1,226	1,302	1,384	1,471	1,563	1,661	1,766
Accra East	33	Mamobi 2 (H)	631	671	713	758	806	856	910	967	1,028	1,092	1,161
Accra East	33	Mamobi 3 (H)	1,146	1,218	1,294	1,376	1,462	1,554	1,651	1,755	1,865	1,982	2,106
Accra East	33	Legon (H)	629	669	711	755	803	853	906	963	1,024	1,088	1,156
Accra East	33	Adenta (H)	629	681	736	796	861	931	1,007	1,089	1,178	1,273	1,375
Accra East	33	Kotobabi 1 (H)	566	616	671	731	796	866	943	1,027	1,118	1,217	1,325
Accra East	33	Kotobabi 2 (H)	468	497	528	561	596	634	674	716	761	809	859
Accra East	33	Airport 1 (H)	903	960	1,020	1,084	1,152	1,225	1,301	1,383	1,470	1,562	1,660
Accra East	33	Airport 2 (H)	717	779	846	919	999	1,085	1,178	1,280	1,391	1,511	1,641
Accra East	33	Cantoment 1 (K)	323	343	365	388	412	438	465	495	526	559	594
Accra East	33	Ringway (K)	258	274	292	310	329	350	372	395	420	447	475
Accra East	33	Mamobi 2 (K)	444	472	502	533	567	602	640	680	723	768	817
Accra East	33	Mamobi 1 (K)	860	914	971	1,032	1,097	1,166	1,239	1,316	1,399	1,487	1,580
Accra East	33	Mamobi 3 (K)	515	547	581	618	656	698	741	788	837	890	946
Accra East	33	Cantoment 2 (K)	376	400	425	452	480	510	542	576	612	651	691
Accra East	33	Ridge (K)	414	440	468	497	529	562	597	635	674	717	762
Accra East	33	T-Nungua 2 (L)	383	407	432	459	488	519	551	586	623	662	703
Accra East	33	Cantoment 2 (L)	298	316	336	357	380	403	429	456	484	515	547
Accra East	33	Cantoment 1 (L)	478	508	540	574	610	648	689	732	778	827	879
Accra East	33	T-Nungua 1 (L)	308	328	348	370	393	418	444	472	502	533	566
Accra East	33	Airport City 1 (L)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Airport City 2 (L)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Legon (M)	613	652	693	736	782	831	883	939	998	1,060	1,127
Accra East	33	Old Mampong (M)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Teshie Nungua 1 (Q)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Teshie Nungua 2 (Q)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Baatsona 1 (Q)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Baatsona 2 (Q)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Adenta (T)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Mampong (T)	342	364	386	411	437	464	493	524	557	592	629
Accra East	33	Old Mampong (T)	335	356	378	402	427	454	482	513	545	579	615
Accra East	33	Mampong to T (W)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Tema 1 (Y)	400	434	472	512	556	604	656	713	774	841	913
Accra East	33	Tema 2 (Y)	439	466	496	527	560	595	632	672	714	759	807
Accra East	33	Baatsona 1 (Y)	0	0	0	0	0	0	0	0	0	0	0
Accra East	33	Baatsona 2 (Y)	0	0	0	0	0	0	0	0	0	0	0
Accra East	11	F15(FK02)	336	357	379	403	428	455	484	514	546	581	617

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Accra East	11	F11(FD19)	354	376	400	425	451	480	510	542	576	612	650
Accra East	11	F10(FD42)	255	271	288	306	325	346	367	391	415	441	469
Accra East	11	F06(F11)	213	226	240	255	271	288	306	325	346	368	391
Accra East	11	F05(F01)	244	260	276	293	312	331	352	374	398	423	449
Accra East	11	F04(FD48)	268	302	322	342	363	386	410	436	463	492	508
Accra East	11	F03(FD38)	276	294	312	332	352	375	398	423	450	478	508
Accra East	11	F13(FK01)	116	123	131	139	148	157	167	177	188	200	213
Accra East	11	G21(G25)	329	350	372	395	420	447	475	504	536	570	605
Accra East	11	G19(G60)	319	339	360	383	407	432	459	488	519	551	586
Accra East	11	G18(G32)	191	202	213	224	237	250	264	278	294	310	327
Accra East	11	G06(G64)	287	305	324	344	366	389	413	439	467	496	527
Accra East	11	G12(G47)	308	328	348	370	393	418	444	472	502	533	566
Accra East	11	G02(G33)	276	294	312	332	352	375	398	423	450	478	508
Accra East	11	G07(G06)	228	243	258	274	291	310	329	350	372	395	420
Accra East	11	G13(G36)	255	271	288	306	325	346	367	391	415	441	469
Accra East	11	G05	174	190	206	225	244	266	290	315	343	373	406
Accra East	11	G04(G351)	255	271	288	306	325	346	367	391	415	441	469
Accra East	11	G03(GE19)	234	248	264	281	298	317	337	358	380	404	430
Accra East	11	G11(G13)	266	282	300	319	339	360	383	407	432	459	488
Accra East	11	H02(H351)	411	437	465	494	525	558	593	630	669	711	756
Accra East	11	H04(H07)	282	299	318	338	359	382	406	431	458	487	518
Accra East	11	H05(H06)	323	343	365	388	412	438	465	495	526	559	594
Accra East	11	H07(H35)	260	277	294	313	332	353	375	399	424	450	479
Accra East	11	H08(H24)	299	317	337	358	381	405	430	457	486	516	549
Accra East	11	H10(H10)	298	316	336	357	380	403	429	456	484	515	547
Accra East	11	K03(K09)	230	253	277	304	333	365	401	440	482	529	580
Accra East	11	K04(K10)	303	322	342	364	386	411	436	464	493	524	557
Accra East	11	K06(K60)	324	344	366	389	413	439	467	496	527	561	596
Accra East	11	K10(K61)	210	228	248	269	292	317	343	370	398	426	455
Accra East	11	K11(K06)	308	328	348	370	393	418	444	472	502	533	566
Accra East	11	K12(K07)	248	263	280	297	316	336	357	379	403	428	455
Accra East	11	K13(K13)	287	305	324	344	366	389	413	439	467	496	527
Accra East	11	K05(K150)	368	391	415	441	469	498	530	563	598	636	676
Accra East	11	L13(Burma Camp 1)	324	344	366	389	413	439	467	496	527	561	596
Accra East	11	L12(Burma Camp 3)	201	218	237	257	279	303	329	357	387	420	456
Accra East	11	L11(L01)	276	294	312	332	352	375	398	423	450	478	508
Accra East	11	L10(L22)	218	232	246	262	278	295	314	334	355	377	400
Accra East	11	L05(Burma Camp 2)	308	328	348	370	393	418	444	472	502	533	566
Accra East	11	L04(L03)	234	248	264	281	298	317	337	358	380	404	430
Accra East	11	L03(L02)	298	316	336	357	380	403	429	456	484	515	547
Accra East	11	L06(L12)	292	315	341	368	398	429	464	501	542	585	632
Accra East	11	M01(Old Legon 1)	393	418	444	472	502	533	567	602	640	680	723
Accra East	11	M02(Workshop)	43	45	48	51	54	58	61	65	69	74	78
Accra East	11	M03(University 1)	244	260	276	293	312	331	352	374	398	423	449
Accra East	11	M05(Old Legon 2)	298	316	336	357	380	403	429	456	484	515	547
Accra East	11	M07(Madina)	477	521	569	621	678	740	808	882	962	1051	1147
Accra East	11	M08(Kwabanya)	487	517	550	584	621	660	701	745	792	842	895
Accra East	11	M10(University 2)	222	236	251	267	283	301	320	340	361	384	408
Accra East	11	Q01(Old Spintex)	266	282	300	319	339	360	383	407	432	459	488
Accra East	11	Q03(Teshie 1)	509	541	575	611	649	690	733	779	828	880	936
Accra East	11	Q07(Teshie 2)	391	416	442	469	499	530	563	599	636	676	719
Accra East	11	Q06(Teshie 3)	383	407	432	459	488	519	551	586	623	662	703
Accra East	11	R13	182	195	209	224	240	258	276	296	317	340	364
Accra East	11	R12	308	328	348	370	393	418	444	472	502	533	566
Accra East	11	R11	298	316	336	357	380	403	429	456	484	515	547
Accra East	11	R10	79	84	89	94	100	107	113	120	128	136	145
Accra East	11	R05	185	201	218	237	257	279	302	328	356	386	418
Accra East	11	R04	164	174	185	196	209	222	236	251	266	283	301
Accra East	11	R03	217	235	255	275	300	325	353	383	415	450	488
Accra East	11	R02	285	303	322	342	363	386	410	436	463	493	523
Accra East	11	T03(Adenta Est. 1)	441	469	498	529	563	598	635	675	718	763	811
Accra East	11	T04(Redco)	441	469	498	529	563	598	635	675	718	763	811

LOCATION	Feeder Voltage	FEEDER ID	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Accra East	11	T09(Agbogba)	389	420	452	488	526	567	611	659	711	766	826
Accra East	11	T10(Dodowa)	218	232	246	262	278	295	314	334	355	377	400
Accra East	11	T11(Pantang)	277	295	313	333	354	376	400	425	451	480	510
Accra East	11	T02(Adelta Est 2)	0	0	0	0	0	0	0	0	0	0	0
Accra East	11	Akropong W03	181	192	204	217	230	245	260	277	294	312	332
Accra East	11	Peduaase	132	140	148	157	166	176	187	198	209	222	235
Accra East	11	Tetteh Quashie	0	0	0	0	0	0	0	0	0	0	0
Accra East	11	Y11(Spintex)	496	527	561	596	633	673	715	760	808	858	912
Accra East	11	Y03(J & Z)	314	333	354	376	400	425	452	480	510	542	576
Accra East	11	Y04(Johnson Wax)	464	494	525	557	592	630	669	711	756	803	854
Accra East	11	Y09(Coca Cola)	319	339	360	383	407	432	459	488	519	551	586
Accra East	11	Y10(Texpo)	505	536	570	606	644	684	727	773	821	873	928
Accra East	11	Y02(Old Spintex)	262	279	296	315	335	356	378	402	427	454	482
Accra East	11	Y12	0	0	0	0	0	0	0	0	0	0	0









Location	Feeder ID	Length (km)	Conductor Type(eg, mm)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Growth rate %
				S (MVA)	S (MVA)	S (MVA)	S (MVA)	S (MVA)	S (MVA)	S (MVA)	S (MVA)	S (MVA)	S (MVA)	S (MVA)	
<b>BOLGATANGA</b>															
BOLGA	29F1B	11.6	50AAC(2km), 120AAC(9.6km)	2.16	2.35	2.57	2.80	3.05	3.33	3.63	3.95	4.31	4.70	5.13	9.04%
BOLGA	29F4B	22.12	50AAC(4.8km), 120AAC(17.48km), 100AAC(2.5km)	2.79	2.95	3.11	3.28	3.46	3.66	3.86	4.07	4.30	4.54	4.79	5.56%
BOLGA	29F6B	18.4	50AAC(7.8km), 100AAC(10.8km)	2.03	2.19	2.36	2.55	2.76	2.98	3.21	3.47	3.75	4.05	4.37	7.99%
NAVROGO	29F2Y	20	150AAC	4.04	4.43	4.84	5.30	5.80	6.35	6.95	7.61	8.33	9.12	9.99	9.46%
NAVROGO	NGBF1	2	50AAC	0.37	0.41	0.45	0.49	0.54	0.60	0.66	0.72	0.80	0.88	0.97	10.14%
NAVROGO	NGBF2	6.6	50AAC(4.8km), 120AAC(1.8km)	0.64	0.70	0.77	0.84	0.92	1.01	1.10	1.21	1.32	1.45	1.58	9.41%
NAVROGO	NGBF3	16.1	120AAC	0.55	0.61	0.67	0.73	0.80	0.88	0.97	1.07	1.17	1.29	1.41	9.85%
SANDEMA	NGF1Y	21	120AAC	0.48	0.53	0.57	0.62	0.68	0.74	0.80	0.87	0.95	1.03	1.12	8.79%
TUMU	NGF2Y	19	150AAC	0.98	1.07	1.16	1.27	1.39	1.51	1.65	1.80	1.97	2.14	2.34	9.13%
PO	NGF3Y	19	120AAC	0.43	0.46	0.51	0.55	0.60	0.66	0.72	0.79	0.86	0.94	1.02	9.16%
NAVROGO PRIMARY S/S	S/S Capacity			3.10	3.36	3.63	3.92	4.24	4.58	4.95	5.36	5.79	6.26	6.77	8.11%
BAWKU	29F3Y	30.7	120AAC	4.33	4.76	5.22	5.73	6.29	6.91	7.58	8.32	9.14	10.03	11.01	9.77%
BAWKU	BKBF1	4	50AAC	1.61	1.74	1.88	2.03	2.19	2.37	2.56	2.76	2.98	3.22	3.48	8.02%
BAWKU	BKBF2	18	50AAC	1.15	1.25	1.35	1.46	1.59	1.72	1.86	2.02	2.19	2.37	2.57	8.39%
BAWKU	BKVF1	30	120AAC	1.45	1.57	1.69	1.83	1.98	2.14	2.32	2.51	2.71	2.94	3.18	8.18%
BAWKU	BKVF2	30.6	120AAC	0.47	0.50	0.53	0.56	0.60	0.64	0.68	0.73	0.78	0.83	0.88	6.55%
BAWKU PRIMARY S/S	S/S Capacity			3.10	3.42	3.77	4.15	4.58	5.04	5.56	6.12	6.75	7.44	8.20	10.20%
WALEWALE	29F4Y	30	100AAC	0.86	0.94	1.03	1.12	1.22	1.33	1.45	1.59	1.73	1.89	2.06	9.11%
Total(Bolga Substation)				14.02	15.07	16.21	17.42	18.73	20.13	21.64	23.27	25.01	26.89	28.90	7.50%
<b>TECHIMAN</b>															
TECHIMAN *	26F1B	12	100AAC	2.70	2.81	2.93	3.06	3.19	3.32	3.46	3.61	3.76	3.92	4.09	4.25%
TECHIMAN	26F2B	12	100AAC	1.93	2.02	2.11	2.21	2.31	2.41	2.52	2.63	2.75	2.87	3.00	4.52%
AKOMADAN	26F3B	30	100AAC	1.96	2.06	2.17	2.28	2.40	2.53	2.66	2.80	2.95	3.11	3.27	5.27%
ATEBUBU	26F1Y	214	120AAC	6.53	6.82	7.13	7.45	7.78	8.13	8.49	8.87	9.27	9.68	10.11	4.47%
Nkoranza	26F1Y	22 From Techiman	120AAC	2.47	2.59	2.71	2.84	2.98	3.12	3.27	3.42	3.58	3.76	3.93	4.77%
Ejura	26F1Y	46 From Nkoranza	120AAC	1.11	1.16	1.22	1.28	1.34	1.40	1.47	1.54	1.62	1.70	1.78	4.82%
Atebubu Township	26F1Y	60 From Ejura	120AAC	1.05	1.08	1.12	1.15	1.19	1.23	1.27	1.31	1.35	1.39	1.44	3.19%
Yeji	26F1Y	62 From Atebubu	120AAC	1.01	1.06	1.11	1.16	1.21	1.26	1.32	1.38	1.45	1.51	1.58	4.60%
Kwame Danso	26F1Y	86 From Atebubu	120AAC	0.89	0.93	0.96	1.00	1.04	1.09	1.13	1.18	1.23	1.28	1.33	4.08%
WENCHI	26F2Y	31	120AAC	2.33	2.45	2.57	2.70	2.83	2.97	3.12	3.28	3.44	3.61	3.79	4.99%
WENCHI	WHF1B	12	50AAC	0.58	0.62	0.65	0.68	0.72	0.76	0.80	0.85	0.89	0.94	0.99	5.45%
WENCHI	WHF2B	7.7	50AAC	0.48	0.50	0.52	0.55	0.57	0.60	0.63	0.66	0.69	0.72	0.76	4.75%
WENCHI	WHF1Y	35	120AAC	0.85	0.89	0.94	0.99	1.05	1.10	1.16	1.23	1.29	1.36	1.43	5.37%
WENCHI PRIMARY S/S	S/S Capacity			2.33	2.47	2.63	2.79	2.96	3.15	3.34	3.55	3.77	4.01	4.25	6.21%
KINTAMPO	26F5Y	57	150AAC	1.03	1.08	1.13	1.18	1.24	1.30	1.36	1.43	1.50	1.57	1.64	4.78%
TECHIMAN BSP	S/S Capacity			13.75	14.30	14.87	15.46	16.08	16.72	17.39	18.08	18.80	19.55	20.33	3.99%
<b>TAMALE</b>															
TAMALE	28F2B			2.48	2.62	2.76	2.91	3.07	3.24	3.41	3.60	3.79	4.00	4.22	5.44%
TAMALE	28F3B			4.49	4.70	4.91	5.14	5.37	5.62	5.87	6.14	6.42	6.71	7.02	4.55%
TAMALE	28F4B			2.63	2.75	2.88	3.02	3.16	3.31	3.46	3.62	3.79	3.97	4.16	4.70%
TAMALE	28F6B	23.7	185ALXPLE(1km), 100AAC(22.7km)	4.42	4.68	4.95	5.24	5.55	5.87	6.21	6.57	6.96	7.36	7.79	5.83%
TAMALE	28F7B			2.51	2.66	2.81	2.98	3.15	3.34	3.54	3.75	3.97	4.20	4.45	5.90%
TAMALE	28F8B			2.61	2.73	2.85	2.98	3.11	3.24	3.39	3.54	3.69	3.85	4.02	4.41%
TAMALE	28F9B			3.27	3.43	3.59	3.77	3.94	4.13	4.33	4.54	4.75	4.98	5.22	4.78%
TAMALE	28F1Y	43	150AAC	4.51	4.74	4.98	5.23	5.50	5.78	6.07	6.38	6.70	7.04	7.39	5.05%
PONG-TAMALE	28F2Y			1.26	1.32	1.39	1.45	1.52	1.59	1.66	1.74	1.82	1.91	2.00	4.69%
BUJPE	28F5Y			0.93	0.98	1.02	1.07	1.12	1.17	1.23	1.29	1.35	1.41	1.48	4.70%
Total(Tamale Substation)				29.13	30.94	32.85	34.89	37.05	39.34	41.78	44.36	47.11	50.03	53.12	6.19%
TOTAL(NED)				113.58	116.71	121.66	126.84	132.25	137.91	143.81	149.98	156.43	163.17	170.21	

List of Distribution line constant

No	Type	r (Ω/km)	x (Ω/km)	Rating (A)	Remark
1	AAC400mm2	0.0789	0.3150	1,066	Overhead
2	AAC265mm2	0.1128	0.3254	810	Overhead
3	AAC250mm2	0.1214	0.3286	740	Overhead
4	AAC240mm2	0.1271	0.3314	720	Overhead
5	AAC200mm2	0.1512	0.3371	640	Overhead
6	AAC150mm2	0.2046	0.3485	530	Overhead
7	AAC120mm2	0.2743	0.3568	455	Overhead
8	AAC100mm2	0.3029	0.3625	405	Overhead
9	AAC95mm2	0.3333	0.3645	391	Overhead
10	AAC85mm2	0.3942	0.3684	362	Overhead
11	AAC50mm2	0.6074	0.3843	260	Overhead
12	AAC25mm2	1.528	0.4831	155	Overhead
13	Cu240mm2	0.0849	0.3939	807	Overhead
14	Cu70mm2	0.2897	0.4436	369	Overhead
15	Cu35mm2	0.7056	0.4693	236	Overhead
16	Cu16mm2	1.2952	0.5054	137	Overhead
17	35CuPILC(11kV)	0.668	0.142	155	Underground
18	70CuXLPE(11kV)	0.342	0.132	220	Underground
19	70CuPILC(11kV)	0.342	0.132	220	Underground
20	95CuPILC(11kV)	0.247	0.124	265	Underground
21	95ALXPLE(11kV)	0.2894	0.1512	225	Underground
22	120CuPILC(11kV)	0.196	0.121	295	Underground
23	185CuPILV(11kV)	0.128	0.113	370	Underground
24	185ALXPLE(11kV)	0.1486	0.1265	335	Underground
25	240CuPILC(11kV)(for NED)	0.0983	0.123	415	Underground
26	240CuXLPE(11kV)(for NED)	0.0983	0.141	501	Underground
27	258CuPILC(11kV)	0.0928	0.123	429	Underground
28	240CuXLPE(33kV)	0.0983	0.123	440	Underground
29	240ALXLPE(33kV)	0.1271	0.2166	510	Underground
30	258CuXLPE(33kV)	0.0983	0.141	440	Underground
31	258CuPILC(33kV)	0.0928	0.123	455	Underground
32	2*240ALXLPE(33kV)	0.0636	0.2381	918	Underground
33	35CUBARE	0.5921	0.4693	236	Overhead
34	50ALBARE	0.6074	0.3843	260	Overhead
35	95ALBARE	0.333	0.3645	391	Overhead
36	100ALBARE	0.3029	0.3625	350	Overhead
37	120ALBARE	0.2524	0.3568	390	Overhead
38	150ALBARE	0.2046	0.3485	455	Overhead
39	265ALBARE	0.1143	0.3254	697	Overhead
40	400ALBARE	0.0789	0.315	855	Overhead
41	6*1*120ALBARE	0.126	0.18	780	Overhead
42	6*1*150ALBARE	0.103	0.174	910	Overhead
43	6*1*265ALBARE	0.057	0.165	1394	Overhead
44	95ALPILC	0.2894	0.1512	225	Underground
45	240CUXLPE (for ECG)	0.0928	0.11	480	Underground
46	240CUPILC (for ECG)	0.0983	0.11	397	Underground
47	500CUPILC	0.0473	0.1	800	Underground
48	500ALXLPE	0.061	0.0943	648	Underground
49	3x1x240CUXLPE	0.030933	0.036	1296	Underground
50	3x1x500CUXLPE	0.0236	0.04715	831	Underground
51	3x1x630ALXLPE	0.03712	0.044	755	Underground
52	6*1*240ALXLPE	0.0636	0.0615	790	Underground
53	6*1*240CUXLPE	0.049	0.062	1006	Underground
54	6*1*240CUPILC	0.049	0.0554	837	Underground
55	6x1x500CUXLPE	0.0472	0.0943	1590	Underground
56	6x1x630ALXLPE	0.01856	0.022	1434	Underground
57	None	0	0	0	

### Result of Power System Analysis (ECG)

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure				Remarks			
					Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)		Voltage Drop (%)	Current Loading (%)	Year for Countermeasure
1	Accra East	Main F	F13(FK01)	11	109	1%	33%	184	3%	55%						2009	Adabraka Substation will be constructed by CEDAP in 2009.	
2	Accra East	Main F	F03(FD38)	11	260	4%	78%	440	6%	131%	Adabraka S/S relieve load on F							
3	Accra East	Main F	F15(FK02)	11	316	4%	94%	535	7%	160%	Adabraka S/S relieve load on F							
4	Accra East	Main F	F11(FD19)	11	333	5%	99%	620	8%	185%	Adabraka S/S relieve load on F							
5	Accra East	Main F	F04(FD48)	11	252	3%	75%	426	5%	127%	Adabraka S/S relieve load on F							
6	Accra East	Main G	G013(G56)	11	240	3%	72%	406	5%	121%	Adabraka S/S relieve load on G							
7	Accra East	Main G	G07(G06)	11	215	1%	64%	364	2%	109%	Adabraka S/S relieve load on G							
8	Accra East	Main G	G11(G13)	11	250	2%	75%	423	4%	126%	Adabraka S/S relieve load on G							
9	Accra East	Main G	G19(G60)	11	300	4%	90%	508	6%	152%	Adabraka S/S relieve load on G							
10	Accra East	Main G	G12(G47)	11	290	4%	87%	360	4%	107%	Adabraka S/S relieve load on G							
11	Accra East	Main G	G02(G33)	11	260	3%	78%	440	5%	131%	Adabraka S/S relieve load on G							
12	Accra East	Main G	G06(G64)	11	270	2%	81%	457	4%	136%	Adabraka S/S relieve load on G							
13	Accra East	Main G	G04(G351)	11	240	3%	72%	406	6%	121%	Adabraka S/S relieve load on G							
14	Accra East	MAIN G	G21(G25)	11	310	6%	93%	525	10%	157%	Adabraka S/S relieve load on G							
15	Accra East	MAIN H	H02(H351)	11	387	19%	85%	571	28%	125%	change cable size from 120sqmm Al to 185 Al XLPE	15	km			2007	A part of load will be transferred to "M01 feeder of Main M". These 2 feeders are located closely, so this countermeasure is	
16	Accra East	MAIN H	H05(H06)	11	304	6%	91%	514	10%	153%	change cable size from 185sqmm Al XLPE to 240sqmmCu XLPE	13	km			2017	An additional feeder will be created from "Main H", which is same as "H04."	
17	Accra East	MAIN H	H10(H10)	11	280	6%	84%	474	10%	141%	change cable size from 185sqmmCu XLPE to 240sqmmCu XLPE	14	km		95%	2017		
18	Accra East	MAIN H	H04(H07)	11	265	4%	79%	448	7%	134%		10	km			2011	An additional feeder will be created from "Main H", which is same as "H04."	
19	Accra East	MAIN H	H07(H351)	11	245	1%	73%	415	2%	124%							A part of load will be transferred to "M01 feeder of Main M".	
20	Accra East	MAIN H	H08(H24)	11	281	7%	84%	476	12%	142%	change cable size from 185sqmm Al XLPE to 240sqmmCu XLPE	15	km		78%	2013		
21	Accra East	MAIN K	K03(K09)	11	210	3%	63%	355	6%	106%		8	km				An additional feeder will be created from a new substation "Trade Fair"constructed in 2009	
22	Accra East	MAIN K	K04(K10)	11	285	4%	85%	482	7%	144%		8	km				An additional feeder will be created from a new substation "Trade Fair"constructed in 2009	
23	Accra East	MAIN K	K05(K150)	11	346	11%	103%	663	20%	198%	change cable size from 185sqmm Al XLPE to 240sqmmCu XLPE	18	km		8%	73%	2007	

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks			
					Maximum Demand (A)	Voltage Drop (%)	Current Loading	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)	Year for Countermeasure	
24	Accra East	MAIN K	K13(K13)	11	270	7%	81%	457	12%	136%	Change cable size from 185sqmm Al XLPE to 240sqmmCu XLPE	17	km		8%	79%	2014	An additional feeder will be created from a new substation "Airport" that has been already constructed.	
25	Accra East	MAIN K	K06(K60)	11	305	6%	91%	389	8%	116%		9	km			less than 100%	2011	An additional feeder will be created from a new substation "Airport" that has been already constructed.	
26	Accra East	MAIN K	K10(K61)	11	198	4%	59%	335	6%	100%		7	km			less than 100%	2017	An additional feeder will be created from a new substation "Airport" that has been already constructed.	
27	Accra East	MAIN K	K11(K06)	11	290	4%	87%	491	6%	147%		10	km			less than 100%	2009	An additional feeder will be created from a new substation "Airport" that has been already constructed.	
28	Accra East	MAIN K	K12(K07)	11	233	2%	70%	394	4%	118%		8	km			less than 100%	2011	An additional feeder will be created from a new substation "Airport" that has been already constructed.	
29	Accra East	MAIN L	L11(L01)	11	260	6%	78%	440	10%	131%	change cable size from 185sqmm Al XLPE to 240sqmmCu XLPE	17	km		7%	88%	2017		
30	Accra East	MAIN L	L10(L22)	11	205	5%	61%	347	8%	104%		6	km				2017	An additional feeder will be created from a new substation "Trade Fair" constructed in 2009	
31	Accra East	MAIN L	L06(L12)	11	270	5%	81%	571	10%	170%	change cable size from 185sqmm Al XLPE to 240sqmmCu XLPE	12	km		9%	114%	2017	A part of load will be transferred to "L06".	
32	Accra East	MAIN L	L04(L03)	11	220	5%	66%	372	8%	111%	Trade Fair S/S relieve load on L, and new feeder will be constructed.	6	km				2015		
33	Accra East	MAIN L	L03(L02)	11	280	7%	84%	474	12%	141%	Trade Fair S/S relieve load on L, and new feeder will be constructed.	9	km				2010		
34	Accra East	MAIN M	M05(OLD LEGON 2)	11	280	3%	84%	474	6%	141%	Nimat Djorn relieve load on M								
35	Accra East	MAIN M	M01(OLD LEGON 1)	11	370	9%	110%	492	12%	147%	Change cable size from 185sqmm Al XLPE to 240sqmmCu XLPE	16	km		8%	84%	2011		
36	Accra East	MAIN M	M02(LEGON WORKSHOP)	11	40	0%	12%	68	0%	20%									
37	Accra East	MAIN M	M07(MADINA)	11	437	7%	130%	1037	16%	310%	Nimat Djorn S/S relieve load on M								Not Ashaley Botwe, but Nimai Djorn (2010)
38	Accra East	MAIN M	M08(KWABENYA)	11	458	15%	137%	629	15%	188%		18	km		11%	less than 100%	2007	A part of load will be transferred to new substation "Kwabeniya" constructed by GEDAP in 2010.	
39	Accra East	MAIN Q	Q03(TESHIE 1)	11	479	7%	105%	811	9%	153%		5	km				2009	An additional feeder will be created from "Main Q."	

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks			
					Maximum Demand (A)	Voltage Drop (%)	Current Loading	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)	Year for Countermeasure	
40	Accra East	MAIN Q	Q06(TESHIE 3)	11	360	12%	79%	609	17%	115%			5	km		8%	53%	2015	An additional feeder will be created from "Main Q."
41	Accra East	MAIN Q	Q01(OLD SPINTEX)	11	250	7%	55%	423	12%	93%			4	km		8%	30%	2008	An additional feeder will be created from "Main Q."
42	Accra East	MAIN Q	Q07(TESHIE 2)	11	368	17%	81%	623	20%	118%			5	km		8%	69%	2014	An additional feeder will be created from "Main Q."
43	Accra East	MAIN T	T03(ADENTA EST. 1)	11	415	7%	124%	702	12%	210%									Not Ashrley Botwe, but Nmai Djorn (2010)
44	Accra East	MAIN T	T09(AGOBGA)	11	361	14%	79%	746	30%	164%								2010	An additional feeder will be created from a new substation "Kwabenyaa" constructed in 2010.
45	Accra East		T10(DODOWA)	11	205	5%	45%	339	9%	75%									
46	Accra East	MAIN T	T11(PANTANG)	11	261	8%	57%	396	11%	87%			10	km		8%	62%	2010	An additional feeder will be created from a new substation "Kwabenyaa" constructed in 2010.
47	Accra East	MAIN T	T04(REDCO)	11	415	10%	91%	702	17%	154%								2007	A part of load will be transferred to "M08 feeder of Main M".
48	Accra East	MAIN W	W05(T. Q. M.)	11	50	2%	15%	81	3%	24%									
49	Accra East	MAIN W	PEDUASE	11	125	14%	27%	212	70%	47%								2008	Installation of the capacitor bank
50	Accra East	MAIN W	W03(AKROPONG)	11	170	16%	37%	288	29	63%								2008	Installation of the capacitor bank
51	Accra East	MAIN Y	Y04(JOHNSON WAX)	11	437	12%	96%	739	20%	162%			5	km		8%	64%	2010	An additional feeder (5km) will be created from a new substation "Nmai Djorn" constructed in 2010.
52	Accra East	MAIN Y	Y09(COCA COLA)	11	360	3%	66%	365	4%	80%									
53	Accra East	MAIN Y	Y10(TEXPO)	11	475	2%	104%	804	3%	177%			12	km				2008	An additional new feeder will be created from substation "Main Y."
54	Accra East	MAIN Y	Y11(SPINTEX)	11	467	20%	103%	710	30%	156%								2008	
55	Accra East	MAIN Y	Y02(OLD SPINTEX)	11	247	5%	74%	418	8%	125%			10	km				2013	A new feeder will be created from a new substation "Air Port."
56	Accra West	A(Odorkon)	A120 (Underground Network)	11KV	474	4%	141%	876	7%	261%								2007	
57	Accra West	A(Odorkon)	A16	11KV	156	1%	47%	264	1%	79%									
58	Accra West	A(Odorkon)	A13	11KV	253	1%	76%	428	2%	128%								2012	New Substation Darkman and New Substation Sowutuom will be constructed in 2011 and 2010 by GEDAP respectively. These countermeasures are assumed to solve both voltage-drop problem and over current problem completely.
59	Accra West	A(Odorkon)	A01	11KV	480	25%	123%	717	37%	184%								2007	
60	Accra West	A(Odorkon)	A18	11KV	91	1%	23%	154	1%	39%									
61	Accra West	A(Odorkon)	A61 TRUNK	11KV	480	10%	123%	592	12%	152%								2007	
61	Accra West	A(Odorkon)	A61 Branch 1	11KV	480	20%	56%	592	25%	70%								2007	

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks	
					Maximum Demand (A)	Voltage Drop (%)	Current Loading	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)
61	Accra West	A(Odorkor)	A61 Branch 2	11KV	480	21%	89%	592	25%	110%	Load should be transferred onto new feeder					2007	
62	Accra West	B(Korle Bu)	B25	11KV	260	3%	78%	440	5%	131%	Injection of primary substation to relieve load					2007	
63	Accra West	B(Korle Bu)	B27	11KV	330	3%	99%	762	8%	227%	Injection of primary substation to relieve load					2007	
64	Accra West	B(Korle Bu)	B35	11KV	200	0%	60%	338	1%	101%	Injection of primary substation to relieve load						New Substation Dansoman will be constructed in 2009 by GEDAP. This countermeasure is assumed to solve both voltage-drop problem and over current problem completely.
65	Accra West	B(Korle Bu)	B15	11KV	340	2%	101%	543	3%	162%	Injection of primary substation to relieve load					2007	
66	Accra West	B(Korle Bu)	B42	11KV	274	2%	86%	433	3%	129%	Injection of primary substation to relieve load					2007	
67	Accra West	B(Korle Bu)	B24	11KV	310	1%	90%	318	1%	90%	Injection of primary substation to relieve load					2007	
68	Accra West	B(Korle Bu)	B28	11KV	341	2%	102%	673	4%	201%	Injection of primary substation to relieve load					2007	
69	Accra West	B(Korle Bu)	B19	11KV	340	1%	101%	470	1%	140%	Injection of primary substation to relieve load					2007	
70	Accra West	B(Korle Bu)	B20	11KV	205	1%	61%	347	2%	104%	Injection of primary substation to relieve load						
71	Accra West	C(Achimota Village)	ABC	11KV	351	10%	144%	658	19%	279%	upgrade existing conductor (35mm2) to 120mm2AAC	20 km				2008	It is assumed that the length of conductor to be replaced is 20km.
72	Accra West	C(Achimota Village)	C20	11KV	331	8%	85%	647	19%	166%	Injection of new primary substation at Ofankor is expected to relieve load					2007	
73	Accra West	C(Achimota Village)	C20	11KV	331	1%	99%	647	1%	99%	Injection of new primary substation at Ofankor is expected to relieve load						
74	Accra West	C(Achimota Village)	C60	11KV	320	1%	82%	539	2%	138%	Injection of new primary substation at Ofankor is expected to relieve load						New Substation Sowutuom will be constructed in 2010 by GEDAP. This countermeasure is assumed to solve both voltage-drop problem and over current problem completely.
74	Accra West	C(Achimota Village)	C60 branch 1	11KV	320	3%	36%	539	5%	60%	Injection of new primary substation at Ofankor is expected to relieve load					2007	
74	Accra West	C(Achimota Village)	C60 branch 2	11KV	320	4%	42%	539	6%	70%	Injection of new primary substation at Ofankor is expected to relieve load						
75	Accra West	C(Achimota Village)	C14	11KV	356	6%	151%	565	10%	239%	Injection of new primary substation at Ofankor to relieve load					2007	
76	Accra West	C(Achimota Village)	C13	11KV	355	20%	150%	415	23%	176%	Injection of new primary substation at Ofankor to relieve load					2007	
77	Accra West	C(Achimota Village)	C13	11KV	355	23%	69%	415	26%	80%	Injection of new primary substation at Ofankor to relieve load					2007	
78	Accra West	D(Avenor)	D150	11KV	270	1%	81%	457	1%	136%		2.2 km				2011	The cable should be replaced to from "185mm2 Al XLPE" to "240mm <sup>2</sup> Cu XLPE".
79	Accra West	D(Avenor)	D123	11KV	280	4%	84%	474	6%	141%		4.4 km				2010	The cable should be replaced to from "185mm2 Al XLPE" to "240mm <sup>2</sup> Cu XLPE".

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks			
					Maximum Demand (A)	Voltage Drop (%)	Current Loading	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)	Year for Countermeasure	
80	Accra West	D(Avenor)	D16	11kV	394	4%	118%	975	9%	291%				3.2 km				2008	The cable should be replaced to from "185mm <sup>2</sup> Al XLPE" to "6 x 1 x 630mm <sup>2</sup> Al XLPE".
81	Accra West	D(Avenor)	D101	11kV	384	5%	115%	517	7%	154%				4.2 km				2008	The cable should be replaced to from "185mm <sup>2</sup> Al XLPE" to "240mm <sup>2</sup> Cu XLPE".
82	Accra West	D(Avenor)	D103	11kV	380	6%	113%	474	8%	141%				5.3 km				2008	The cable should be replaced to from "185mm <sup>2</sup> Al XLPE" to "240mm <sup>2</sup> Cu XLPE".
83	Accra West	D(Avenor)	D01	11kV	267	4%	80%	452	7%	135%				5.4 km				2011	The cable should be replaced to from "185mm <sup>2</sup> Al XLPE" to "240mm <sup>2</sup> Cu XLPE".
84	Accra West	D(Avenor)	D114	11kV	340	7%	101%	346	7%	103%				6.6 km				2008	The cable should be replaced to from "185mm <sup>2</sup> Al XLPE" to "240mm <sup>2</sup> Cu XLPE".
85	Accra West	E(Transhipment)	ABL1	11kV	100	0%	30%	169	0%	50%									
86	Accra West	E(Transhipment)	ABL2	11kV	100	0%	30%	157	0%	47%									
87	Accra West	E(Transhipment)	E08	11kV	315	2%	94%	490	4%	146%								2008	Injection of new primary substation at Adabraka is expected to relieve load
87	Accra West	E(Transhipment)	E08 branch 1	11kV	315	3%	55%	490	4%	85%									
88	Accra West	E(Transhipment)	E07	11kV	345	1%	101%	575	2%	172%								2008	Injection of new primary substation at Adabraka is expected to relieve load
88	Accra West	E(Transhipment)	E07 branch 1	11kV	345	2%	58%	575	4%	97%									
89	Accra West	E(Transhipment)	EG14	11kV	260	3%	78%	603	6%	180%								2008	Injection of new primary substation at Adabraka is expected to relieve load
90	Accra West	E(Transhipment)	E20	11kV	215	2%	64%	364	3%	109%									
90	Accra West	E(Transhipment)	E20 branch 1	11kV	215	2%	44%	364	3%	67%									
91	Accra West	E(Transhipment)	E26	11kV	146	1%	44%	247	1%	74%									
92	Accra West	E(Transhipment)	E41	11kV	100	0%	30%	118	0%	35%									
93	Accra West	E(Transhipment)	E150	11kV	270	1%	81%	457	2%	136%									
94	Accra West	F(Kokomlemie)	F11	11kV	200	1%	60%	338	2%	101%									
95	Accra West	F(Kokomlemie)	F01	11kV	230	2%	116%	389	2%	116%								2008	Injection of new primary substation at Adabraka is expected to relieve load



No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks	
					Maximum Demand (A)	Voltage Drop (%)	Current Loading	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)
96	Accra West (Power House)	G25		11KV	310	1%	93%	525	2%	157%	Great additional feeder to relieve load on existing feeder.					2009	New Adabraka Substation will solve the problem.
97	Accra West (Power House)	G32		11KV	181	1%	54%	306	1%	91%							
98	Accra West (Power House)	G56		11KV	240	2%	72%	406	4%	121%	Great additional feeder to relieve load on existing feeder.					2013	New Adabraka Substation will solve the problem.
99	Accra West (Power House)	G05		11KV	220	1%	48%	271	1%	81%							
100	Accra West (Power House)	GE19		11KV	220	2%	66%	372	4%	111%		6.2 km					change cable size from 185sqmm Al XLPE to 258sqmmCu PILC
101	Accra West (NSAWAM)	Nsawam-Accra		11KV	260	19%	110%	440	32%	186%	Injection of new primary substation at Ofankor to relieve load. Upgrade existing conductors to					2008	
102	Accra West (NSAWAM)	Nsawam-Accra B1		11KV	260	25%	25%	440	42%	43%	Injection of new primary substation at Ofankor to relieve load. Upgrade existing conductors to					2008	
103	Accra West (NSAWAM)	Nsawam-Accra b2		11KV	260	34%	38%	440	57%	64%	Injection of new primary substation at Ofankor to relieve load. Upgrade existing conductors to					2008	New Ofankor Substation which has been already constructed will solve the problem.
104	Accra West (NSAWAM)	Adoagyiri-Coaltar		11KV	230	93%	97%	389	100%	165%	Injection of new primary substation at Ofankor to relieve load. Upgrade existing conductors to					2008	
105	Accra West (NSAWAM)	Adoagyiri-Coaltar b1		11KV	230	93%	2%	389	100%	4%							
106	Accra West (NSAWAM)	Adoagyiri-Coaltar b2		11KV	230	96%	11%	389	100%	18%							
107	Accra West (NSAWAM)	Nsawam-Accra		11KV	250	53%	96%	440	57%	186%	Injection of new primary substation at Ofankor to relieve load. Upgrade existing conductors to					2008	
108	Accra West (NSAWAM)	Coaltar-Adoagyiri		11KV	230	100%	88%	389	100%	165%	Injection of new primary substation at Ofankor to relieve load. Upgrade existing conductors to					2008	
109	Accra West	R(Ridge)		11KV	220	1%	66%	288	2%	86%							
110	Accra West	R(Ridge)		11KV	290	2%	87%	413	3%	123%		4.9 km				2011	The existing cable will be replaced to 240mm <sup>2</sup> Cu XLPE.
111	Accra West	R(Ridge)		11KV	280	1%	84%	474	2%	141%		2.1 km				2010	The existing cable will be replaced to 240mm <sup>2</sup> Cu XLPE.
111	Accra West	R(Ridge)		11KV	280	3%	52%	474	7%	88%							

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks		
					Maximum Demand (A)	Voltage Drop (%)	Current Loading	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)	Year for Countermeasure
112	Accra West	R(Ridge)	R10	11KV	74	1%	22%	125	1%	37%								
113	Accra West	R(Ridge)	R5	11KV	171	2%	51%	289	3%	86%								
114	Accra West	R(Ridge)	R4	11KV	154	1%	46%	249	2%	74%								
115	Accra West	R(Ridge)	R3	11KV	200	2%	60%	338	4%	101%		7.2 km				67%	2017	The existing cable will be replaced to 240mm <sup>2</sup> Cu XLPE.
116	Accra West	S(Kuwasheman)	S02	11KV	205	1%	53%	347	2%	89%							2007	Injection of primary substation at Sowutuom to relieve load on Station S
117	Accra West	S(Kuwasheman)	S10	11KV	410	31%	105%	474	39%	122%							2007	Injection of primary substation at Sowutuom to relieve load on Station S
118	Accra West	S(Kuwasheman)	S11	11KV	165	1%	42%	279	3%	72%							2007	Injection of primary substation at Sowutuom to relieve load on Station S
119	Accra West	V(Dansoman)	V02	11KV	277	0%	71%	469	1%	120%							2008	Injection of new primary station at Dansoman is expected to relieve load
120	Accra West	V(Dansoman)	V10	11KV	453	13%	116%	791	23%	203%							2008	Injection of new primary station at Dansoman is expected to relieve load
120	Accra West	V(Dansoman)	V10 BRANCH 1	11KV	453	16%	56%	791	28%	98%							2008	Injection of new primary station at Dansoman is expected to relieve load
121	Accra West	V(Dansoman)	V11	11KV	262	3%	67%	443	6%	114%							2008	Injection of new primary station at Dansoman is expected to relieve load
122	Accra West	Z(Tokuse)	RADIO	11KV	395	25%	101%	668	43%	171%							2008	An additional feeder will be created from "Z (Tokuse)". The conductor size may be 120mm <sup>2</sup> AAC
122	Accra West	Z(Tokuse)	RADIO branch 1	11KV	395	28%	14%	668	47%	24%							2008	An additional feeder will be created from "Z (Tokuse)". The conductor size may be 120mm <sup>2</sup> AAC
122	Accra West	Z(Tokuse)	RADIO branch 2	11KV	395	60%	106%	668	100%	179%		15 km					2008	An additional feeder will be created from "Z (Tokuse)". The conductor size may be 120mm <sup>2</sup> AAC
123	Accra West	Z(Tokuse)	TUJA	11KV	200	10%	51%	338	17%	87%							2008	An additional feeder will be created from "Z (Tokuse)". The conductor size may be 120mm <sup>2</sup> AAC
123	Accra West	Z(Tokuse)	TUJA branch 1	11KV	200	16%	22%	338	26%	38%							2008	An additional feeder will be created from "Z (Tokuse)". The conductor size may be 120mm <sup>2</sup> AAC
123	Accra West	Z(Tokuse)	TUJA branch 2	11KV	200	11%	23%	338	19%	39%							2008	An additional feeder will be created from "Z (Tokuse)". The conductor size may be 120mm <sup>2</sup> AAC
124	Tema	A	A21	11	160	2%	54%	286	4%	97%								first 3km to upgraded to 240sqmm
125	Tema	A	A31	11	250	2%	85%	446	3%	151%		3 km	S/S - A35			89%	2009	Replacement of the cable from 120mm <sup>2</sup> Cu to 240mm <sup>2</sup> Cu should be done a year before
126	Tema	A	A41	11	50	0%	24%	89	0%	30%								
127	Tema	A	A61	11	140	3%	47%	250	4%	85%								
128	Tema	A	A71	11	280	5%	62%	357	2%	78%								feeder curtailed by New Lashibi S/S that has been already constructed

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks	
					Maximum Demand (A)	Voltage Drop (%)	Current Loading	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)
129	Tema A	A81		11	50	0%	17%	89	1%	30%	None						
130	Tema A	A91		11	120	1%	41%	214	1%	73%	None						
131	Tema A	A1_Lashbi		33	90	0%	11%	161	0%	19%	None						
132	Tema A	A2_Lashbi		33	70	0%	8%	125	0%	15%	None						
133	Tema B	B31		11	220	4%	48%	393	7%	86%	None						
134	Tema B	B51		11	55	0%	19%	98	1%	33%	None						
135	Tema B	B41/71		11	130	1%	44%	232	1%	79%	None						
136	Tema B	B81		11	100	1%	34%	178	2%	60%	None						
137	Tema B	B91		11	200	3%	40%	357	6%	71%	None						
138	Tema B	B101		11	100	1%	20%	178	1%	36%	None						
139	Tema B	B111		11	300	9%	81%	535	16%	145%	feeder to be curtailed by new Adjei Kojjo Substation	3 km	New S/S-B105c		6%	64%	2010
140	Tema B	B-Y1		33	180	3%	40%	321	5%	71%	None						New N.O.P near Daben Clinic
141	Tema B	B-Y2		33	130	2%	29%	232	3%	51%	None						
142	Tema D	LUBE OIL		11	200	1%	68%	357	2%	121%	Upgrade cable from 120mm2 to 240mm2	1.75 km	S/S - UNICO		1%	86%	2012
143	Tema D	PSC_aShipYard		11	70	0%	24%	125	0%	42%	None						
144	Tema D	PFC		11	120	0%	29%	214	0%	52%	None						
145	Tema D	F/H#1		11	70	0%	24%	125	0%	42%	None						
146	Tema D	F/H#2		11	240	5%	81%	428	10%	145%	create new feeder to take up PFC tank branch (240sqmm) from	0.5 km	Sin D- PFC tanks		6%	31%	2010
147	Tema D	AGRONA		11	220	1%	75%	393	2%	133%	Upgrade cable from 120mm2 to 240mm2	3 km			2%	78%	2010
148	Tema D	GHACEM		11	240	1%	29%	428	1%	51%	None						
149	Tema D	ASASUA		11	125	1%	42%	223	1%	76%	None						
150	Tema D	D-A1		33	290	0%	73%	518	0%	130%	commission second feeder under construction						2008
151	Tema D	D-A2		33	168	0%	20%	300	0%	36%	None						
152	Tema D	D-E1		33	105	0%	21%	187	0%	47%	None						
153	Tema D	D-E2		33	101	0%	20%	180	0%	45%	None						
154	Tema E	E11		11	110	2%	37%	196	4%	66%	None						

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks	
					Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)
155	Tema	E	E21	11	320	3%	108%	571	2%	170%	Upgrade cable to 3(1X240sqmm)	1 km	S/S-Flour Mill		0%	44%	
156	Tema	E	OLD GTMC	11	80	0%	27%	143	0%	48%	None						
157	Tema	E	G.P.H.A	33	17	0%	3%	89	0%	30%	None						
158	Tema	H	Slaughter Hse	11	60	0%	20%	107	1%	36%	Existing cable fault to be rectified to pick more load	0.8 km	Franpac-Atlas		3%	85%	The feeder "Slaughter Hse" is out of order now and 3 feeders (GNTC, NESTLE and Ernest Chemist) owe to its load
159	Tema	H	T.O.R	11	200	0%	40%	357	1%	71%	None						
160	Tema	H	Kpone Garages	11	150	2%	33%	268	3%	59%	None						
161	Tema	H	GNTC	11	140	2%	33%	250	3%	59%	repair of protection equipment in feeder panel about 4No new 11kV						
162	Tema	H	Prampram	11	220	7%	75%	473	15%	160%	feeders to be created from the proposed Dawhenya primary S/S (120sqmm)	15 km					2009
163	Tema	H	NESTLE	11	320	8%	87%	571	12%	155%	G.N.T.C feeder to be re-energized				5%	68%	2008
164	Tema	H	Western Casting	11	309	5%	68%	551	9%	121%	upgrade initial cable from 3x185sqmm to 3x240sqmm	2 km			0%	95%	2011
165	Tema	H	Ernest Chemist	11	240	3%	81%	428	5%	145%	cable fault on Si. Hse fdr to be rectified				3%	91%	immediately/before 2010
166	Tema	H	H-A1	33	290	1%	32%	518	2%	56%	None						H-A1&A2 bunched
167	Tema	H	H-A2	33	-	-	-	525	2%	57%	None						New feeder
168	Tema	H	H-B1	33	370	1%	89%	660	2%	159%	Bunch existing H-B1&B2 cables	6 km			1%	72%	2010
169	Tema	H	H-B2	33	385	1%	93%	687	2%	159%	Bunch existing H-B1&B2 cables	6 km			1%	72%	2010
170	Tema	H	H-B3(2)	33	-	-	-	687	2%	166%	lay new cable		H-B		0%	83%	2010
171	Tema	H	H-E1	33	75	0%	16%	134	1%	29%	None						
172	Tema	H	H-E2	33	70	0%	15%	125	1%	27%	None						
173	Tema	H	H-Wahome	33	146	0%	33%	261	0%	59%	None						
174	Tema	H	H-Ferofabrik	33	150	0%	28%	268	0%	51%	None						
175	Tema	H	H-TTL	33	20	0%	5%	36	0%	9%	None						
176	Tema	Lashibi (L)	Vivian Farm	11	106	2%	23%	189	3%	42%	fdr to absorb part of Nungua-Buade load		branch Nungua feeder		5%	60%	2010
177	Tema	Lashibi (L)	Nungua/Buade	11	293	5%	75%	523	9%	134%	"				6%	97%	2012
178	Tema	Lashibi (L)	Klagon	11	117	4%	26%	209	7%	46%	None						

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks			
					Maximum Demand (A)	Voltage Drop (%)	Current Loading	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)	Year for Countermeasure	
179	Tema	Lashibi (L)	Comm.20 (L91)	11	160	6%	35%	286	10%	63%	install capacitor bank	300 kVA	Near ECOC Cash Office		6%	70%	2013	proposed Adjei Kojo primary S/S to absorb loads at fdr extreme	
180	Tema	Ashiaman (S)	AFARIWA	11	280	4%	62%	500	9%	128%	proposed Mobole primary S/S to absorb loads at fdr extreme			6%	85%	2012	It is not decided that which project "Mobole" will be constructed by.		
181	Tema	Ashiaman (S)	COMM.22	11	80	1%	21%	143	3%	36%	None								
182	Tema	Ashiaman (S)	OFFICIAL TOWN	11	100	1%	26%	178	4%	45%	None								
183	Tema	Ashiaman (S)	NEW TOWN	11	200	2%	74%	357	7%	91%	None								
184	Tema	K	AKWAMUFIE	11	60	1%	15%	107	2%	27%	Replacement of conductor from 16mm <sup>2</sup> Cu to 120mm <sup>2</sup> AAC	6 km					2008	upgrade tee-off to Akwamufie to 120sqmm Al bare conductor	
185	Tema	K	OKWENYA	33	20	1%	4%	36	1%	8%									
186	Tema	K	JUAPONG	33	32	1%	7%	57	1%	13%									
187	Tema	ASUTSUARE	ASUTSUARE	11	42	3%	9%	75	5%	16%	upgrade from 35Cu/50Alsqmm to 120sqmm Al bare conductor	16 km	Former Agric School junction to Golden Exotic				2008	upgrade from 35Cu/50Alsqmm to 120sqmm Al bare conductor	
188	Tema	ASUTSUARE	MILITARY CAMP	11	10.1	0%	3%	18	0%	5%	None								
189	Tema	KPONG	KROBO AREA	11	258	15%	66%	460	27%	118%	construct new OHL from S/S to Atua (120sqmm)	16 km	S/S - Mt Mary		2%	64%	2013		
190	Tema	KPONG	OLD WORKS	11	60	1%	11%	107	1%	20%	None								
191	Tema	KPONG	New Feeder	11	-	-	-	150	2%	40%	None								
192	Eastern	Tafo BSP	Kibi/Suhum	11	205	13%	90%	364	28%	80%	Upgrade feeder to 33kV	22 Km	Tafo to Akoko to Kibi		5%	100%	2008		
192	Eastern	Tafo BSP	Kibi/Suhum	7.9	91	17%	33%	161	59%	30%	"	61 Km	Akoko to Kibi		15%	55%	2008		
192	Eastern	Tafo BSP	Kibi/Suhum	7.9	89	24%	17%	158	42%	30%	"	35 Km	Akoko to Kibi		7%	66%	2008		
193	Eastern	Tafo BSP	Tafo	11	-	-	-	-	-	-	A 33KV new feeder will be installed from Tafo BSP and will be connected to the medium point of existing tafo feeder by a 33kV/11kV substation with	20 km							It is assumed that the conductor size of a new 33kV feeder is 240mm <sup>2</sup> AAC and the length is 25km.
194	Eastern	Tafo BSP	OPASS	11	40	1%	9%	52	1%	11%								The existing line between "Tafo BSP" and "Koforidua" has many failures, because much part of it passes through bush. So by-pass route will be constructed to	
195	Eastern	Tafo BSP	Koforidua	33	216	9%	41%	325	13%	61%	Construct second feeder	17 Km	Tafo BSP - Koforidua S/in		4%	44%	2007		
196	Eastern	Koforidua	Power House	11	145	1%	43%	196	1%	59%	Injection of 10MVA Power transformer	1 No.	Koforidua Primary Station				2008	Work in progress	
197	Eastern	Koforidua	Estate Junc.	11	140	2%	42%	261	4%	78%	"	"	"				"	"	
198	Eastern	Koforidua	Accra Rd.	11	202	6%	60%	250	7%	75%	"	"	"				"	"	
199	Eastern	Koforidua	Old Estate	11	87	1%	26%	162	2%	48%	"	"	"				"	"	
200	Eastern	Koforidua	St. Joseph	11	66	5%	15%	77	6%	17%	"	"	"				"	"	
201	Eastern	Tafo BSP	Aseewa	11	19	3%	4%	23	3%	5%	"	"	"				"	"	

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks		
					Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)	Year for Countermeasure
202	Eastern	Akwatia BSP	Akwatia	11	153	17%	41%	191	21%	52%	Upgrade feeder to 33kV				7%	89%	2008	Proposed substation to be constructed at Asasco Junction. Current load on Asamankese feeder is 2.13MW
203	Eastern	Akwatia BSP	Asamankese	11	130	21%	29%	247	41%	54%	Upgrade feeder to 33kV and inject a 5MVA Power transformer	34 Km	Akwatia BSP to Asasco Junction			79%	2008	
204	Eastern	Nsawam	Adoagyiri	11	210	43%	46%	389	80%	85%	Construct an 11kV line to link Asamankese to Adoagyiri feeder and isolate at a point	5 Km	St Thomas to Asuokaw			18%	2008	Voltage drop is so high that the District is hastened to add customers to existing the
205	Eastern	Akwatia BSP	Oda	33	176	5%	33%	185	6%	35%	Incomer to Primary Station be taken from Asamankese proposed 33kV line	30 Km	Oda Primary substation			5%	2008	About 5.75MW will be off-loaded from existing feeder
205	Eastern	Akwatia BSP	Oda	31.2	84	10%	19%	89	10%	19%					7%		2008	
206	Eastern	Oda	Town	11	120	1%	36%	137	4%	41%	Upgrading of 35mm <sup>2</sup> Cu and 50AAC to 120AAC	4 Km	Nkwantanu m to Telecom			1%	2008	
207	Eastern	Oda	Achiase	11	116	3%	35%	159	4%	47%	Upgrading of 35mm <sup>2</sup> Cu and 50AAC to 120AAC	4 Km	E104 to Swedru No. 2			5%	2008	
207	Eastern	Oda	Achiase	10.6	63	8%	27%	86	11%	36%	Upgrading of 35mm <sup>2</sup> Cu to 120AAC	56 Km	Akim Swedru No.2 to Akenkensu Iso. at			3%	2008	Injection of an additional 10MVA Power transformer at substation in 2012 to cater for the projected load of 9.32MW
208	Eastern	Oda	Sawmill	11	90	2%	38%	168	5%	71%	Upgrading of 35mm <sup>2</sup> Cu to 120AAC	5 Km	Primary substation to Oda Sawmill			1%	2007	
209	Eastern	Oda	Oda	11	-	-	-	-	-	-	Injection of 10MVA Power transformer	1 No	Primary substation				2012	
210	Eastern	Nkawkaw	Donkorkrom	33	20	4%	4%	33	7%	7%								
211	Eastern	Nkawkaw	New Abirem	33	71	8%	16%	73	8%	16%	Interconnect Akwatia BSP to New Abirem feeder	36 Km	Akwatia BSP to Pamine			5%	2008	To off-load part of the New Abirem at Akwatia District
211	Eastern	Nkawkaw	New Abirem	29.7	15	8%	3%	16	8%	3%								
212	Eastern	Nkawkaw	Enyresi	33	7	0%	3%	13	1%	5%								
213	Eastern	Nkawkaw	Mountains	11	250	46%	63%	508	93%	128%	Upgrading of 16mm <sup>2</sup> Cu to 120AAC	2 Km	Obo Sec Tech. to Twenduras to Mpases to Akwatia				2007	
213	Eastern	Nkawkaw	Mountains	11	-	-	-	-	-	-	Upgrading of 16mm <sup>2</sup> Cu to 120AAC	30 Km	Abetifi				2007	
213	Eastern	Nkawkaw	Mountains	11	-	-	-	-	-	-	Construct a Primary substation with 5MVA Power transformer	1 No	Mpass Area				2007	Great 3No. Outgoing feeders at Proposed substation
213	Eastern	Nkawkaw	Mountains	11	-	-	-	-	-	-		44 Km	Mpass to Nsuta			84%		Proposed feeder F1 (11kV)
213	Eastern	Nkawkaw	Mountains	11	-	-	-	-	-	-		42 Km	Mpass to Proposed			66%		Proposed feeder F2 (11kV)
213	Eastern	Nkawkaw	Mountains	11	-	-	-	-	-	-		58 Km	Kotoso GWCL			68%		Proposed feeder F3 (11kV)
214	Eastern	Nkawkaw	Novotex	11	53	4%	20%	99	8%	38%	Upgrading of 50AAC to 120AAC	33 Km	Novotex to Kwahu Daa			4%	2015	The proposed injection at Mpass will relieve the existing trafo improving end voltages on the

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure						Remarks	
					Maximum Demand (A)	Voltage Drop (%)	Current Loading	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)		Year for Countermeasure
215	Eastern	Nkawkaw	Town	11	190	0%	57%	373	1%	111%	Upgrade 95XLPE and 185XLPE Al to 240XLPE Cu	3 Km	Between Nkawkaw BSP to Obuase		4%	less than 74%	2007	"
215	Eastern	Nkawkaw	Town	10.9	91	1%	20%	178	3%	39%	Upgrading of 35mm <sup>2</sup> Cu to 120AAC	5 Km	Akuamoah		5%	77%	2007	"
215	Eastern	Nkawkaw	Town	10.9	91	4%	30%	195	7%	58%	Upgrading of 95mm <sup>2</sup> XLPE and 185mm <sup>2</sup> XLPE Al to 240mm <sup>2</sup> XLPE Cu	10 Km	Between Nkawkaw BSP and Moccoco		"		2007	
216	Volta	KPANDO	TOWNSHIP	11	76	1%	7%	125	2%	27%	Create a second alternative feeder	4.5 km	BSP to Kpando					120mm <sup>2</sup> AAC
217	Volta	KPANDO	SOVIE-VAKPO	11	61	9%	13%	100	15%	22%	Transfer load unto Kpeve/Have Fdr	10.5 km	Have Jtn to Vakpo		9%	13%	2007	120mm <sup>2</sup> AAC
218	Volta	KPANDO	HOHOE	33	134	10%	25%	220	17%	42%	Establish a 33kV Booster Station at Jasikan	1 set	Between Jasikan & Wozawora		10%	25%	2007	
219	Volta	KPANDO	HOHOE-JASIKAN	33	87	10%	19%	143	17%	31%	Construction of an alternative feeder for Jasikan	48 km	Kpando		10%	19%		120mm <sup>2</sup> AAC
220	Volta	KPANDO	NIKONYA	33	19	2%	4%	31	7%	7%								
221	Volta	KPEVE	HAVE	11	17	1%	4%	28	1%	6%								
222	Volta	KPEVE	TOWNSHIP	11	44	10%	10%	72	17%	16%	Construction of a missing link	4.5 km	Have Jtn to Vokpo		10%	10%	2007	A tie line which connects "TSIBU BETHEL" and "AGBATE" will be constructed. (120mm <sup>2</sup> AAC, 4.5km)
223	Volta	KPEVE	TSITO-AMEDZOPE	33	50	2%	9%	83	4%	16%	Construct a second fdr to separate Tsito from Amedzope	8.5 km	Kpeve BSP to Bama		4%	16%	2008	120mm <sup>2</sup> AAC
224	Volta	HO	HO-CENTRAL	11	172	1%	51%	282	2%	84%								
225	Volta	HO	SOKODE	11	138	4%	26%	226	7%	43%	Establish a 33/11kV Primary station at Load	4 km	Have BSP to Sokode Load		6%	38%	2015	
226	Volta	HO	TANYIGBE	11	185	6%	35%	303	11%	39%	Create a Separate fdr to pick portion of load	3.5 km	Have Jtn to Vokpo		6%	35%	2016	120mm <sup>2</sup> AAC
227	Volta	SOGAKOPE	SOGA-AKATSI	33	172	9%	38%	233	11%	51%	Construct a second fdr to separate Keta line from Akatsi and Sodakope	12.5 km	Soga BSP to Dabaha Jn		9%	38%	2007	120mm <sup>2</sup> AAC
228	Volta	SOGAKOPE	ADIDOME	33	8	0%	2%	14	0%	3%								
229	Volta	KPEVE	GWCL	11	82	4%	18%	133	6%	29%								
230	Volta	TSITO	TOWNSHIP	11	15	0%	3%	24	0%	5%								
231	Volta	TSITO	ADULT COLLEGE	11	2	0%	1%	3	0%	1%								
232	Volta	TSITO	PEKI	11	74	10%	16%	120	16%	26%	Establish a 33/11kV Primary station at Load	2 km	Have Jtn to Vokpo		9%	15%	2006	120mm <sup>2</sup> AAC
233	Volta	TSITO	INCOMER	11	80	-	64%	131	-	104%	Upgrade Power trafo	5/10 MVA	TSITO BSP		5%	64%	2014	Upgrading the trafo will ensure firm capacity
234	Volta	AFLAO	ABOR	33	50	5%	11%	83	5%	20%								
235	Volta	AFLAO	DENU	11	121	3%	51%	198	5%	84%	Construct an alternative 11kV fdr for the upgrade	4.5 km	Afac BSP - Denu		5%	84%	2017	120mm <sup>2</sup> AAC
236	Volta	AFLAO	AFLAO	11	42	0%	18%	69	0%	29%	conductor from 35Cu to				4%	6%		

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks			
					Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)	Year for Countermeasure	
237	Volta	KPANDO	INCOMER	11	160	-	82%	262	-	135%	Upgrade Power trafo	10 MV/A	Kpando BSP			52%	2014	The existing 5MVA Power Transformer must be upgraded to 10MVA	
238	Volta	SOGAKOPE	INCOMER	33	205	-	78%	336	-	128%	VR to upgrade their Trafo	25/33 MVA	Sogakope			82%	2011	VR to be informed to take up the upgrade	
239	Western	Station A	Circuit 1	33	400	6%	75%	606	7%	91%	Upgrading conductor from 150mm <sup>2</sup> to 265mm <sup>2</sup>	8 km			5%		2011		
240	Western	Station A	Circuit 2	33	239	4%	45%	276	4%	52%	Upgrading conductor from 150mm <sup>2</sup> to 265mm <sup>2</sup>								
241	Western	Station A	Circuit 5	33	267	7%	50%	404	7%	52%	Upgrading conductor from 150mm <sup>2</sup> to 265mm <sup>2</sup>	14 km			5%	34%	2007		
242	Western	Station A	A09	11	76	1%	23%	115	1%	34%	Upgrading cable from 120mm <sup>2</sup> to 185mm <sup>2</sup>	1.5 km			4%	89%	2017		
243	Western	Station A	A10	11	197	3%	67%	424	5%	101%	Upgrading cable from 120mm <sup>2</sup> to 185mm <sup>2</sup>								
244	Western	Station A	A13	11	190	2%	64%	288	2%	98%	Upgrading cable from 185mm <sup>2</sup> to 240mm <sup>2</sup>	4.3 km			9%	68%	2007	Load can also be transferred onto feeders A44 and A47	
245	Western	Station A	A31	11	330	6%	99%	500	7%	102%	Upgrading cable from 150mm <sup>2</sup> to 265mm <sup>2</sup>								
246	Western	Station A	A41	11	150	1%	45%	485	2%	68%	Upgrading cable from 185mm <sup>2</sup> to 240mm <sup>2</sup>								
247	Western	Station A	A44	11	130	1%	39%	197	2%	59%	Upgrading cable from 150mm <sup>2</sup> to 265mm <sup>2</sup>								
248	Western	Station A	A55	11	250	10%	60%	710	8%	88%	Upgrading cable from 150mm <sup>2</sup> to 265mm <sup>2</sup>	7.6 km			6%	73%	2010	The existing facilities of A55 have the specification for 33kV feeder.	
249	Western	Station A	A57	11	98	1%	29%	148	1%	44%									
250	Western	Station B	B01	11	10	0%	3%	15	0%	4%									
251	Western	Station B	B09	11	110	1%	33%	167	1%	50%									
252	Western	Station B	B11	11	110	2%	24%	167	2%	50%									
253	Western	Station B	B21	11	270	4%	81%	409	5%	101%	Upgrading cable from 185mm <sup>2</sup> to 240mm <sup>2</sup>	2.9 km			4%	68%	2012		
254	Western	Station B	B32	11	126	1%	38%	727	1%	57%	Upgrading cable from 120mm <sup>2</sup> to 185mm <sup>2</sup>	3.9 km			2%	88%	2015		
255	Western	Station B	B41	11	210	1%	71%	318	2%	100%	Upgrading cable from 120mm <sup>2</sup> to 185mm <sup>2</sup>								
256	Western	Station B	B51	11	270	2%	92%	695	3%	100%	Upgrading cable from 120mm <sup>2</sup> to 185mm <sup>2</sup>	5 km			2%	88%	2007		
257	Western	Station B	B52	11	106	1%	36%	454	1%	55%									
258	Western	Station B	B67	11	125	5%	27%	189	7%	42%									
259	Western	Station B	B71	11	390	5%	132%	619	5%	138%	Upgrading cable from 120mm <sup>2</sup> to 240mm <sup>2</sup>	3.5 km			3%	81%	2007		
260	Western	Station B	B81	11	175	1%	52%	265	2%	79%									
261	Western	Station B	B87	11	120	1%	41%	333	2%	62%									
262	Western	Station C	Agona	33	46	2%	9%	82	3%	15%									
263	Western	Station C	C01	11	260	6%	78%	394	7%	94%	Upgrading cable from 185mm <sup>2</sup> to 240mm <sup>2</sup>	6.6 km			6%	63%	2011		
264	Western	Station C	C02	11	140	1%	42%	333	1%	63%	Change to 33kV				3%				
265	Western	Station C	C08	11	220	22%	66%	228	23%	68%	Upgrading cable from 120mm <sup>2</sup> to 240mm <sup>2</sup>	0.1 km			3%	59%	2007		
266	Western	Station C	C10	11	285	8%	63%	432	5%	100%	Construct a switching Station and separate feeder into two independent feeders.	20 km							
267	Western	Bogoso	Bogoso/Asanko	33	94	16%	21%	143	21%	31%	Change the conductor size from 150mm <sup>2</sup> to 400mm <sup>2</sup>	38 km			7%	37%	2012		
268	Western	Atuabo	Aboso 1	33	136	6%	26%	382	9%	57%	upgrade conductor size to 400mm <sup>2</sup>	38.7 km			7%	24%	2012		
269	Western	Atuabo	Aboso 2	33	141	6%	27%	429	10%	11%	No upgrade								
270	Western	Aboso	Aboso Town	11	55	1%	10%	99	1%	10%	No upgrade								
271	Western	Atuabo	Bonsa	33	42	1%	8%	58	2%	13%	No upgrade								



No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks			
					Maximum Demand (A)	Voltage Drop (%)	Current Loading	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)	Year for Countermeasure	
272	Western	Atuabo	Teberebe 1	33	238	4%	52%	352	4%	66%	Up grade conductor size from 150mm2 to 400mm2	12 km			3%	33%	2017		
273	Western	Atuabo	Teberebe 2	33	140	3%	31%	175	2%	33%	No upgrade								
274	Western	Atuabo	Town 1	11	30	2%	8%	41	2%	11%	No upgrade								
275	Western	Atuabo	Town 2	11	160	9%	43%	277	13%	126%	Upgrade conductor from 70 CU PLC to 240 mm2	12 KM			10%	38%	2013		
276	Western	Atuabo	Manganes	11	175	13%	47%	438	16%	41%	Change to 33kV for 5km and 33kV/11kV substation with 5MVA is installed.	5 km					2008		
277	Western	Bonsa	Bonsa/Simpa	11	83	3%	18%	124	4%	27%	No upgrade				2%	14%	2017		
278	Western	Aboso	Achiase	11	58	1%	13%	59	4%	13%	No upgrade				5%	19%	2017		
279	Western	Asawinso	Awaso/Wiawso	33	146	5%	28%	223	8%	2%	Upgrade conductor from 150mm2 to 200mm2	15 km			7%	35%	2017		
280	Western	Asawinso	New Obuase	33	6	0%	1%	10	0%	2%	No upgrade				0%	1%	2017		
281	Western	Asawinso	Jeitreso	33	4	1%	9%	6	2%	14%	No upgrade				3%	21%	2017		
282	Western	Asawinso	Chirano Mines	33	120	5%	23%	184	7%	35%	No upgrade				7%	34%	2017		
283	Western	Asawinso	Bibiani	33	160	8%	30%	242	12%	46%	Upgrade the 150mm2 to 400mm2	29.5 km			8%	23%	2012		
284	Western	Awaso	Wiawso	33	96	3%	18%	140	4%	26%	No upgrade								
285	Western	Awaso	GBC	11	64	1%	14%	93	2%	20%	No upgrade								
286	Western	Dwenase	Town	11	60	3%	16%	175	3%	16%	No upgrade				4%	20%	2017		
287	Western	Dwenase	New Site/Suhuma	11	98	3%	72%	128	2%	93%	Upgrade conductor from 16 CU PLC to 50 mm2 AL	0.7 KM			1%	49%	2015		
288	Western	Dwenase	Juaboso	33	53	5%	12%	78	8%	17%	Upgrade the trunk line from 120mm2 to 240mm2 and the rest to 200mm2				7%	14%	2012		
289	Western	Bibiani	Town	11	69	5%	45%	105	8%	68%	No upgrade						2016		
290	Western	Bibiani	Old Town	11	35	1%	23%	120	1%	26%	No upgrade						2017		
291	Western	Bibiani	Pit Site	11	33	2%	21%	50	2%	32%	No upgrade						2017		
292	Western	Esiam	Axim	33	40	1%	8%	51	2%	10%	No upgrade						2017		
293	Western	Esiam	Half Assini	33	68	6%	15%	104	7%	20%	No upgrade						2017		
294	Western	Axim	Hospital	11	86	5%	36%	130	7%	55%	Create additional 11KV feeder at Winneba BSP to off-load the feeder (120mm2 AAC) & Establish primary substation at Swedru and create additional circuit (120mm2 AAC)	4 km	Winneba BSP		18%	less than 100%	2010	A part of the load will be transferred to feeder "APAM" in order to reduce the current loading.	
295	Central	WINNEBA	WINNEBA	11KV	380	14%	84%	706	26%	155%	Establish primary substation at Swedru and create additional circuit (120mm2 AAC)	10 km	Swedru		22%	59%	2009		
296	Central	WINNEBA	SWEDRU 1	11KV	185	20%	55%	256	30%	76%	Establish primary substation at Swedru and create additional circuit (120mm2 AAC)	10 km	Swedru		40%	80%	2009		
297	Central	WINNEBA	SWEDRU 2	11KV	280	38%	84%	397	63%	119%	Establish primary substation at Swedru and create additional circuit (120mm2 AAC)	10 km	Swedru		15%	29%	2008		
298	Central	WINNEBA	APAM	11KV	120	13%	26%	209	25%	46%	Loading is OK. Install a capacitor bank to boost end voltage	1							
299	Central	SALTPOND	SALTPOND	11KV	47	1%	10%	87	2%	19%	Loading is OK. Install a capacitor bank to boost end voltage	1							
300	Central	SALTPOND	MANKESSIM	11KV	118	7%	26%	208	12%	46%	Loading is OK. Install a capacitor bank to boost end voltage	1						2008	
301	Central	SALTPOND	ANOMABU	11KV	38	1%	8%	71	2%	16%									
302	Central	SALTPOND	CERAMICS	11KV	-	-	-	-	-	-									
303	Central	CAPE-COAST	PRASO	33KV	54	1%	12%	100	2%	22%									

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure						Remarks	
					Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)		Year for Countermeasure
304	Central	CAPE-COAST	SALTPOND	33KV	86	7%	19%	151	14%	35%	1				8%	12%	2008	
305	Central	CAPE-COAST	FOSU	33KV	112	8%	25%	191	14%	42%	1				9%	27%	2008	
306	Central	KASOA	TOKUSE	33KV	227	12%	50%	384	21%	84%	1	Kasoa			13%	55%	2008	The length of KASOA feeder is so long that its reliability is low. So the switching station will be constructed to improve its reliability. (Switching operation when failure)
307	Central	ASIKUMA	ODA	33KV	116	6%	25%	159	8%	35%	1							The construction cost of "Kasoa switching station" is approximately.
308	Central	CAPE-COAST	ELMINA	11KV	320	13%	70%	623	28%	137%	1	Elmina			14%	79%	2008	Elmina substation will be constructed by 2009.
309	Central	CAPE-COAST	RIDGES	11KV	120	4%	26%	223	7%	49%	3	Cape-Coast BSP			7%	49%	2017	Cape Coast BSP will be constructed by 2009.
310	Central	CAPE-COAST	TOWN 1	11KV	85	1%	25%	128	1%	38%								
311	Central	CAPE-COAST	TOWN 2	11KV	330	7%	99%	437	9%	130%	1	Elmina			8%	less than 100%	2009	It is much difficult to replace the underground cable "95mm <sup>2</sup> XLPE".
312	Central	CAPE-COAST	TOWN 3	11KV	160	6%	35%	216	9%	47%	1	Cape-Coast BSP			8%	less than 100%	2013	
313	Ashanti West	MAIN A	ADOATO 1& 2	33	-	-	-	-	-	-								This feeder is an interconnection feer to connect to another substation.
314	Ashanti West	MAIN A	ABOABO 1&2	33	-	-	-	-	-	-								This feeder is an interconnection feer to connect to another substation.
315	Ashanti West	MAIN A	GUINNESS 1	11	100	2%	22%	144	4%	32%								
316	Ashanti West	MAIN A	GBC	11	165	2%	47%	223	3%	67%								
317	Ashanti West	MAIN A	OBR	11	390	27%	86%	638	44%	140%	0.1 km 0.1 km 0.1 km 1 km						2008	New substation "Amanfrom" has been already constructed and new 4 feeders of it are under construction.
318	Ashanti West	MAIN A	IND OHL	11	320	6%	70%	761	9%	146%	2.7 km	RING ON SWITCHING			4%	76%	2008	

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks	
					Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)
319	Ashanti West	MAIN A	POWERHOUSE 1	11	255	2%	76%	345	2%	103%							When current of this feeder was measured, this feeder had the part of another feeder's load additionally. So the measurement current value was much more than its practical value. Therefore, the
320	Ashanti West	MAIN A	WAHW	11	140	1%	42%	189	2%	56%							"KTI" means "Jackson Park". 1 feeder from this substation has been already constructed (0.1km, 3x185mm <sup>2</sup> AL XLPE), and 3 feeders are now under construction (each feeder : 0.1km, 3x185mm <sup>2</sup> AL XLPE).
321	Ashanti West	MAIN A	LAKE ROAD	11	370	3%	110%	606	5%	181%							2008
322	Ashanti West	MAIN A	POWERHOUSE 2	11	390	4%	86%	672	7%	148%							2008
323	Ashanti West	MAIN A	RAIN TREE	11	145	1%	49%	197	1%	59%							
324	Ashanti West	MAIN A	GUINNESS 2	11	200	4%	44%	270	5%	59%							
325	Ashanti West	MAIN A	NEW ASAFO	11	85	1%	25%	115	1%	34%							
326	Ashanti West	MAIN A	LLL	11	100	1%	30%	135	1%	40%							
327	Ashanti West	MAIN B	Manso Nkwanta	33	30	3%	7%	41	3%	9%							
328	Ashanti West	MAIN B	Barekese 1	33	70	3%	13%	86	3%	16%							
329	Ashanti West	MAIN B	Barekese 2	33	104	3%	20%	141	4%	27%							
330	Ashanti West	MAIN B	B 11	11	305	4%	91%	412	5%	123%				15 km			2010
331	Ashanti West	MAIN B	B 21	11	190	1%	57%	499	4%	149%				15 km			2013
332	Ashanti West	MAIN B	B 31	11	107	0%	32%	187	1%	56%							
333	Ashanti West	MAIN B	B 41	11	85	0%	25%	115	1%	34%							
334	Ashanti West	MAIN B	B 61	11	344	9%	76%	651	18%	143%							2007
335	Ashanti West	MAIN B	B 71	11	324	9%	71%	438	12%	96%							2007
336	Ashanti West	MAIN B	B 81	11	323	30%	71%	437	31%	95%							2007
337	Ashanti West	MAIN D	BEKWAJ	33	100	4%	22%	109	7%	24%							
338	Ashanti West	MAIN D	D11	11	165	4%	36%	236	6%	52%							2007
339	Ashanti West	MAIN D	D21	11	360	13%	79%	500	18%	110%							The countermeasure was already taken.

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure					Remarks	
					Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)		Current Loading (%)
340	Ashanti West	MAIN D	D31	11	410	14%	90%	554	18%	122%	DEDICATED LINE TO KNUST 11KV BOARD FROM STATION F (KNUST) HAS BEEN CONSTRUCTED TO					2007 The countermeasure was already taken.	New substation "KnuSt (33kV)" has been already constructed, and 4 feeders from it also have been already constructed
341	Ashanti West	MAIN D	D41	11	180	2%	40%	243	3%	53%							
342	Ashanti West	MAIN D	D51	11	180	4%	54%	243	5%	73%							
343	Ashanti West	MAIN E	E11	11	290	7%	64%	315	8%	69%	TRAFO AT SUSTATION UPGRADED					2007	NEW OUTGOING FEEDERS WILL RELIEVE EXISTING FEEDER
344	Ashanti West	BEKWAI	KOKOFU	11	66	6%	48%	138	8%	30%	1 X 10MVA to 2 X 20MVA OUTGOING LINE UPGRADED FROM 16 SQ MM Cu TO 120 SQ MM	0.8 km				2007	
345	Ashanti West	BEKWAI	PACKAGE	11	19	0%	6%	26	0%	8%							
346	Ashanti West	BEKWAI	WATERWORKS	11	39	2%	9%	64	3%	14%							
347	Ashanti West	OBUASI	TUTUKA	11	200	3%	60%	270	5%	81%							
348	Ashanti West	OBUASI	FOMENA	11	270	15%	59%	365	20%	80%	A new feeder "Zongo" will be created from "Substation OBUASI" and it will release the load on	20 km					less than 7%
349	Ashanti West	OBUASI	STADIUM NEW	11	94	2%	28%	127	2%	38%							
350	Ashanti West	OBUASI	EDUBIASE	33	31	3%	7%	41	4%	9%							
351	Ashanti West	DUNKWA	DUNKWA	11	127	7%	56%	163	9%	72%	UPGRADE ALL 35SQMM Cu AND 16MM Cu TO 120 AAC.AND REPLACE 3X35 Cu WITH 3X185 AI XLPE	3.3 km 0.2 km 0.5 km	35mm <sup>2</sup> Cu 16mm <sup>2</sup> CU 3x185AI			2008	A SUBSTATION MUST BE BUILT ON THE ECG SIDE TO FACILITATE OPERATIONAL FLEXIBILITY
352	Ashanti East	MAIN C	NSUTA -KUMAWU	33	239	7%	45%	405	12%	76%	NEW SUBSTATIONS WILL BE CONSTRUCTED	2	FAWOADE AND ACHIASE				New substations "Achiasse" and "Fawoade" will be constructed by GEDAP in 2010.
353	Ashanti East	MAIN C	C 21	11	220	10%	48%	273	12%	60%	PART OF THE LOAD HAS BEEN TRANSFERRED TO NEW FEEDER from Substation F (KNUST).					2008	
354	Ashanti East	MAIN C	C 31	11	160	2%	48%	216	2%	64%							
355	Ashanti East	MAIN C	C 41	11	261	4%	78%	387	6%	116%	PART OF THE LOAD WILL BE TRANSFERRED TO NEW FEEDER FROM NEW SUBSTATION (KTI)					2008	
356	Ashanti East	MAIN C	C 51	11	168	5%	37%	302	9%	67%	PART OF THE LOAD WILL BE TRANSFERRED TO NEW FEEDER FROM NEW SUBSTATION (KTI)						
357	Ashanti East	MAIN C	C 61	11	253	4%	56%	318	5%	70%	PART OF THE LOAD WILL BE TRANSFERRED TO NEW FEEDER FROM NEW SUBSTATION (ACHIASE)					2010	
358	Ashanti East	MAIN C	AIRPORT 1	11	345	12%	76%	435	15%	96%	PART OF THE LOAD WILL BE TRANSFERRED TO NEW FEEDERS FROM NEW SUBSTATION (FAWOADE)		ACHIASE				
359	Ashanti East	MAIN C	AIRPORT 2	11	405	18%	89%	656	30%	144%	PART OF THE LOAD WILL BE TRANSFERRED TO NEW FEEDERS FROM NEW SUBSTATION (FAWOADE)					2010	

No	Office Name	Substation Name	Feeder Name	Voltage	2007			2017			Countermeasure						Remarks
					Maximum Demand (A)	Voltage Drop (%)	Current Loading	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Maximum Demand (A)	Voltage Drop (%)	Current Loading (%)	
360	Ashanti East	MAINE	E 21	11	273	8%	60%	301	9%	65%	PART OF THE LOAD WILL BE TRANSFERRED TO NEW FEEDERS FROM EXISTING STATION AND NEW SUBSTATION (FAWOADE)	SUAME AND FAWOADE				2008	Substation E : 2008. New substation "Fawoade" will be constructed by GEDAP in 2010.
361	Ashanti East	NSUTA	MAMPONG	11	121	17%	27%	138	19%	30%	UPGRADE 11KIM OF 16 SQMM Cu TO 120SQMM AAC	FROM GWCL S/S TO KROBO		8%	30%	2008	
362	Ashanti East	NSUTA	NSUTA	11	37	2%	8%	60	3%	13%							Installation of a capacitor bank to improve the voltage
363	Ashanti East	AGONA	KUMAWU	33	126	5%	28%	170	7%	37%							
364	Ashanti East	AGONA	NSUTA	33	203	8%	45%	274	11%	60%							Installation of a capacitor bank to improve the
365	Ashanti East	KONONGO	KONONGO	11	165	18%	36%	223	25%	49%							Installation of a capacitor bank to improve the
366	Ashanti East	KONONGO	AGOGO	11	95	15%	21%	128	21%	28%							Installation of a capacitor bank to improve the
367	Ashanti East	KONONGO	ODUMASI	11	75	14%	16%	101	19%	22%							Installation of a capacitor bank to improve the
368	Ashanti East	EFFIDUASE	EJISU	11	109	13%	24%	147	17%	32%							Installation of a capacitor bank to improve the
369	Ashanti East	EFFIDUASE	EFFIDUASE	11	72	2%	16%	97	2%	21%							
370	Ashanti East	KUMAWU	BODOMASE	11	19	1%	7%	25	1%	10%							
371	Ashanti East	KUMAWU	KUMAWU	11	16	1%	4%	21	1%	5%							

### Result of Power System Analysis of VRA-NED

No	Substation Name	Feeder Name	Feeder ID	Voltage (KV)	2007		2017		Countermeasure				Remarks				
					Maximum Demand	Voltage Drop (%)	Current Loading (%)	Maximum Demand (MVA)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity		Site	Voltage Drop (%)	Current Loading (%)	Year for Countermeasure
1	Sunyani	Sunyani - Berekum	27F1Y	34.5	11.48	9%	51%	17.57	19.3%	73.4%	Install capacitor bank at Berekum substation and upgrade conductor from 120mm <sup>2</sup> AAC to 200mm <sup>2</sup> AAC	3000 Kvar 43 km	Berekum Substation	3.0%	47%	2010	
2	Sunyani	Berekum - Drobo	BRYF1	34.5	3.33	16%	14%	7.16	32.7%	39.0%	Upgrade conductor size from 120sq mm Aluminium to 150 sq mm Aluminium.	40 Km	Entire Feeder	8.5%	20%	2009	
3	Sunyani	Berekum - Dormaa	BRYF2	34.5	3.47	15%	15%	5.46	26.6%	27.3%	Upgrade conductor size from 120sq mm Aluminium to 150 sq mm Aluminium.	31 Km	Entire Feeder	6.0%	15%	2009	
4	Sunyani	Berekum F1	BRBF1	11	1.74	37%	93%	2.11	84.3%	114.0%	Upgrade voltage to 34.5KV . Upgrade conductor size from 16sq mm Copper & 50 sq mm Aluminium to 240 sq mm Aluminium.	23 Km	Entire Feeder	8.3%	9%	2008	
5	Sunyani	Berekum F2	BRBF2	11	1.29	13%	27%	1.55	19.9%	36.8%	Upgrade conductor size from 50sq mm Aluminium to 100 sq mm Aluminium.	6 Km		8.0%	22%	2008	
6	Sunyani	Berekum F3	BRBF3	11	1.67	20%	71%	3.13	41.4%	68.2%	Upgrade conductor size from 16sq mm Copper & 50 sq mm Aluminium to 100 sq mm Aluminium.	8 Km	Entire Feeder	10.0%	35%	2008	
7	Sunyani	Sunyani - Mim	27FSY	34.5	7.63	12%	27%	12.00	29.5%	58.5%	Install capacitor bank at Mim switching substation	4000 Kvar	Mim substation	3.5%	39%	2010	Installing the capacitor bank at Mim will improve voltage on this
8	Sunyani	Mim/Goaso/Hwidien	MMF1Y	34.5	4.41	18%	21%	6.93	36.7%	43.5%				8.6%	31%		Installing the capacitor bank at Mim will improve voltage on this
9	Sunyani	Scanstyle	MMF2Y	34.5	0.96	12%	7%	2.46	30.5%	22.8%				4.3%	17%		Installing the capacitor bank at Mim will improve voltage on this
10	Sunyani	Ayum	MMF3Y	34.5	2.19	12%	9%	3.21	29.5%	16.8%				3.7%	12%		Installing the capacitor bank at Mim will improve voltage on this
11	Sunyani	Sunyani Bechem	27F4Y	34.5	3.44	2%	11%	5.42	5.4%	17.9%	No countermeasure			5.4%	17.9%		No activity is required
12	Sunyani	Sunyani F1	27F1B	11	0.22	0%	4%	0.35	0.1%	5.6%	No countermeasure			0.1%	5.6%		No activity is required
13	Sunyani	Sunyani F3	27F3B	11	2.63	29%	75%	3.74	22.2%	62.4%	Upgrade network to 34.5KV	20 Km	Entire Feeder	0.0%	16%	2008	
14	Sunyani	Sunyani F4	27F4B	11	0.90	0%	14%	1.40	1.6%	22.1%	No countermeasure						
15	Sunyani	Sunyani F7	27F7B	11	2.12	5%	29%	3.34	10.3%	57.3%	Upgrade section of feeder from 35 sq mm copper to 100 sq mm Aluminium	7 Km		7.0%	56%	2013	
16	Sunyani	Sunyani F8	27F8B	11	3.37	37%	117%	6.22	100.0%		Upgrade feeder to 34.5KV and conductor size to 100 sq mm Aluminium	24 Km	Part of Feeder	2.7%	26%	2008	
17	Sawla	Sawla - Damongo	38F4Y	34.5	0.71	0%	2%	1.02	1.4%	3.3%	No countermeasure						
18	Sawla	Sawla Township	38F5Y	34.5	0.23	0%	1%	0.33	0.0%	2.1%	No countermeasure						
19	Sawla	Sawla - Bole	38F3Y	34.5	0.49	0%	3%	0.71	0.0%	4.5%	No countermeasure						

No	Substation Name	Feeder Name	Feeder ID	Voltage (KV)	2007			2017			Countermeasure				Remarks			
					Maximum Demand (MVA)	Voltage Drop (%)	Current Loading (%)	Maximum Demand (MVA)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Voltage Drop (%)		Current Loading (%)	Year for Countermeasure	
20	Sawla	Sawla - Wa	38YF6	34.5	5.26	8%	20%	8.02	32.5%	46.1%	Install Capacitor bank	2000	KVar	Wa substation	7.0%	28%	2011	Installing the capacitor bank at Wa will improve voltage on this feeder
21	Sawla	Wa - Hamile	WAFY1	34.5	1.13	11%	4%	1.63	37.7%	8.1%					9.9%	6%		
22	Sawla	Wa Township 1	479BF1	11	1.42	11%	38%	2.24	45.7%	96.2%	upgrade take off to 185 XLPE and increase section of conductor from 50sq mm to 100sq mm	6	Km		8.8%	39%	2009	Assume capacitor bank installed at Wa
23	Sawla	Wa Township 2	479BF2	11	1.10	12%	25%	1.57	44.6%	57.4%	upgrade conductor from 100sq mm and 120 sq mm to 150 sq mm and increase section of conductor from 50sq mm to 100	12	Km	Entire Feeder	9.6%	17%	2010	Assume capacitor bank installed at Wa
24	Sawla	Wa Township 3	479BF3	11	1.61	10%	42%	2.58	41.7%	103.4%	upgrade take off to 185 XLPE and increase section of conductor from 50sq mm to 100	5	Km		7.7%	36%	2008	Assume capacitor bank installed at Wa
25	Yendi	Gushiegu	35F1Y	34.5	1.17	3%	4%	1.58	4.4%	5.1%	No countermeasure							
26	Yendi	Saboba	35F2Y	34.5	0.20	0%	1%	0.28	0.0%	0.9%	No countermeasure							
27	Yendi	Zabzugu	35F3Y	34.5	0.43	0%	1%	0.60	0.0%	1.9%	No countermeasure							
28	Yendi	Yendi Township	35F4Y	34.5	1.03	0%	12%	1.50	0.0%	9.5%	No countermeasure							
29	Yendi	Bimbilla	35F5Y	34.5	4.44	15%	37%	6.03	19.9%	32.0%	install booster station upgrade take off to 185 XLPE and increase section of conductor from 50sq mm (2km) and 120sq mm (9.6km) to	10	MVA	Bimbilla	0.0%	22%	2008	
30	Bolgatanga	BOLGA	29F1B	11	2.16	6%	47%	4.54	35.3%	113.2%	upgrade section of conductor from 50sq mm to 150 sq mm.	2	Km		15.3%		2010	
31	Bolgatanga	BOLGA	29F4B	11	2.79	29%	88%	4.27	100.0%	N/A	upgrade network to 34.5KV and increase section of conductor from 50sq mm to 150 sq mm.	20	Km	Entire Feeder	3.5%	22%	2008	Replaced to not 100mm2 AAC, but 150mm2
32	Bolgatanga	BOLGA	29F6B	11	2.03	12%	46%	4.22	26.4%	75.7%	upgrade voltage from 11kv to 34.5kv and increase section of conductor from 50sq mm to 150 sq mm.	8	Km	Entire Feeder	0.6%	18%	2009	Replaced to not 100mm2 AAC, but 150mm2
33	Bolgatanga	NAVROGO	29F2Y	34.5	4.04	0%	11%	8.66	1.0%	24.8%	No countermeasure				100.0%			
34	Bolgatanga	NAVROGO	NGBF1	11	0.37	0%	7%	0.79	1.6%	16.1%	No countermeasure				100.0%			
35	Bolgatanga	NAVROGO	NGBF2	11	0.64	0%	15%	1.38	5.8%	34.2%	No countermeasure				100.0%			
36	Bolgatanga	NAVROGO	NGBF3	11	0.55	0%	6%	1.18	8.0%	14.7%	No countermeasure				100.0%			
37	Bolgatanga	SANDEMA	NGFY1	34.5	0.48	0%	2%	1.04	2.0%	3.9%	No countermeasure				100.0%			
38	Bolgatanga	TUMU	NGF2Y	34.5	0.98	0%	3%	2.09	2.2%	6.8%	No countermeasure				100.0%			
39	Bolgatanga	PO	NGF3Y	34.5	0.43	0%	2%	0.91	1.6%	3.4%	No countermeasure				100.0%			
40	Bolgatanga	BAWKU	29F3Y	34.5	4.33	1%	19%	9.56	16%	67%	VRA has a plan to raise the voltage of the line from Bolgatanga to Bawku (from 34.5kv to 161kv) and to install the " Zebilla BSP". When this "Zahilla RSP" is constructed and annotated these							
41	Bolgatanga	BAWKU	BKBF1	11	1.61	3%	34%	3.09	30%	88%								
42	Bolgatanga	BAWKU	BKBF2	11	1.15	14%	29%	2.29	86%	196%								
43	Bolgatanga	BAWKU	BKYF1	34.5	1.45	1%	5%	2.63	17%	12%								
44	Bolgatanga	BAWKU	BKYF2	34.5	0.47	2%	2%	0.85	17%	4%								
45	Bolgatanga	WALEWALE	29F4Y	30	0.86	0%	3%	1.88	2%	8%	No countermeasure				100.0%			

No	Substation Name	Feeder Name	Feeder ID	Voltage (KV)	2007				2017				Countermeasure					Remarks
					Maximum Demand	Voltage Drop (%)	Current Loading (%)	Maximum Demand (MVA)	Voltage Drop (%)	Current Loading (%)	Countermeasure	Quantity	Site	Voltage Drop (%)	Current Loading (%)	Year for Countermeasure		
																	Year for Countermeasure	
46	Techiman	TECHIMAN *	26F1B	11	2.70	23%	71%	3.99	84.9%	346%	upgrade take off to 185 ALXPLE and increase conductor size from 50sq mm to 150 sq mm	0.2 Km	Entire Feeder	16.0%	55%	2008		
47	Techiman	TECHIMAN *	26F2B	11	1.93	6%	41%	2.86	13.0%	66%	Upgrade conductor from 50 sq. mm to 120sq. mm.	17 km	Entire Feeder	8.8%	41%	2013		
48	Techiman	AKOMADAN	26F3B	30	1.96	2%	9%	2.90	4.2%	14%	No countermeasure	30 Km	Entire Feeder	4.2%	14%			
49	Techiman	ATEBUBU	26F1Y	34.5	6.53	13%	27%	8.73	31.3%	43%	Upgrade line to 161KV network with a 161/34.5kv substation.	130 Km	Atebubu	0.0%		2011		
50	Techiman	WENCHI	26F2Y	34.5	2.33	0%	13%	3.45	3.5%	14%	No countermeasure							
51	Techiman	WENCHI	WHF2B	11	0.68	19%	15%	0.86	33.3%	26%	Upgrade section from 25 sq mm to 100 sq mm.	20 km		6.1%	12%	2008		
52	Techiman	WENCHI	WHF3B	11	0.48	6%	11%	0.71	8.0%	15%	No countermeasure							
53	Techiman	WENCHI	WHF1Y	34.5	0.85	4%	8%	1.26	6.1%	5%	No countermeasure							
54	Techiman	KINTAMPO	26F5Y	30	1.03	0%	3%	1.52	2.0%	5%	No countermeasure							
55	Tamale	TAMALE	28F2B	11	2.48	4%	39%	3.54	6.8%	60%	No countermeasure							
56	Tamale	TAMALE	28F3B	11	4.49	25%	64%	6.41	33.3%	89%	Upgrade voltage to 34.5KV . Upgrade section of conductor from 25sq mm Aluminium to 120 sq mm Aluminium.	12 Km		0.0%	22%	2008		
57	Tamale	TAMALE	28F4B	11	2.63	18%	50%	3.75	23.8%	77%	Upgrade feeder to 34.5KV .	24 Km	Entire Feeder	0.0%	23%	2009		
58	Tamale	TAMALE	28F6B	11	4.42	38%	65%	6.31	0.0%	N/A	Upgrade feeder to 34.5KV .	30 Km	Entire Feeder	0.3%	20%	2008		
59	Tamale	TAMALE	28F7B	11	2.51	9%	43%	3.58	11.0%	63%	Upgrade section of conductor from 100sq mm Aluminium to 240 sq mm Aluminium.	8 Km		9.4%	39%	2013		
60	Tamale	TAMALE	28F8B	11	2.61	18%	50%	3.73	25.6%	77%	Upgrade section of conductor from 100sq mm Aluminium to 240 sq mm Aluminium.	19 km		0.2%	23%	2009		
61	Tamale	TAMALE	28F9B	11	3.27	17%	66%	4.67	23.8%	94%	Upgrade feeder to 34.5KV .	20 Km	Entire Feeder	0.0%	23%	2010		
62	Tamale	TAMALE	28F10B	11	-	-	-	-	-	-								
63	Tamale	DALUN	28F1Y	34.5	4.51	0%	14%	6.44	3.2%	21%	No countermeasure							
64	Tamale	PONG-TAMALE	28F2Y	20	1.26	0%	5%	1.80	0.0%	7%	No countermeasure							
65	Tamale	BUIPE	28F5Y	30	0.93	0%	5%	1.33	0.0%	6%	No countermeasure							



NAME	DISTRICT	RegionName	LONG	LAT	Pop	Total kW	Company
Amponya	Adansi West	Ashanti	-1.62	6.39	696	18.25	ECG
Ahwiaa Sensanso	Afigya Sekyere	Ashanti	-1.57	6.75	603	15.81	ECG
Nwamase	Afigya Sekyere	Ashanti	-1.54	6.76	636	16.68	ECG
Adeesena	Afigya Sekyere	Ashanti	-1.51	6.76	894	23.45	ECG
Koniyaw	Amansie East	Ashanti	-1.45	6.40	1,542	40.44	ECG
Fereso No.2	Amansie East	Ashanti	-1.36	6.31	1,705	44.72	ECG
Fereso	Amansie East	Ashanti	-1.38	6.32	1,657	43.46	ECG
Hu	Amansie East	Ashanti	-1.87	6.21	772	20.25	ECG
Apitiso No.2	Amansie East	Ashanti	-1.72	6.17	1,390	36.46	ECG
Abanyasu Mile 14	Amansie East	Ashanti	-1.81	6.21	1,526	40.02	ECG
Fiankwa	Amansie East	Ashanti	-1.72	6.31	1,699	44.56	ECG
Nkuran	Bosomtwe Kwanwom	Ashanti	-1.67	6.65	835	21.90	ECG
Sape	Bosomtwe Kwanwom	Ashanti	-1.46	6.64	910	23.87	ECG
Twenuase	Bosomtwe Kwanwom	Ashanti	-1.62	6.54	1,265	33.18	ECG
Abanasi	Ejisu Juaben	Ashanti	-1.42	6.68	1,443	37.85	ECG
Abroma	Kwabre	Ashanti	-1.60	6.97	767	20.12	ECG
Soku	Kwabre	Ashanti	-1.62	6.97	897	23.53	ECG
Amoako	Kwabre	Ashanti	-1.61	6.94	1,335	35.01	ECG
Duasidan	Dormaa	Brong Ahafo	-2.92	7.22	846	13.77	NED
Agyeman Kurom	Dormaa	Brong Ahafo	-2.97	7.34	592	9.64	NED
Ntronan	Dormaa	Brong Ahafo	-2.75	7.13	2,332	61.16	ECG
Atuna	Drobo	Brong Ahafo	-2.82	7.50	2,167	35.28	NED
Gyengyemeregya	Jaman	Brong Ahafo	-2.72	7.64	1,090	17.75	NED
Kookuma	Nkoranza	Brong Ahafo	-1.77	7.82	1,250	20.35	NED
Kuntunso	Techiman	Brong Ahafo	-1.94	7.53	937	15.25	NED
Wurompo	Wenchi	Brong Ahafo	-2.07	7.78	718	11.69	NED
Akete	Wenchi	Brong Ahafo	-2.07	7.80	758	12.34	NED
Gyansoso	Wenchi	Brong Ahafo	-2.11	7.77	1,121	18.25	NED
Agyena Ti	Wenchi	Brong Ahafo	-1.90	7.81	1,513	24.63	NED
Rubber Lane Asedu	Abura Asebu Kwam	Central	-1.20	5.21	2,727	71.52	ECG
Kwaman	Agona	Central	-0.83	5.58	533	13.98	ECG
Kwansakrom	Agona	Central	-0.68	5.54	686	17.99	ECG
Amanful	Agona	Central	-0.72	5.59	859	22.53	ECG
Kwaaman	Agona	Central	-0.83	5.57	869	22.79	ECG
Abeadze	Ajumako Enyan Es	Central	-0.87	5.42	634	16.63	ECG
Afranse	Ajumako Enyan Es	Central	-0.75	5.52	2,573	67.48	ECG
Kwanyako	Ajumako Enyan Es	Central	-0.87	5.44	1,108	29.06	ECG
Esaaman	Ajumako Enyan Es	Central	-0.90	5.43	968	25.39	ECG
Osai Krodia	Awutu Effutu Sen	Central	-0.52	5.64	638	16.73	ECG
Topiase No.1 & 2	Awutu Effutu Sen	Central	-0.52	5.72	643	16.86	ECG
Ahenkromu	Awutu Effutu Sen	Central	-0.52	5.55	650	17.05	ECG
Kow Pobi Ayereso	Awutu Effutu Sen	Central	-0.52	5.61	777	20.38	ECG
Ofajator	Awutu Effutu Sen	Central	-0.52	5.66	784	20.56	ECG
Asaminaba	Awutu Effutu Sen	Central	-0.59	5.35	846	22.19	ECG
Bewuanum	Awutu Effutu Sen	Central	-0.56	5.64	892	23.39	ECG
Ofaada	Awutu Effutu Sen	Central	-0.54	5.72	937	24.57	ECG
Fianko	Awutu Effutu Sen	Central	-0.52	5.72	958	25.13	ECG
Ankaful	Cape Coast	Central	-1.30	5.14	569	14.92	ECG
Gomoa Dunkwa	Gomoa	Central	-0.82	5.41	865	22.69	ECG
Abrekum	Gomoa	Central	-0.71	5.30	739	19.38	ECG
Buduata	Gomoa	Central	-0.58	5.49	654	17.15	ECG
Fomena	Gomoa	Central	-0.80	5.50	716	18.78	ECG
Apeakwa Dabiso	Gomoa	Central	-0.86	5.46	746	19.57	ECG
Gomoa Asepanyin	Gomoa	Central	-0.87	5.36	798	20.93	ECG
Akyease	Gomoa	Central	-0.84	5.42	815	21.38	ECG
Gomoa Okwawu	Gomoa	Central	-0.79	5.47	890	23.34	ECG
Akropon I	Gomoa	Central	-0.80	5.44	897	23.53	ECG
Ayensuadze	Gomoa	Central	-0.66	5.47	926	24.29	ECG
Akropon	Gomoa	Central	-0.85	5.42	1,397	36.64	ECG
Akyiase	Gomoa	Central	-0.74	5.50	1,453	38.11	ECG
Gomoa Ekrofor	Gomoa	Central	-0.72	5.52	1,706	44.74	ECG
Ankamu	Gomoa	Central	-0.71	5.33	1,814	47.58	ECG
Ampenyi	Komenda Edina Eg	Central	-1.44	5.07	1,331	34.91	ECG
Abrem Ankase	Komenda Edina Eg	Central	-1.40	5.19	1,091	28.61	ECG
Buadukwae	Mfantsiman	Central	-0.85	5.29	588	15.42	ECG
Kromantse Bentsir	Mfantsiman	Central	-1.07	5.20	600	15.74	ECG
Aboano	Mfantsiman	Central	-0.84	5.21	646	16.94	ECG
Gyinakuma	Mfantsiman	Central	-0.92	5.32	667	17.49	ECG
Serafa Beach	Mfantsiman	Central	-0.85	5.21	856	22.45	ECG

NAME	DISTRICT	RegionName	LONG	LAT	Pop	Total kW	Company
Serafa Kokodo	Mfantsiman	Central	-0.84	5.22	1,692	44.38	ECG
Ekurofor	Mfantsiman	Central	-0.91	5.34	2,535	66.49	ECG
Nkwanta	Mfantsiman	Central	-1.24	5.14	941	24.68	ECG
Nwamaso	Twifo Hemang Low	Central	-1.65	5.69	1,281	33.60	ECG
Kayireku	Twifo Hemang Low	Central	-1.62	5.61	911	23.89	ECG
Nyenase Station	Twifo Hemang Low	Central	-1.59	5.60	932	24.44	ECG
Mampoma	Twifo Hemang Low	Central	-1.62	5.67	1,009	26.46	ECG
Ayaase	Twifo Hemang Low	Central	-1.70	5.74	912	23.92	ECG
Mmeaem	Twifo Hemang Low	Central	-1.37	5.30	612	16.05	ECG
Mokwaa Old Town	Twifo Hemang Low	Central	-1.59	5.71	618	16.21	ECG
Denkyira Foso	Twifo Hemang Low	Central	-1.64	5.70	633	16.60	ECG
Akweikrom	Twifo Hemang Low	Central	-1.27	5.30	777	20.38	ECG
Twifo Agona	Twifo Hemang Low	Central	-1.60	5.74	903	23.68	ECG
Bukuruso	Twifo Hemang Low	Central	-1.60	5.47	985	25.83	ECG
Oponso Kese-Nzema	Twifo Hemang Low	Central	-1.79	5.74	1,452	38.08	ECG
Odumase	Twifo Hemang Low	Central	-1.37	5.33	765	20.06	ECG
Buaben	Upper Denkyira	Central	-1.76	5.87	1,066	27.96	ECG
Esaase	Upper Denkyira	Central	-1.78	5.87	546	14.32	ECG
Sobroso	Upper Denkyira	Central	-1.77	5.88	552	14.48	ECG
Ayanfure Gyaman	Upper Denkyira	Central	-1.91	5.97	645	16.92	ECG
New Obuase	Upper Denkyira	Central	-2.04	6.09	1,277	33.49	ECG
Atekyem	Upper Denkyira	Central	-1.79	5.97	1,768	46.37	ECG
Diaso	Upper Denkyira	Central	-2.16	6.15	2,409	63.18	ECG
Ayanfuri	Upper Denkyira	Central	-1.89	5.96	2,646	69.40	ECG
Kiteasi	Akuapim South	Eastern	-0.19	5.81	782	20.51	ECG
Ahuntem Darmang	Akuapim South	Eastern	-0.39	5.82	928	24.34	ECG
Ahverase	Akuapim South	Eastern	-0.17	5.85	1,110	29.11	ECG
Ankwadobro	Akuapim South	Eastern	-0.34	5.77	1,169	30.66	ECG
Nsabaa	Akuapim South	Eastern	-0.22	5.66	1,231	32.29	ECG
Adamorobe	Akuapim South	Eastern	-0.14	5.82	1,334	34.99	ECG
Mame Dede	Birem North	Eastern	-0.43	5.80	752	19.72	ECG
Amanfro	Birem North	Eastern	-0.67	5.82	775	20.33	ECG
Kwasi Nyarko	Birem North	Eastern	-0.40	5.80	971	25.47	ECG
Topease	Birem North	Eastern	-0.68	5.87	1,121	29.40	ECG
Asuaba	Birem North	Eastern	-0.43	5.77	1,433	37.58	ECG
Oworam	Birem North	Eastern	-0.60	5.92	1,470	38.55	ECG
Ekoso	Birem North	Eastern	-0.72	5.88	1,834	48.10	ECG
Bunso	Birem North	Eastern	-0.67	5.93	2,159	56.62	ECG
Essam	Birem South	Eastern	-0.97	6.02	570	14.95	ECG
Tabita	Birem South	Eastern	-0.80	5.78	624	16.37	ECG
Suponso	Birem South	Eastern	-0.83	5.90	633	16.60	ECG
Osarase Railway Station	Birem South	Eastern	-0.92	5.80	727	19.07	ECG
Mmofra Mfa Adwen	Birem South	Eastern	-0.85	5.82	761	19.96	ECG
Osenho	Birem South	Eastern	-0.82	5.77	805	21.11	ECG
Potroase	East Akim	Eastern	-0.57	6.12	1,240	32.52	ECG
Ankaase	East Akim	Eastern	-0.50	6.38	809	21.22	ECG
Pempemso	Fanteakwa	Eastern	-0.32	6.31	598	15.68	ECG
Dome	Fanteakwa	Eastern	-0.44	6.35	2,699	70.79	ECG
Dokyi	Kwaebibirem	Eastern	-0.65	6.13	791	20.75	ECG
Akim Kwamang	Kwaebibirem	Eastern	-0.70	6.21	1,021	26.78	ECG
Kobiriso	Kwaebibirem	Eastern	-0.67	6.02	825	21.64	ECG
Larbikurom	Kwaebibirem	Eastern	-0.95	6.37	899	23.58	ECG
Akyem Abenaso Township	Kwaebibirem	Eastern	-0.75	6.22	946	24.81	ECG
Apesika	Kwahu South	Eastern	-0.58	6.48	566	14.84	ECG
Twewaa	Kwahu South	Eastern	-0.57	6.57	628	16.47	ECG
Sada	Kwahu South	Eastern	-0.71	6.73	638	16.73	ECG
Semboa	Kwahu South	Eastern	-0.60	6.72	639	16.76	ECG
Nkwantanan	Kwahu South	Eastern	-0.70	6.74	741	19.43	ECG
Oboyan No.2	Kwahu South	Eastern	-0.85	6.74	853	22.37	ECG
Hyewohuden	Kwahu South	Eastern	-0.66	6.82	896	23.50	ECG
Yaw Atta Amama	Kwahu South	Eastern	-0.71	6.66	995	26.10	ECG
Abetim Owerebease	Kwahu South	Eastern	-0.72	6.64	1,253	32.86	ECG
Dzaman	Manya Krobo	Eastern	-0.21	6.30	590	15.47	ECG
Dawa Tlim	Manya Krobo	Eastern	-0.22	6.30	637	16.71	ECG
Santowa	Manya Krobo	Eastern	-0.25	6.28	641	16.81	ECG
Sokwenya Sutapong	Manya Krobo	Eastern	-0.26	6.32	670	17.57	ECG
Nyankumase	Manya Krobo	Eastern	-0.24	6.37	682	17.89	ECG
Plekumaso Agbom	Manya Krobo	Eastern	-0.35	6.34	686	17.99	ECG
Fefe	Manya Krobo	Eastern	-0.22	6.42	723	18.96	ECG

NAME	DISTRICT	RegionName	LONG	LAT	Pop	Total kW	Company
Akotue Blorse	Manya Krobo	Eastern	-0.28	6.47	728	19.09	ECG
Akumesu Sisi	Manya Krobo	Eastern	-0.27	6.35	728	19.09	ECG
Tlawa	Manya Krobo	Eastern	-0.22	6.28	768	20.14	ECG
Takorase West	Manya Krobo	Eastern	-0.21	6.35	780	20.46	ECG
Bleponso	Manya Krobo	Eastern	-0.24	6.32	792	20.77	ECG
Wulapong	Manya Krobo	Eastern	-0.27	6.22	837	21.95	ECG
Kokone Abetina Dorsi	Manya Krobo	Eastern	-0.22	6.41	860	22.56	ECG
Osonson	Manya Krobo	Eastern	-0.22	6.31	881	23.11	ECG
Aiyersu	Manya Krobo	Eastern	-0.23	6.43	908	23.81	ECG
Abesle	Manya Krobo	Eastern	-0.23	6.43	1,166	30.58	ECG
Aketebuor	Manya Krobo	Eastern	-0.14	6.22	1,474	38.66	ECG
Kuano	Suhum Kraboa Coa	Eastern	-0.58	5.98	1,125	29.51	ECG
Kwaboanta	Suhum Kraboa Coa	Eastern	-0.57	5.90	1,195	31.34	ECG
Mfranor	Suhum Kraboa Coa	Eastern	-0.56	6.01	1,246	32.68	ECG
Akorabo	Suhum Kraboa Coa	Eastern	-0.35	6.02	1,507	39.52	ECG
Anum Apapam	Suhum Kraboa Coa	Eastern	-0.58	5.97	3,672	96.31	ECG
Fawotiri Kosie Ayesuano	Suhum Kraboa Coa	Eastern	-0.52	5.95	636	16.68	ECG
Adidi Nkatewanso	Suhum Kraboa Coa	Eastern	-0.37	6.07	652	17.10	ECG
Supresu	Suhum Kraboa Coa	Eastern	-0.33	6.03	655	17.18	ECG
Neefio	Suhum Kraboa Coa	Eastern	-0.46	6.06	666	17.47	ECG
Koransan Atebui	Suhum Kraboa Coa	Eastern	-0.32	6.02	700	18.36	ECG
Sowate	Suhum Kraboa Coa	Eastern	-0.57	5.98	719	18.86	ECG
Kwahia	Suhum Kraboa Coa	Eastern	-0.39	6.03	727	19.07	ECG
Trayo	Suhum Kraboa Coa	Eastern	-0.40	6.04	818	21.45	ECG
Ateibu	Suhum Kraboa Coa	Eastern	-0.52	6.05	865	22.69	ECG
Kukua	Suhum Kraboa Coa	Eastern	-0.35	6.02	886	23.24	ECG
Supreso No.2	Suhum Kraboa Coa	Eastern	-0.34	6.04	925	24.26	ECG
Santrama	Suhum Kraboa Coa	Eastern	-0.40	5.99	928	24.34	ECG
Amahia	Suhum Kraboa Coa	Eastern	-0.42	6.03	950	24.92	ECG
Abobiri No.1 & 2	Suhum Kraboa Coa	Eastern	-0.54	6.03	979	25.68	ECG
Nubensu Akyeansa	Suhum Kraboa Coa	Eastern	-0.58	6.02	992	26.02	ECG
Kromamen	Suhum Kraboa Coa	Eastern	-0.32	6.04	1,025	26.88	ECG
Aponapono	Suhum Kraboa Coa	Eastern	-0.53	6.05	1,197	31.39	ECG
Oboase	Suhum Kraboa Coa	Eastern	-0.58	6.08	1,202	31.53	ECG
Bong Densuso	Suhum Kraboa Coa	Eastern	-0.57	6.10	1,290	33.83	ECG
Abenabu	Suhum Kraboa Coa	Eastern	-0.42	6.02	1,588	41.65	ECG
Kofi Pare	Suhum Kraboa Coa	Eastern	-0.57	5.93	1,626	42.65	ECG
Prasokuma	West Akim	Eastern	-1.03	6.40	722	18.94	ECG
Sutri	Yilo Krobo	Eastern	-0.25	6.22	630	16.52	ECG
Opleyo	Yilo Krobo	Eastern	-0.12	6.19	694	18.20	ECG
Ominase	Yilo Krobo	Eastern	-0.27	6.20	705	18.49	ECG
Etwiso Otrompe	Yilo Krobo	Eastern	-0.23	6.10	788	20.67	ECG
Tsunya	Yilo Krobo	Eastern	-0.22	6.27	816	21.40	ECG
Tsremanteng Yoyim	Yilo Krobo	Eastern	-0.21	6.14	844	22.14	ECG
Trawa	Yilo Krobo	Eastern	-0.22	6.22	845	22.16	ECG
Sikaben	Yilo Krobo	Eastern	-0.15	6.17	864	22.66	ECG
Aboa Besease	Yilo Krobo	Eastern	-0.85	6.08	887	23.26	ECG
Oluahai	Yilo Krobo	Eastern	-0.20	6.27	1,033	27.09	ECG
Akwapim Yilor	Yilo Krobo	Eastern	-0.25	6.24	1,189	31.18	ECG
Tsremanteng Doguanor	Yilo Krobo	Eastern	-0.25	6.15	1,253	32.86	ECG
Bornya	Yilo Krobo	Eastern	-0.19	6.20	1,567	41.10	ECG
Anumle	Accra	Greater Accra	-0.21	5.63	807	21.17	ECG
Legon	Accra	Greater Accra	-0.18	5.65	910	23.87	ECG
South Legon	Accra	Greater Accra	-0.19	5.64	1,489	39.05	ECG
Green Hill	Accra	Greater Accra	-0.20	5.63	1,679	44.04	ECG
Achimota Police Station	Accra	Greater Accra	-0.23	5.63	1,834	48.10	ECG
Achimota Sec & Prim Sch.	Accra	Greater Accra	-0.23	5.63	2,723	71.42	ECG
Lotsobuer	Dangbe West	Greater Accra	0.20	5.80	634	16.63	ECG
Adentan	Ga	Greater Accra	-0.17	5.70	713	18.70	ECG
Ashiflao	Ga	Greater Accra	-0.48	5.70	720	18.88	ECG
Adenta No.1	Ga	Greater Accra	-0.18	5.75	820	21.51	ECG
Pokuase Agric. Quarters	Ga	Greater Accra	-0.27	5.68	857	22.48	ECG
Tokuse	Ga	Greater Accra	-0.38	5.55	881	23.11	ECG
Tsokome	Ga	Greater Accra	-0.33	5.50	1,020	26.75	ECG
C.F.C Quarters Dome	Ga	Greater Accra	-0.23	5.65	1,108	29.06	ECG
Christian	Ga	Greater Accra	-0.17	5.55	1,354	35.51	ECG
Atomic Energy Quarters	Ga	Greater Accra	-0.25	5.68	1,395	36.59	ECG
Adzen Kotoku	Ga	Greater Accra	-0.35	5.73	2,312	60.64	ECG
Kwashiman Bu	Ga	Greater Accra	-0.27	5.60	2,664	69.87	ECG

NAME	DISTRICT	RegionName	LONG	LAT	Pop	Total kW	Company
Saru	Bole	Northern	-2.65	9.50	778	12.67	NED
Vondiali	Bole	Northern	-2.55	9.58	792	12.89	NED
Kpuribayiri	Bole	Northern	-2.58	9.55	835	13.59	NED
Yerikori	Bole	Northern	-2.63	9.50	838	13.64	NED
Soma	Bole	Northern	-2.32	9.47	856	13.94	NED
Yipala	Bole	Northern	-2.42	9.58	967	15.74	NED
Ure	Bole	Northern	-2.63	9.57	1,002	16.31	NED
Tuna	Bole	Northern	-2.42	9.50	2,927	47.65	NED
Nyanga	Bole	Northern	-2.38	9.25	606	9.87	NED
Kong	Bole	Northern	-2.30	9.53	608	9.90	NED
Sanjeri	Bole	Northern	-2.54	9.43	618	10.06	NED
Kakwaise	Bole	Northern	-2.47	9.22	696	11.33	NED
Gbinyiri	Bole	Northern	-2.62	9.40	727	11.84	NED
Jentilpe	Bole	Northern	-2.35	9.23	735	11.97	NED
Fuu	East Gonja	Northern	-0.64	9.29	759	12.36	NED
Kpalisogu	Nanumba	Northern	-1.03	9.56	732	11.92	NED
Demon	Saboba Chereponi	Northern	0.22	9.52	959	15.61	NED
Kpalung	Savelugu Nanton	Northern	-0.79	9.70	609	9.91	NED
Fooshegu	Tamale	Northern	-0.87	9.33	755	12.29	NED
Gbanjon	Tolon Kumbungu	Northern	-1.10	9.47	1,030	16.77	NED
Kasuridaborshe	Tolon Kumbungu	Northern	-1.08	9.50	2,124	34.58	NED
Boggo	Tolon Kumbungu	Northern	-1.00	9.53	651	10.60	NED
Wambong	West Gonja	Northern	-1.06	9.34	649	10.57	NED
Tusaani	Yendi	Northern	-0.05	9.54	755	12.29	NED
Gnani	Yendi	Northern	0.18	9.37	807	13.14	NED
Tugu	Yendi	Northern	-0.62	9.39	852	13.87	NED
Gbungbalaga	Yendi	Northern	-0.02	9.38	1,490	24.26	NED
Adibo	Yendi	Northern	0.01	9.32	2,212	36.01	NED
Tidan	Zabugu Tatale	Northern	0.19	9.39	714	11.62	NED
Widana	Bawku East	Upper East	-0.02	11.06	776	12.63	NED
Kuka	Bawku East	Upper East	-0.02	11.01	711	11.58	NED
Nombokko	Bawku East	Upper East	-0.23	10.87	744	12.11	NED
Nware Koltamise	Bawku East	Upper East	-0.16	11.12	744	12.11	NED
Lalsaa	Bawku East	Upper East	-0.17	11.00	758	12.34	NED
Bakanga Zorsi	Bawku East	Upper East	-0.35	11.04	770	12.54	NED
Yarigungu	Bawku East	Upper East	-0.33	11.08	771	12.55	NED
Sugudi Part 2	Bawku East	Upper East	-0.09	11.07	798	12.99	NED
Kulok-Suugin	Bawku East	Upper East	-0.34	11.01	806	13.12	NED
Kugsabla	Bawku East	Upper East	-0.12	10.90	899	14.64	NED
Tempelim	Bawku East	Upper East	-0.29	11.02	925	15.06	NED
Gumakutari	Bawku East	Upper East	-0.25	11.15	952	15.50	NED
Tansia Market	Bawku East	Upper East	-0.33	10.92	965	15.71	NED
Zoogo	Bawku East	Upper East	-0.33	10.99	988	16.08	NED
Sapelliga Kare	Bawku East	Upper East	-0.40	11.09	1,009	16.43	NED
Pialoko	Bawku East	Upper East	-0.12	11.05	1,104	17.97	NED
Bimpiela	Bawku East	Upper East	-0.03	11.08	1,159	18.87	NED
Zambala West	Bawku East	Upper East	-0.10	10.95	1,171	19.06	NED
Tarivago	Bawku East	Upper East	-0.06	11.02	1,208	19.67	NED
Baribari	Bawku East	Upper East	-0.25	11.12	1,211	19.72	NED
Sugudi Part 1	Bawku East	Upper East	-0.10	11.07	1,211	19.72	NED
Zambala East	Bawku East	Upper East	-0.10	10.95	1,289	20.99	NED
Mandago	Bawku East	Upper East	-0.09	11.08	1,352	22.01	NED
Taraganga	Bawku East	Upper East	-0.15	10.93	1,394	22.69	NED
Aniisi	Bawku East	Upper East	-0.25	10.95	1,634	26.60	NED
Karatesi	Bawku East	Upper East	-0.08	10.93	1,671	27.20	NED
Sabzundi	Bawku East	Upper East	-0.05	11.00	2,053	33.42	NED
Ninkogo	Bawku East	Upper East	-0.17	11.08	2,425	39.48	NED
Susudi	Bawku East	Upper East	-0.10	11.00	577	9.39	NED
Dabia	Bawku East	Upper East	-0.13	11.01	586	9.54	NED
Deega	Bawku East	Upper East	-0.02	11.04	588	9.57	NED
Sarabogo Central	Bawku East	Upper East	-0.17	11.06	618	10.06	NED
Kpatua	Bawku East	Upper East	-0.24	10.87	630	10.26	NED
Adukgbal	Bawku East	Upper East	-0.07	10.95	633	10.31	NED
Yarega	Bawku East	Upper East	-0.04	11.08	633	10.31	NED
Kpalewege Chiefs House	Bawku East	Upper East	-0.30	11.01	634	10.32	NED
Zoabuliga West	Bawku East	Upper East	-0.16	11.04	637	10.37	NED
Nakambo	Bawku East	Upper East	-0.09	11.03	645	10.50	NED
Nakum	Bawku East	Upper East	-0.88	11.02	650	10.58	NED
Benguri	Bawku East	Upper East	-0.12	10.99	659	10.73	NED

NAME	DISTRICT	RegionName	LONG	LAT	Pop	Total kW	Company
Sapeliga Part Tegbila	Bawku East	Upper East	-0.30	11.02	680	11.07	NED
Bulugu	Bawku East	Upper East	-0.20	11.10	681	11.09	NED
Narango Boko	Bawku East	Upper East	-0.27	10.95	683	11.12	NED
Gumyoko Zawgo	Bawku East	Upper East	-0.33	10.97	690	11.23	NED
Nyorugu Part	Bawku East	Upper East	-0.29	11.02	697	11.35	NED
Sapelliga Bugula	Bawku East	Upper East	-0.40	11.10	713	11.61	NED
Salipiga	Bawku East	Upper East	-0.40	11.09	714	11.62	NED
Bugri Natinga West	Bawku East	Upper East	-0.14	10.97	717	11.67	NED
Sapeliga Natinga Part	Bawku East	Upper East	-0.35	10.97	719	11.71	NED
Wempsi Bugri	Bawku East	Upper East	-0.14	10.98	719	11.71	NED
Bugri Natinga East	Bawku East	Upper East	-0.14	10.97	728	11.85	NED
Kulok-Tengiri	Bawku East	Upper East	-0.34	11.01	737	12.00	NED
Zoabuliga East	Bawku East	Upper East	-0.16	11.04	738	12.01	NED
Aniago	Bawku West	Upper East	-0.42	10.94	920	14.98	NED
Kansorgo	Bawku West	Upper East	-0.42	11.02	1,044	17.00	NED
Shiega Namolgo Part	Bawku West	Upper East	-0.72	10.72	1,116	18.17	NED
Gunga	Bawku West	Upper East	-0.47	11.03	608	9.90	NED
Sekoti Benzure	Bolgatanga	Upper East	-0.62	10.79	739	12.03	NED
Gari Logri	Bolgatanga	Upper East	-0.70	10.75	741	12.06	NED
Kumbosigo	Bolgatanga	Upper East	-0.82	10.80	743	12.10	NED
Tongo Nayire Puhug	Bolgatanga	Upper East	-0.81	10.71	747	12.16	NED
Gorogo Gorzuure	Bolgatanga	Upper East	-0.82	10.70	753	12.26	NED
Balungu Gatorisi Part 2	Bolgatanga	Upper East	-0.86	10.95	757	12.32	NED
Yikene Nayirekura	Bolgatanga	Upper East	-0.89	10.97	761	12.39	NED
Yinduri	Bolgatanga	Upper East	-0.82	10.65	775	12.62	NED
Zuarungu Konkoo	Bolgatanga	Upper East	-0.80	10.79	816	13.28	NED
Yikine	Bolgatanga	Upper East	-0.88	10.77	831	13.53	NED
Sumbrungo Woebongo	Bolgatanga	Upper East	-0.93	10.82	838	13.64	NED
Gambrungo Azaabisi Part 2	Bolgatanga	Upper East	-0.90	10.90	904	14.72	NED
Baare Sapari	Bolgatanga	Upper East	-0.80	10.72	906	14.75	NED
Winkogo Gorogu	Bolgatanga	Upper East	-0.83	10.70	927	15.09	NED
Dusi Gari	Bolgatanga	Upper East	-0.67	10.77	935	15.22	NED
Baare Lakum	Bolgatanga	Upper East	-0.80	10.73	976	15.89	NED
Aseamabi	Bolgatanga	Upper East	-0.71	10.77	1,008	16.41	NED
Yameriga	Bolgatanga	Upper East	-0.74	10.72	1,019	16.59	NED
Dusi Nayiri	Bolgatanga	Upper East	-0.69	10.77	1,028	16.74	NED
Yorogo Abangabisi	Bolgatanga	Upper East	-0.82	10.85	1,029	16.75	NED
Bulugo Yipala	Bolgatanga	Upper East	-0.81	10.82	1,058	17.22	NED
Gambibigo Asantanbisi	Bolgatanga	Upper East	-0.83	10.76	1,077	17.53	NED
Sherigu Nyokuku	Bolgatanga	Upper East	-0.90	10.77	1,100	17.91	NED
Azuabisi Gambibigo	Bolgatanga	Upper East	-0.82	10.76	1,135	18.48	NED
Amogribisi	Bolgatanga	Upper East	-0.92	10.80	1,175	19.13	NED
Winkogo Abokobisi	Bolgatanga	Upper East	-0.87	10.72	1,222	19.89	NED
Kpatia	Bolgatanga	Upper East	-0.75	10.74	1,226	19.96	NED
Shia Main	Bolgatanga	Upper East	-0.84	10.67	1,253	20.40	NED
Zaare Ayorogobisi	Bolgatanga	Upper East	-0.86	10.82	1,294	21.07	NED
Gorogo Ykpemike	Bolgatanga	Upper East	-0.82	10.70	1,339	21.80	NED
Yagzore	Bolgatanga	Upper East	-0.77	10.75	1,350	21.98	NED
Tongo Wakii	Bolgatanga	Upper East	-0.80	10.70	1,489	24.24	NED
Nyogbare	Bolgatanga	Upper East	-0.62	10.77	1,526	24.84	NED
Zuarungu Moshie	Bolgatanga	Upper East	-0.79	10.80	1,649	26.85	NED
Zuarungu Katanga	Bolgatanga	Upper East	-0.81	10.78	1,766	28.75	NED
Dachiu	Bolgatanga	Upper East	-0.80	10.82	2,237	36.42	NED
Apuungu	Bolgatanga	Upper East	-0.80	10.84	631	10.27	NED
Zaare Akusiabisi	Bolgatanga	Upper East	-0.86	10.82	643	10.47	NED
Datuku Nayire	Bolgatanga	Upper East	-0.63	10.70	652	10.61	NED
Veas Asoranabisi	Bolgatanga	Upper East	-0.85	10.87	664	10.81	NED
Duusi Bugban Part	Bolgatanga	Upper East	-0.68	10.77	680	11.07	NED
Amonobisi Yarigabisi Part	Bolgatanga	Upper East	-0.81	10.79	698	11.36	NED
Atongobisi Gambibigo	Bolgatanga	Upper East	-0.82	10.76	699	11.38	NED
Baare Tengre	Bolgatanga	Upper East	-0.79	10.72	700	11.40	NED
Yikene Asobisi	Bolgatanga	Upper East	-0.88	10.95	701	11.41	NED
Sumbrungo Agusi Part 1	Bolgatanga	Upper East	-0.92	10.86	727	11.84	NED
Nangodi Nakpaliga No.2	Bolgatanga	Upper East	-0.67	10.87	729	11.87	NED
Amogribisi Part	Bolgatanga	Upper East	-0.95	10.80	734	11.95	NED
Gbanbigo	Bolgatanga	Upper East	-0.77	10.72	738	12.01	NED
Samboligu Bungu	Bongo	Upper East	-0.87	10.96	757	12.32	NED
Veas Gunga	Bongo	Upper East	-0.86	10.87	781	12.71	NED
Zoko Atanshieka	Bongo	Upper East	-0.94	10.92	799	13.01	NED

NAME	DISTRICT	RegionName	LONG	LAT	Pop	Total kW	Company
Zoko Kodorogo Part 3	Bongo	Upper East	-0.90	10.91	802	13.06	NED
Kabre Soe	Bongo	Upper East	-0.77	10.93	865	14.08	NED
Feo Nabisi Part	Bongo	Upper East	-0.86	10.94	915	14.90	NED
Zoko Kodorogo	Bongo	Upper East	-0.88	10.95	922	15.01	NED
Balungu Tongonabisi Part	Bongo	Upper East	-0.88	10.92	924	15.04	NED
Kinkua	Bongo	Upper East	-0.93	10.77	946	15.40	NED
Zoko Kango	Bongo	Upper East	-0.89	10.93	980	15.95	NED
Feo Nabisi	Bongo	Upper East	-0.82	10.99	1,366	22.24	NED
Kasingo	Bongo	Upper East	-1.07	10.95	594	9.67	NED
Balungu Nabisi Part 4	Bongo	Upper East	-0.82	10.92	616	10.03	NED
Bogorogo	Bongo	Upper East	-0.75	10.87	622	10.13	NED
Kadare Part	Bongo	Upper East	-0.89	10.95	644	10.48	NED
Dua Apuwong	Bongo	Upper East	-0.77	10.84	654	10.65	NED
Zoko-Kadare	Bongo	Upper East	-0.90	10.95	679	11.05	NED
Veal Kulpeliga	Bongo	Upper East	-0.86	10.87	718	11.69	NED
Gurogo	Bongo	Upper East	-0.99	10.92	722	11.75	NED
Samboligu Kansoe	Bongo	Upper East	-0.85	10.97	728	11.85	NED
Boko Akumbelimbisi	Bongo	Upper East	-0.83	10.97	738	12.01	NED
Namonsa	Builsa	Upper East	-1.00	10.79	891	14.51	NED
Chuchuiliga Nawaasa	Builsa	Upper East	-1.19	10.81	955	15.55	NED
Chondema	Builsa	Upper East	-1.16	10.77	546	8.89	NED
Azugyeri	Builsa	Upper East	-1.18	10.84	623	10.14	NED
Tiedema Part	Builsa	Upper East	-1.21	10.80	641	10.44	NED
Jaata	Builsa	Upper East	-1.19	10.80	650	10.58	NED
Chuchuliga Nanjopiung	Builsa	Upper East	-1.17	10.81	670	10.91	NED
Akuteyeri	Builsa	Upper East	-1.15	10.80	723	11.77	NED
Kadina Part	Kassena Nankana	Upper East	-1.32	10.95	743	12.10	NED
Kayilo	Kassena Nankana	Upper East	-1.32	10.97	746	12.14	NED
Sirigu Gerebesi	Kassena Nankana	Upper East	-0.92	10.94	756	12.31	NED
Kassaningo	Kassena Nankana	Upper East	-1.00	10.92	775	12.62	NED
Kandiga Atiyoro	Kassena Nankana	Upper East	-0.97	10.90	825	13.43	NED
Nyangania	Kassena Nankana	Upper East	-1.19	10.82	839	13.66	NED
Yuwa Afarigabisi	Kassena Nankana	Upper East	-0.92	11.00	846	13.77	NED
Manyaro South Dombise	Kassena Nankana	Upper East	-0.98	10.96	864	14.07	NED
Yidania	Kassena Nankana	Upper East	-1.29	10.85	871	14.18	NED
Mirigu Achobisi Part	Kassena Nankana	Upper East	-0.99	10.92	879	14.31	NED
Kulebngu	Kassena Nankana	Upper East	-1.08	10.75	897	14.60	NED
Nayiri Kologu	Kassena Nankana	Upper East	-1.07	10.74	947	15.42	NED
Sirigu Basengo	Kassena Nankana	Upper East	-0.93	10.95	970	15.79	NED
Gwenia	Kassena Nankana	Upper East	-1.22	10.84	975	15.87	NED
Badung	Kassena Nankana	Upper East	-1.04	10.97	995	16.20	NED
Manyaro North	Kassena Nankana	Upper East	-0.99	10.95	996	16.21	NED
Anawhinia	Kassena Nankana	Upper East	-1.32	10.92	1,001	16.30	NED
Wombio	Kassena Nankana	Upper East	-1.30	10.92	1,003	16.33	NED
Kandiga Kurugu	Kassena Nankana	Upper East	-0.93	10.88	1,035	16.85	NED
Chania Kalevio Abuenia	Kassena Nankana	Upper East	-1.09	10.99	1,035	16.85	NED
Gaane	Kassena Nankana	Upper East	-1.07	10.84	1,068	17.39	NED
Vonania Anarabisi	Kassena Nankana	Upper East	-1.07	10.85	1,092	17.78	NED
Manyaro	Kassena Nankana	Upper East	-0.98	10.96	1,159	18.87	NED
Atibabisi Kandiga	Kassena Nankana	Upper East	-0.97	10.90	1,172	19.08	NED
Navio Primary School	Kassena Nankana	Upper East	-1.05	10.97	1,180	19.21	NED
Gwenia Worania Part	Kassena Nankana	Upper East	-1.30	10.84	1,195	19.45	NED
Kaluogugoro	Kassena Nankana	Upper East	-1.30	10.92	1,242	20.22	NED
Punyaroo	Kassena Nankana	Upper East	-1.06	10.91	1,273	20.72	NED
Sirigugunwoko	Kassena Nankana	Upper East	-0.93	10.95	1,317	21.44	NED
Mirigu Achobisi	Kassena Nankana	Upper East	-0.98	10.92	1,322	21.52	NED
Nakolo	Kassena Nankana	Upper East	-1.05	10.99	1,327	21.60	NED

NAME	DISTRICT	RegionName	LONG	LAT	Pop	Total kW	Company
Janania	Kassena Nankana	Upper East	-1.07	10.86	1,344	21.88	NED
Nabango	Kassena Nankana	Upper East	-0.97	10.93	1,462	23.80	NED
Telania	Kassena Nankana	Upper East	-1.06	10.92	1,481	24.11	NED
Kanania	Kassena Nankana	Upper East	-1.32	10.94	1,662	27.06	NED
Badania	Kassena Nankana	Upper East	-1.08	10.87	1,694	27.58	NED
Asunia	Kassena Nankana	Upper East	-1.26	10.86	1,944	31.65	NED
Bonia	Kassena Nankana	Upper East	-1.12	10.87	1,961	31.93	NED
Mirigu Wolongo	Kassena Nankana	Upper East	-0.98	10.92	600	9.77	NED
Kasanongo	Kassena Nankana	Upper East	-1.00	10.90	614	10.00	NED
Abilu	Kassena Nankana	Upper East	-1.20	10.83	622	10.13	NED
Kalevio Aboenia Part	Kassena Nankana	Upper East	-1.26	10.84	645	10.50	NED
Mirigu Gonnem	Kassena Nankana	Upper East	-0.99	10.92	649	10.57	NED
Sirigu Basiego	Kassena Nankana	Upper East	-0.94	10.97	655	10.66	NED
Kumbusigo Part	Kassena Nankana	Upper East	-0.95	10.87	666	10.84	NED
Sirigu Basiengo Part	Kassena Nankana	Upper East	-0.94	10.95	677	11.02	NED
Ziasa Bui	Kassena Nankana	Upper East	-1.11	10.77	689	11.22	NED
Kozigo	Kassena Nankana	Upper East	-1.05	10.95	696	11.33	NED
Kungabnia	Kassena Nankana	Upper East	-1.03	10.84	696	11.33	NED
Yuwa Gingirigo	Kassena Nankana	Upper East	-0.88	10.97	704	11.46	NED
Sabisi	Kassena Nankana	Upper East	-0.97	10.97	714	11.62	NED
Natugnia Hyogsi	Kassena Nankana	Upper East	-0.96	10.99	723	11.77	NED
Sirigu Busongo	Kassena Nankana	Upper East	-0.94	10.99	733	11.93	NED
Abulo Part	Kassena Nankana	Upper East	-1.22	10.82	733	11.93	NED
Mengwe	Wa	Upper West	-2.32	9.98	1,591	25.90	NED
Sing	Wa	Upper West	-2.44	9.99	744	12.11	NED
Woliyiri	Wa	Upper West	-2.52	9.83	781	12.71	NED
Dariguoyiri	Wa	Upper West	-2.52	9.95	792	12.89	NED
Baayiri	Wa	Upper West	-2.31	10.20	840	13.68	NED
Kandiew	Wa	Upper West	-2.63	9.90	849	13.82	NED
Chegli	Wa	Upper West	-2.45	10.12	860	14.00	NED
Jingu	Wa	Upper West	-2.58	10.07	861	14.02	NED
Bankpama	Wa	Upper West	-2.72	9.92	864	14.07	NED
Pirisi	Wa	Upper West	-2.45	10.10	1,084	17.65	NED
Pisi	Wa	Upper West	-2.68	9.97	1,184	19.28	NED
Buli	Wa	Upper West	-2.57	9.85	1,456	23.70	NED
Kpongu	Wa	Upper West	-2.52	10.00	1,713	27.89	NED
Tanina	Wa	Upper West	-2.47	9.89	1,909	31.08	NED
Berenyasia	Wa	Upper West	-2.65	9.92	639	10.40	NED
Chansa	Wa	Upper West	-2.57	10.00	678	11.04	NED
Janbusi	Wa	Upper West	-2.71	10.02	729	11.87	NED
Kudawukope	Akatsi	Volta	1.17	6.10	712	18.67	ECG
Viepe Adom	Akatsi	Volta	1.16	6.10	1,556	40.81	ECG
Odomiabra	Ho	Volta	0.53	6.70	825	21.64	ECG
Havekope	Ho	Volta	1.13	6.12	1,049	27.51	ECG
Avenui	Ho	Volta	0.31	6.59	1,705	44.72	ECG
Woti	Hohoe	Volta	0.54	7.02	725	19.01	ECG
Afegame	Hohoe	Volta	0.59	7.13	1,081	28.35	ECG
Vodza	Keta	Volta	1.00	5.94	856	22.45	ECG
Keta-Kedzi	Keta	Volta	1.02	5.97	2,652	69.55	ECG
Agorvi	Ketu	Volta	0.97	6.19	629	16.50	ECG
Kpoglu	Ketu	Volta	1.07	6.17	684	17.94	ECG
Ehi-Horme	Ketu	Volta	0.96	6.15	841	22.06	ECG
Mafi Sasekpe	North Tongu	Volta	0.54	6.22	1,250	32.78	ECG
Adidome	North Tongu	Volta	0.50	6.08	4,836	126.83	ECG
Drakope	North Tongu	Volta	0.46	6.14	960	25.18	ECG
Biakokrom	Ahanta West	Western	-1.91	4.89	777	20.38	ECG
Ampemkrom	Bibiani Anhwiaso	Western	-2.29	6.20	754	19.78	ECG
Salman	Nzema East	Western	-2.22	5.02	926	24.29	ECG
Anibil	Nzema East	Western	-2.17	5.00	672	17.62	ECG
Kukoavile	Nzema East	Western	-2.17	4.97	753	19.75	ECG
Banso	Nzema East	Western	-2.07	5.13	1,075	28.19	ECG
Nyame Bekyere No.1	Wassa Amenfi	Western	-2.20	5.56	651	17.07	ECG
Old Dawurampon	Wassa Amenfi	Western	-2.03	5.70	717	18.80	ECG
Suhienso	Wassa Amenfi	Western	-1.98	5.75	976	25.60	ECG
Dumama	Wassa West	Western	-1.58	5.37	559	14.66	ECG
Saponso No.2	Wassa West	Western	-1.65	5.57	560	14.69	ECG
Bonsaso Atakora Krom	Wassa West	Western	-2.01	5.19	625	16.39	ECG
Sekyere Heman	Wassa West	Western	-1.57	5.18	745	19.54	ECG
New Kedadwen	Wassa West	Western	-2.08	5.03	747	19.59	ECG

Village Demand (from MOE RE list)

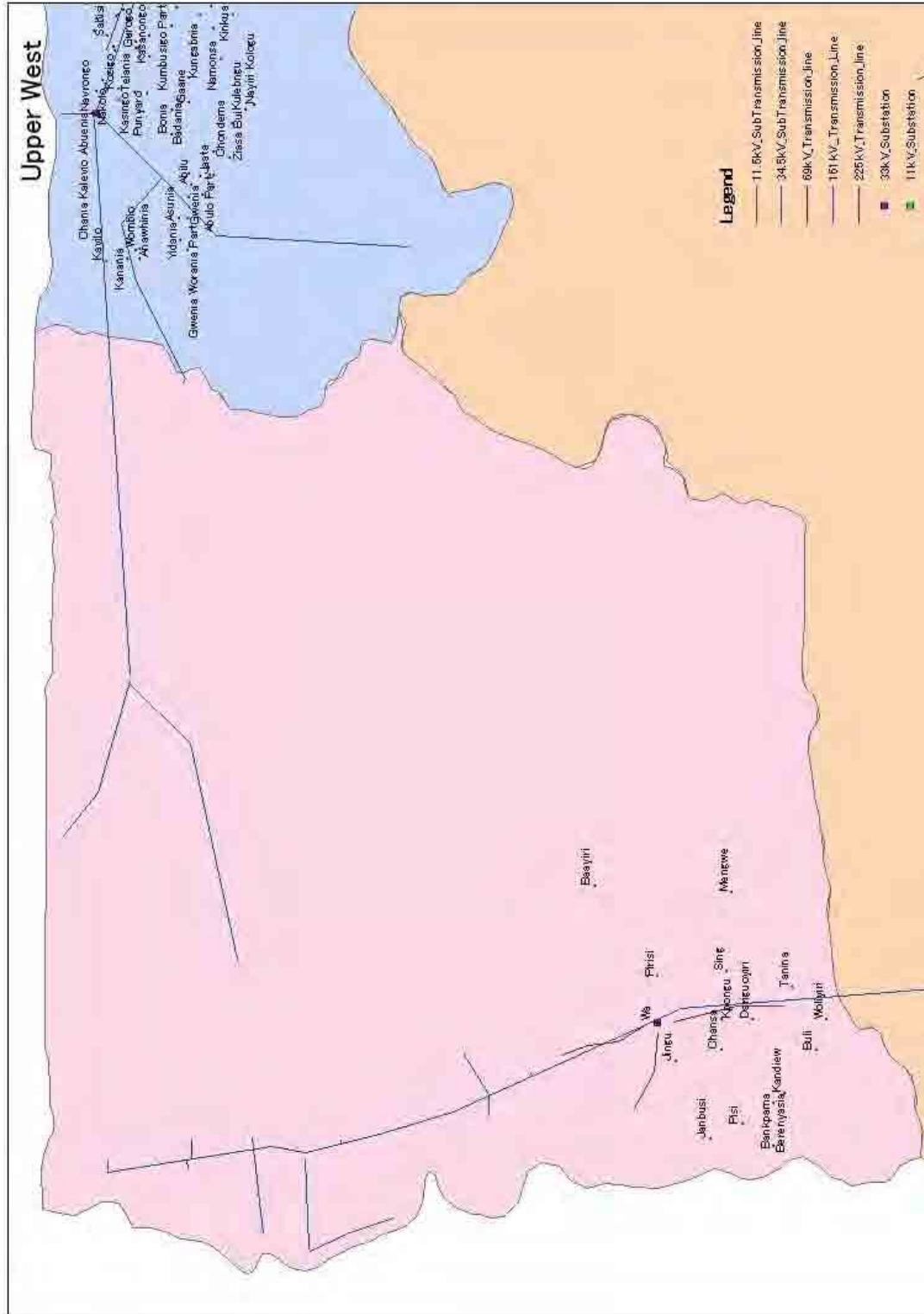
Appendix 4.2.6

NAME	DISTRICT	RegionName	LONG	LAT	Pop	Total kW	Company
Adansi	Wassa West	Western	-1.77	5.12	907	23.79	ECG
Huniiso	Wassa West	Western	-2.07	5.38	1,334	34.99	ECG

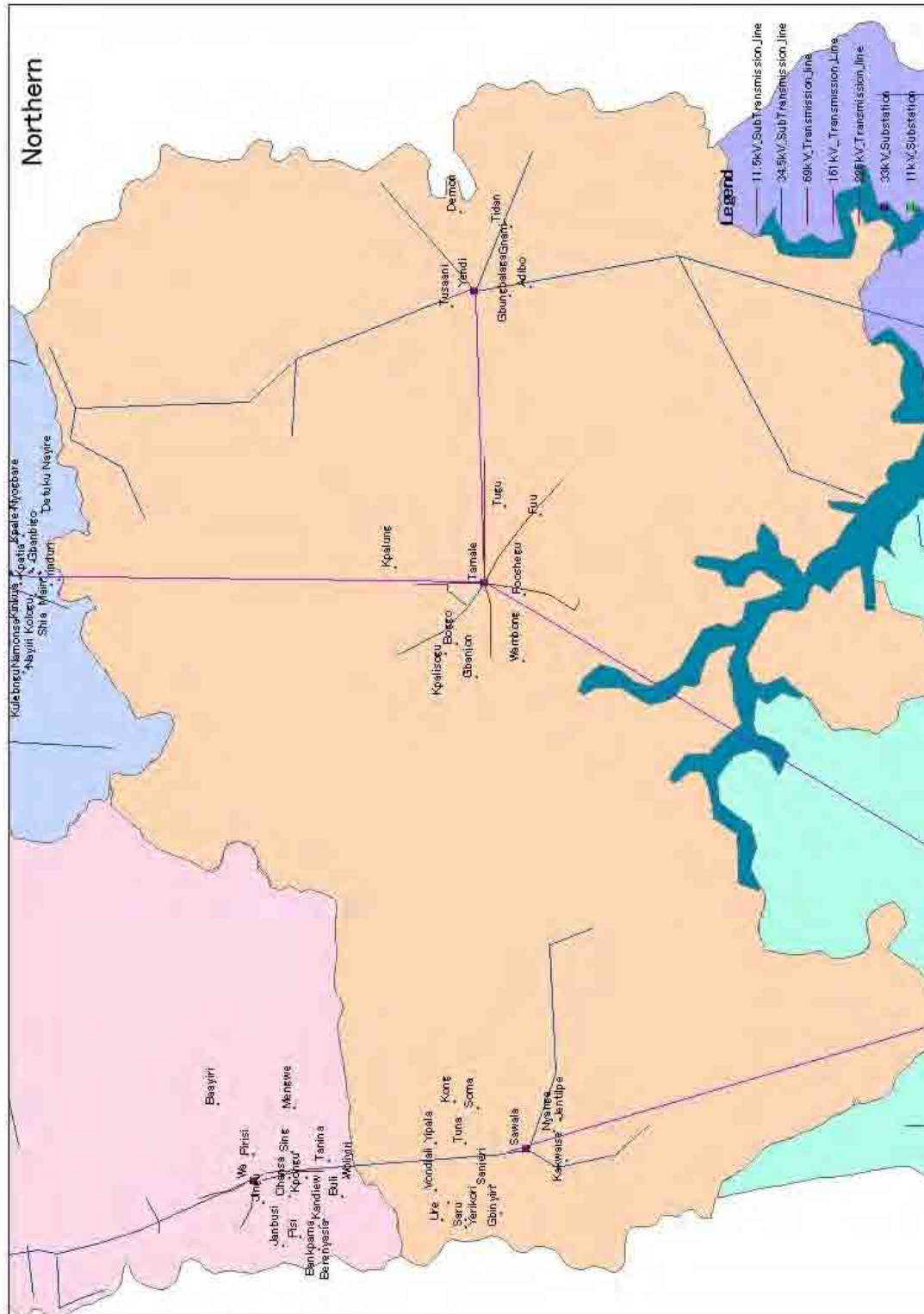




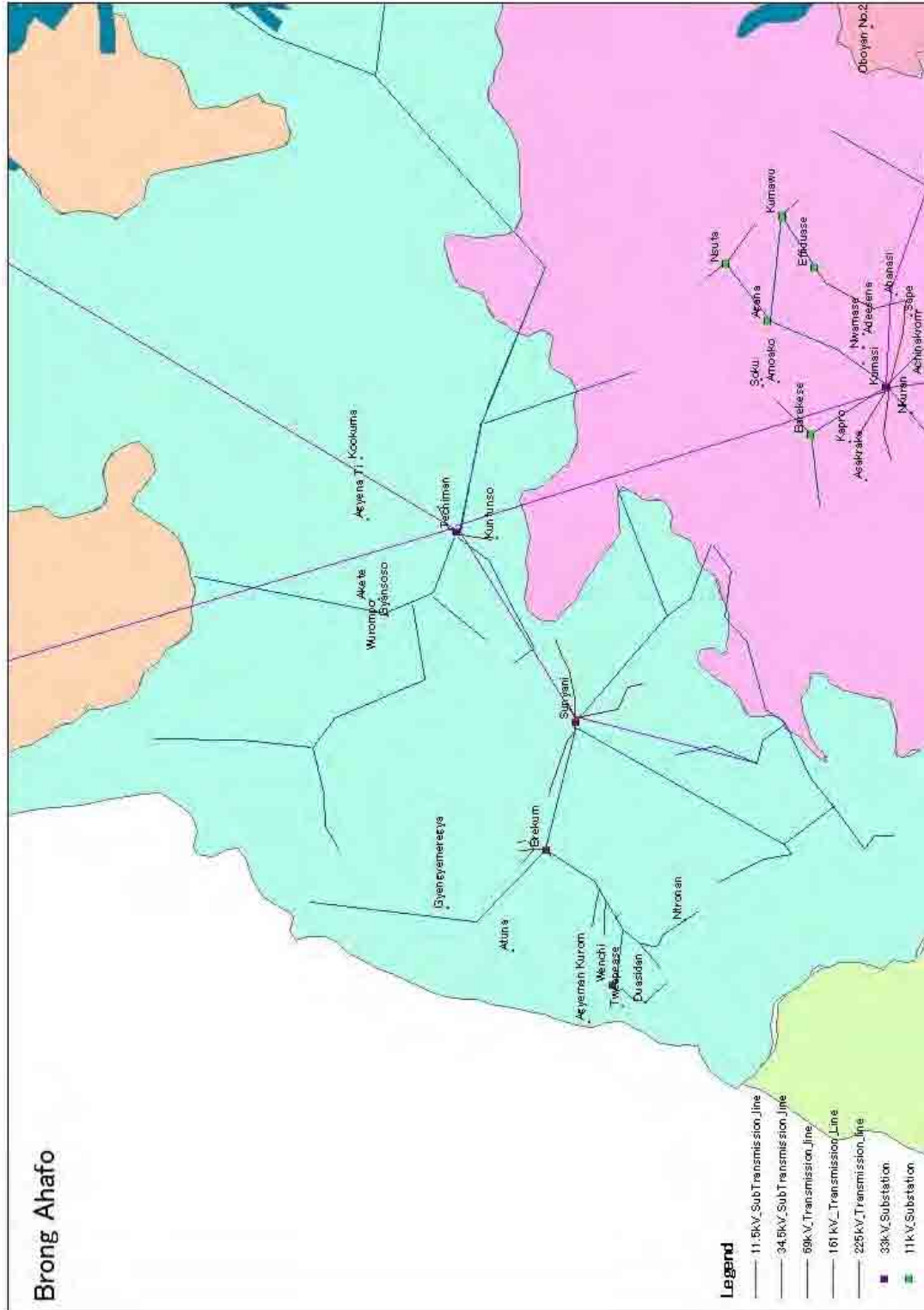
# Upper West



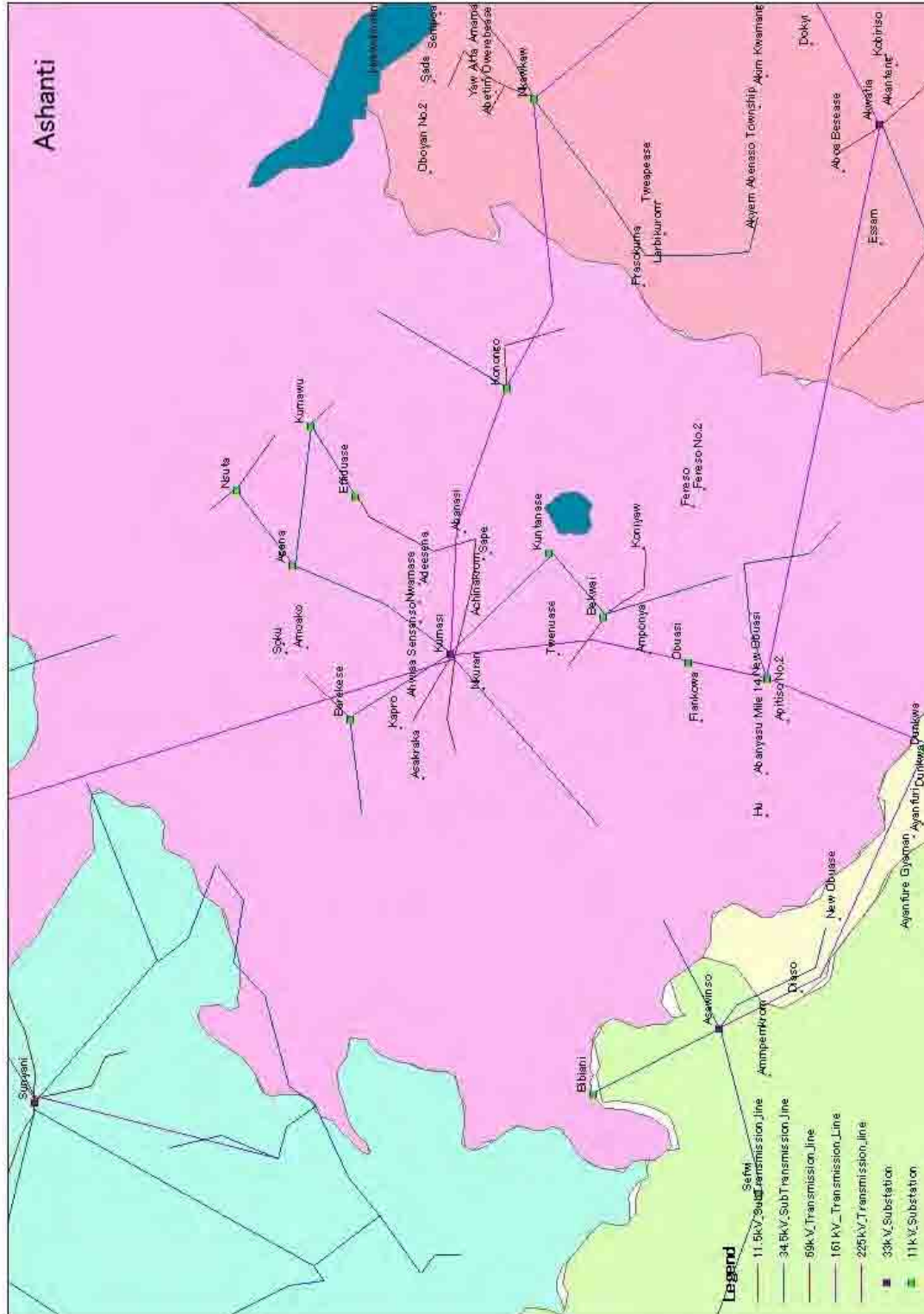
# Northern



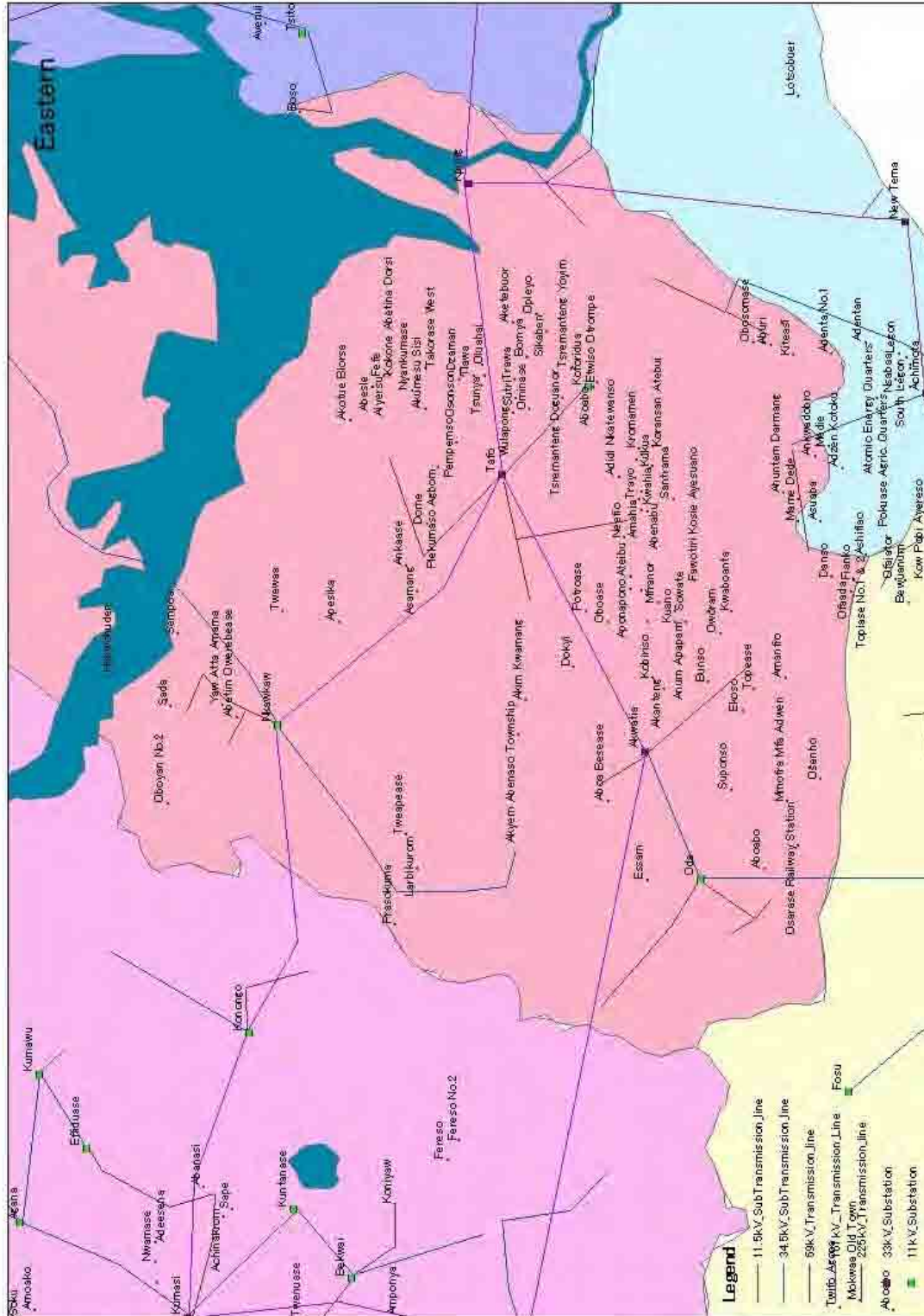
## Brong Ahafo



# Ashanti

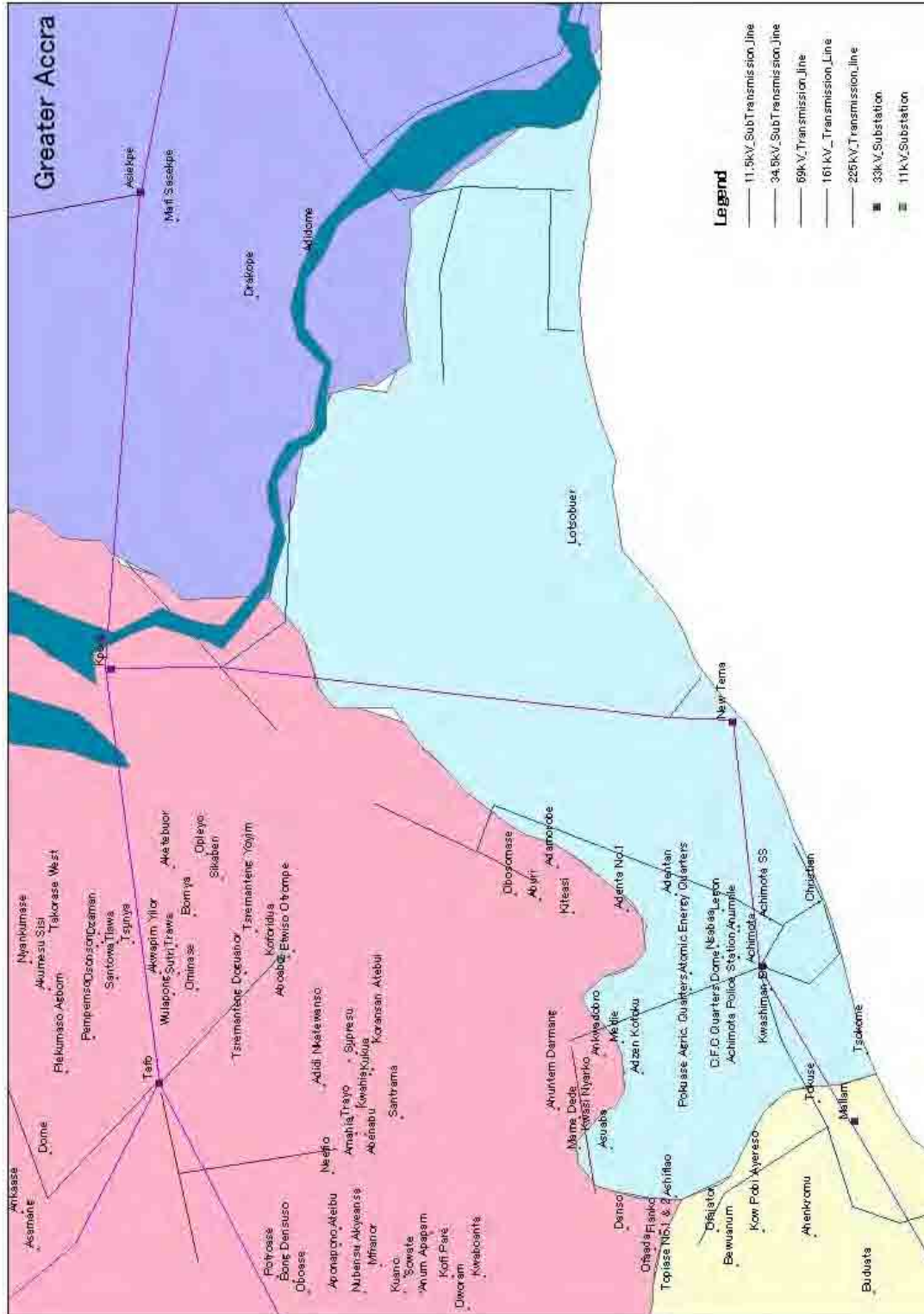


## Eastern



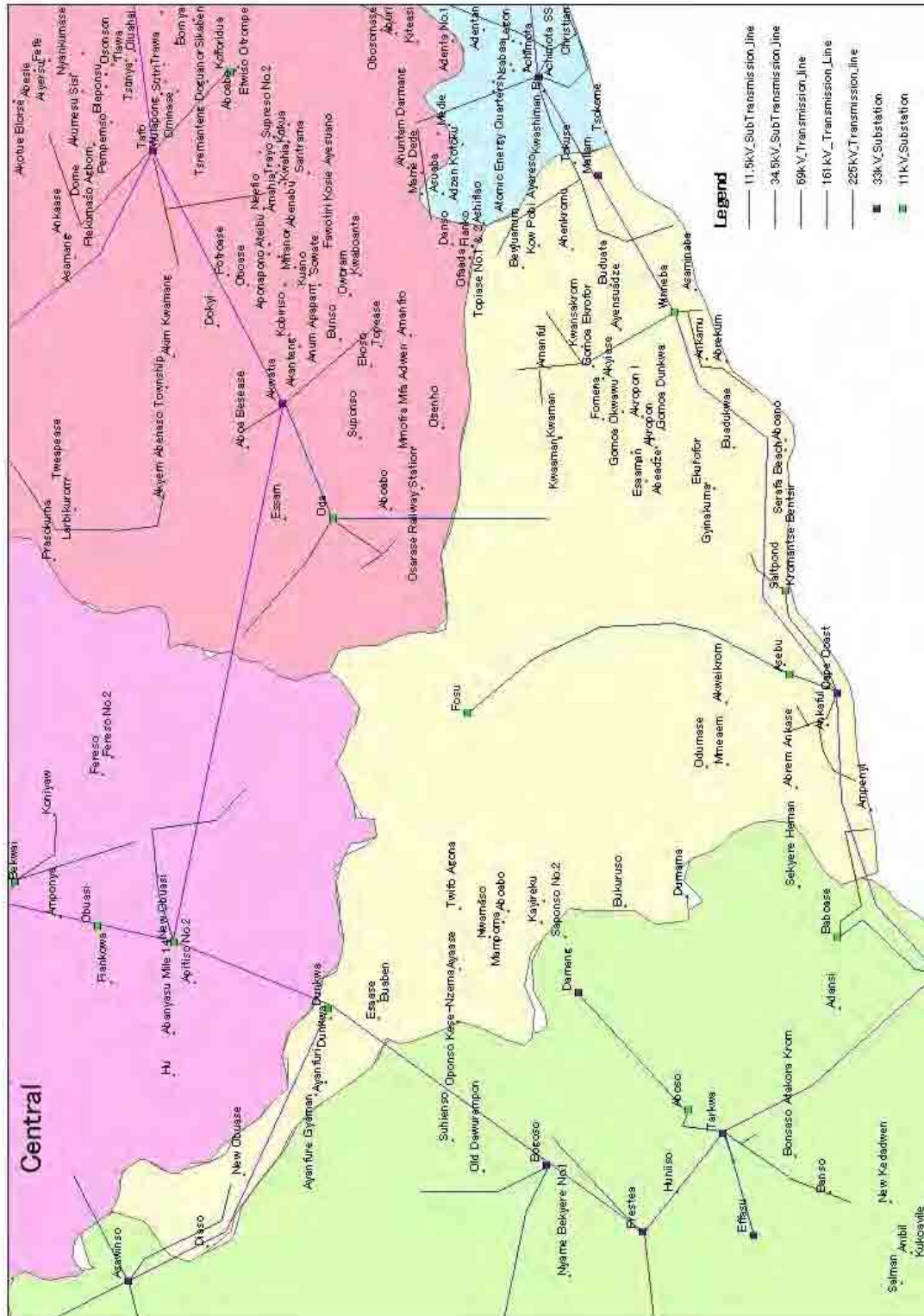


# Greater Accra

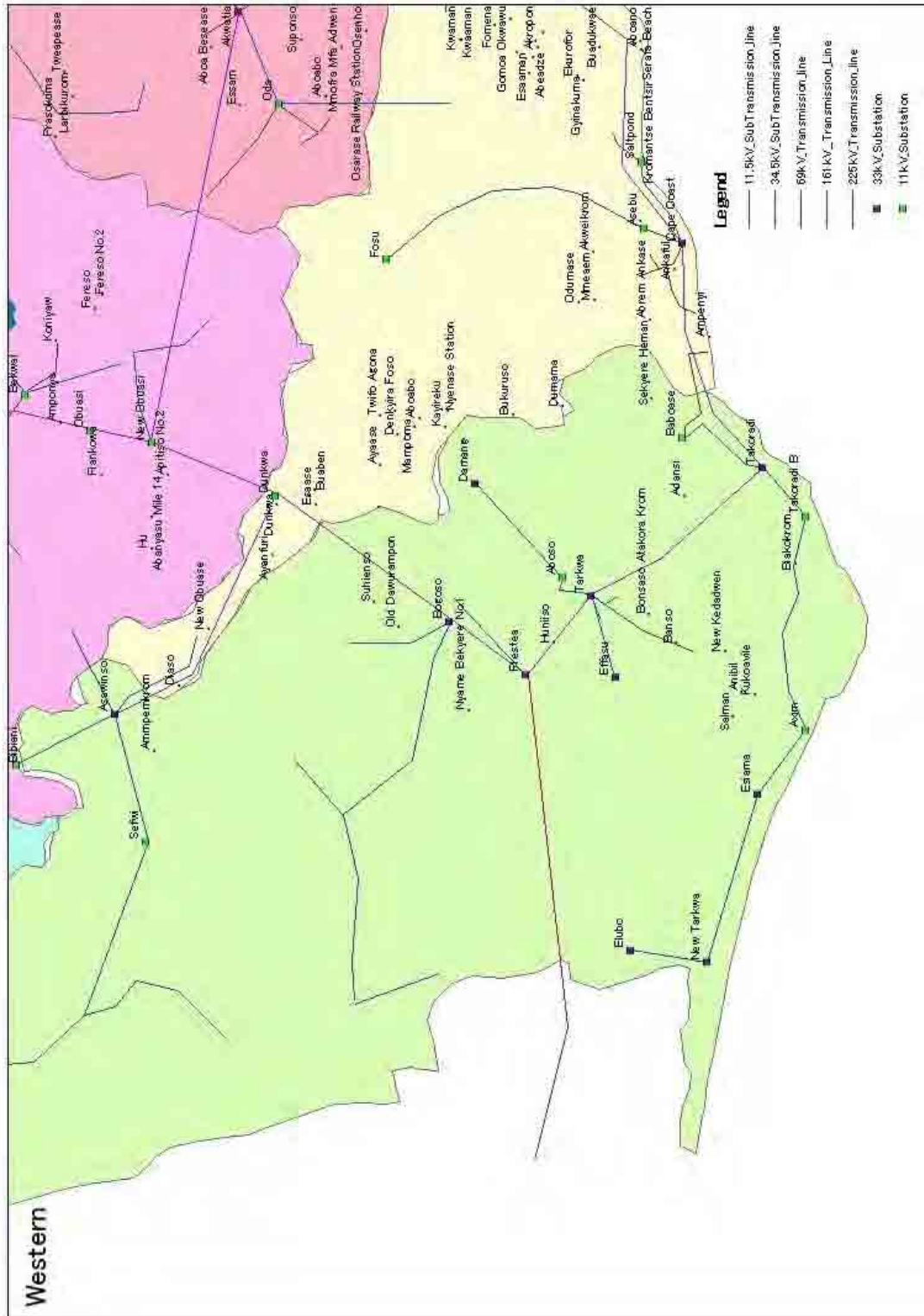




# Central



Western



# Financial IRR by Sub-Station

## A. Accra

Tariff 1200 Cedi/kWh  
 Profitability 5%  
 Profit 60 Cedi/kWh

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026			
<b>C (Achimota)</b>	103																					
Investment (1000 USD)																						
Sale (GWh)	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9		
Sales (1000 USD)	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548	1,548		
Cost (1000 USD)	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471	1,471		
<b>CF (1000 USD)</b>	-103	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77		
<b>IRR=</b>																					74.8%	
<b>D (Avenor)</b>																						
Investment (1000 USD)																						
Sale (GWh)	69	69	76	88	88	88	88	88	88	88	88	18	18	12	0	0	0	0	0	0	0	
Sales (1000 USD)	8,307	8,307	9,112	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	2,193	2,193	1,388	0	0	0	0	0	0	0	
Cost (1000 USD)	7,891	7,891	8,656	9,975	9,975	9,975	9,975	9,975	9,975	9,975	2,084	2,084	1,319	0	0	0	0	0	0	0	0	
<b>CF (1000 USD)</b>	-3,147	415	110	525	525	525	525	525	525	525	110	110	69	0	0	0	0	0	0	0	0	
<b>IRR=</b>																						3.6%
<b>G (Power House)</b>																						
Investment (1000 USD)																						
Sale (GWh)	10	10	10	10	10	10	10	10	10	10	10	23	23	23	23	23	23	23	23	23	23	
Sales (1000 USD)	1,220	1,220	1,220	1,220	1,220	1,220	1,220	1,220	1,220	1,220	2,812	2,812	2,812	2,812	2,812	2,812	2,812	2,812	2,812	2,812	2,812	
Cost (1000 USD)	1,159	1,159	1,159	1,159	1,159	1,159	1,159	1,159	1,159	1,159	2,671	2,671	2,671	2,671	2,671	2,671	2,671	2,671	2,671	2,671	2,671	
<b>CF (1000 USD)</b>	-329	61	61	61	61	61	61	61	61	61	141	141	141	141	141	141	141	141	141	141	141	
<b>IRR=</b>																						10.6%
<b>H (Achimota BSE)</b>																						
Investment (1000 USD)																						
Sale (GWh)	8	8	8	8	12	12	12	26	26	26	44	62	62	62	58	58	44	44	44	44	26	
Sales (1000 USD)	938	938	938	1,463	1,463	1,463	3,166	3,166	3,166	3,166	5,335	7,462	7,462	7,462	6,937	6,937	5,234	5,234	5,234	5,234	3,065	
Cost (1000 USD)	891	891	891	1,389	1,389	1,389	3,008	3,008	3,008	3,008	5,089	7,089	7,089	7,089	6,591	6,591	4,972	4,972	4,972	4,972	2,911	
<b>CF (1000 USD)</b>	-572	47	47	-273	73	73	-966	158	158	158	-1,165	-1,602	373	373	347	347	262	262	262	262	153	
<b>IRR=</b>																						#DIV/0!
<b>K (Kibibak's Bus)</b>																						
Investment (1000 USD)																						
Sale (GWh)	31	46	46	35	35	35	35	85	85	85	57	44	44	44	33	33	33	33	33	33	4	
Sales (1000 USD)	3,748	5,351	5,351	6,632	6,632	6,632	10,172	10,172	10,172	10,172	6,872	5,269	5,269	5,269	3,988	3,988	3,988	3,988	3,988	3,988	448	
Cost (1000 USD)	3,580	5,083	5,083	6,300	6,300	6,300	9,663	9,663	9,663	9,663	6,529	5,006	5,006	5,006	3,789	3,789	3,789	3,789	3,789	3,789	426	
<b>CF (1000 USD)</b>	-1,246	-346	288	-158	332	332	-845	509	509	509	360	344	263	263	199	199	199	199	199	199	22	
<b>IRR=</b>																						5.7%
<b>L (Brima Camp)</b>																						
Investment (1000 USD)																						
Sale (GWh)	0	0	192.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sales (1000 USD)	0	0	599	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cost (1000 USD)	0	0	599	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>CF (1000 USD)</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>IRR=</b>																						#DIV/0!

A. Accra (contd.)

Tariff 1200 Cedi/AWh  
 Profitability 5%  
 Profit 60 Cedi/AWh

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
<b>M (Legon)</b>																				
Investment (1000 USD)	0.0	0.0	64.0	1108.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sale (GWh)	0	0	0	2	33	33	33	33	33	33	33	33	33	31	0	0	0	0	0	0
Sales (1000 USD)	0	0	218	3984	3984	3984	3984	3984	3984	3984	3984	3984	3766	0	0	0	0	0	0	0
Cost (1000 USD)	0	0	207	3785	3785	3785	3785	3785	3785	3785	3785	3785	3578	0	0	0	0	0	0	0
<b>CF (1000 USD)</b>	0	0	-64	-1087	199	199	199	199	199	199	199	199	188	0	0	0	0	0	0	0
IRR=																				9.5%
<b>N (Newam)</b>																				
Investment (1000 USD)	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sale (GWh)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales (1000 USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost (1000 USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>CF (1000 USD)</b>	-320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRR=																				
<b>O (Tribute Nunguh)</b>																				
Investment (1000 USD)	85.0	107.0	0.0	0.0	0.0	0.0	107.0	107.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sale (GWh)	13	30	30	30	30	30	64	64	64	50	33	33	33	33	33	33	33	33	33	17
Sales (1000 USD)	1595	3604	3604	3604	3604	3604	5612	7620	6025	4016	4016	4016	4016	4016	4016	4016	4016	4016	4016	2008
Cost (1000 USD)	1516	3423	3423	3423	3423	3423	3423	5331	7239	5723	3816	3816	3816	3816	3816	3816	3816	3816	3816	1908
<b>CF (1000 USD)</b>	-85	-27	180	180	180	180	73	174	381	381	301	201	201	201	201	201	201	201	201	100
IRR=																				93.8%
<b>R (Ridge)</b>																				
Investment (1000 USD)	0.0	0.0	1450	3890	0.0	0.0	0.0	0.0	0.0	0.0	4890	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sale (GWh)	0	0	5	17	17	17	17	17	34	34	29	17	17	17	17	17	17	17	17	17
Sales (1000 USD)	0	0	609	2033	2033	2033	2033	2033	4128	4128	3519	2095	2095	2095	2095	2095	2095	2095	2095	2095
Cost (1000 USD)	0	0	578	1931	1931	1931	1931	1931	3922	3922	3443	1991	1991	1991	1991	1991	1991	1991	1991	1991
<b>CF (1000 USD)</b>	0	0	-145	-389	102	102	102	102	-387	206	206	176	105	105	105	105	105	105	105	105
IRR=																				11.9%
<b>T (Aletia)</b>																				
Investment (1000 USD)	383.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sale (GWh)	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Sales (1000 USD)	3012	3012	3012	3012	3012	3012	3012	3012	3012	3012	3012	3012	3012	3012	3012	3012	3012	3012	3012	3012
Cost (1000 USD)	2851	2851	2851	2851	2851	2851	2851	2851	2851	2851	2851	2851	2851	2851	2851	2851	2851	2851	2851	2851
<b>CF (1000 USD)</b>	-383	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151
IRR=																				39.4%
<b>W (Mampong)</b>																				
Investment (1000 USD)	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sale (GWh)	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Sales (1000 USD)	1284	1284	1284	1284	1284	1284	1284	1284	1284	1284	1284	1284	1284	1284	1284	1284	1284	1284	1284	1284
Cost (1000 USD)	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220
<b>CF (1000 USD)</b>	-12	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
IRR=																				53.0%

### A. Accra (contd.)

Tariff 1200 Cedi/AWh  
 Profitability 5%  
 Profit 60 Cedi/AWh

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
<b>Y (Bakoma) Total</b>																				
Investment (1000 USD)	256.0	0.0	107.0	0.0	0.0	213.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sales (GWh)	21	21	29	29	29	29	46	46	46	46	46	26	26	17	17	0	0	0	0	
Sales (1000 USD)	2,464	2,464	3,494	3,494	3,494	3,494	5,544	5,544	5,544	5,544	3,080	3,080	2,050	2,050	2,050	0	0	0	0	
Costs (1000 USD)	2,241	2,241	3,319	3,319	3,319	3,319	5,267	5,267	5,267	5,267	2,926	2,926	1,948	1,948	1,948	0	0	0	0	
<b>CF (1000 USD)</b>	-256	123	16	175	175	-38	277	277	277	277	154	154	103	103	103	0	0	0	0	
<b>IRR</b>																				46.6%
<b>Z (Toku)</b>																				
Investment (1000 USD)	640.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sales (GWh)	22	22	22	22	22	22	22	22	22	22	22	0	0	0	0	0	0	0	0	
Sales (1000 USD)	2,592	2,592	2,592	2,592	2,592	2,592	2,592	2,592	2,592	2,592	0	0	0	0	0	0	0	0	0	
Costs (1000 USD)	2,462	2,462	2,462	2,462	2,462	2,462	2,462	2,462	2,462	2,462	0	0	0	0	0	0	0	0	0	
<b>CF (1000 USD)</b>	-640	130	130	130	130	130	130	130	130	130	0	0	0	0	0	0	0	0	0	
<b>IRR</b>																				14.0%

## B. Tema

Tariff	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
1200 Cedi/kWh																					
5% Profitability																					
60 Cedi/kWh																					
<b>Station A</b>																					
Investment (1000 USD)	0	213	0	0	0	0	0	0	284	0	0	0	0	0	0	0	0	0	0	0	
Sale (GWh)	0	5.6	5.6	5.6	5.6	5.6	5.6	5.6	13.4	13.4	13.4	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	0.0	
Sales (1000 USD)	0	676	676	676	676	676	676	676	1608	1608	1608	932	932	932	932	932	932	932	932	0	
Cost (1000 USD)	0	642	642	642	642	642	642	642	1528	1528	1528	886	886	886	886	886	886	886	886	0	
<b>CF (1000 USD)</b>	0	-213	34	34	34	34	34	34	-260	80	80	47	47	47	47	47	47	47	47	0	
IRR=																					5.5%
<b>Station B</b>																					
Investment (1000 USD)	358	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sale (GWh)	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	0.0	
Sales (1000 USD)	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	0.0	
Cost (1000 USD)	239	239	239	239	239	239	239	239	239	239	239	239	239	239	239	239	239	239	239	0	
<b>CF (1000 USD)</b>	-358	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	0	
IRR=																					
<b>Station C</b>																					
Investment (1000 USD)	0	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sale (GWh)	0	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	0	
Sales (1000 USD)	0	2052	2052	2052	2052	2052	2052	2052	2052	2052	2052	2052	2052	2052	2052	2052	2052	2052	2052	0	
Cost (1000 USD)	0	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949	1949	0	
<b>CF (1000 USD)</b>	0	-64	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	0	
IRR=																					160.3%
<b>Station D</b>																					
Investment (1000 USD)	0	0	245	0	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sale (GWh)	0	0	25.9	39.0	25.9	39.0	39.0	39.0	39.0	39.0	39.0	39.0	13.1	13.1	13.1	0.0	0.0	0.0	0.0	0.0	
Sales (1000 USD)	0	0	3107	4680	3107	4680	4680	4680	4680	4680	4680	4680	1573	1573	1573	0	0	0	0	0	
Cost (1000 USD)	0	0	2952	4446	2952	4446	4446	4446	4446	4446	4446	4446	1494	1494	1494	0	0	0	0	0	
<b>CF (1000 USD)</b>	0	0	-245	155	31	234	234	234	234	234	234	234	79	79	79	0	0	0	0	0	
IRR=																					62.6%
<b>Station E</b>																					
Investment (1000 USD)	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sale (GWh)	0	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	0.0	
Sales (1000 USD)	0	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	2064	0.0	
Cost (1000 USD)	0	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	0	
<b>CF (1000 USD)</b>	0	-71	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	0	
IRR=																					145.3%
<b>Station H (BSP)</b>																					
Investment (1000 USD)	0	0	9500	1380	0	0	0	0	0	0	2940	0	0	0	0	0	0	0	0	0	
Sale (GWh)	0	0	21	25	25	25	25	25	25	25	31	31	31	10	7	7	7	7	7	7	
Sales (1000 USD)	0	0	2574	2948	2948	2948	2948	2948	2948	2948	3744	3744	3744	1170	796	796	796	796	796	796	
Cost (1000 USD)	0	0	2445	2800	2800	2800	2800	2800	2800	2800	3557	3557	3557	1112	757	757	757	757	757	757	
<b>CF (1000 USD)</b>	0	0	-950	-147	147	147	147	147	147	147	-147	187	187	187	40	40	40	40	40	40	
IRR=																					2.9%

B. Tema (contd.)

Tariff Profitability Profit	1200 Cedi/AWh 5% 60 Cedi/AWh	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>Kpong</b>	Investment (1000 USD)	0.0	0.0	0.0	0.0	0.0	341.0	0.0	0.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Sales (GWh)	0	0	0	0	0	0	0	11	11	18	18	18	18	18	18	18	7	7	7
	Sales (1000 USD)	0	0	0	0	0	0	1,377	1,377	1,377	2,184	2,184	2,184	2,184	2,184	2,184	807	807	807	807
	Costs (1000 USD)	0	0	0	0	0	0	1,308	1,308	1,308	2,075	2,075	2,075	2,075	2,075	2,075	767	767	767	767
	<b>CF (1000 USD)</b>	0	0	0	0	0	-341	89	89	-131	109	109	109	109	109	109	40	40	40	40
	IRR=							12.1%												
<b>Lashibi</b>	Investment (1000 USD)	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Sales (GWh)	0	0	0	0	0	0	0	11	11	18	18	18	18	18	18	7	7	7	7
	Sales (1000 USD)	0	0	0	0	0	0	1,231	1,231	1,231	1,231	1,231	1,231	1,231	1,231	1,231	431	431	431	431
	Costs (1000 USD)	0	0	0	0	0	0	1,231	1,231	1,231	1,231	1,231	1,231	1,231	1,231	1,231	431	431	431	431
	<b>CF (1000 USD)</b>	0	0	0	0	0	-1	65	65	65	65	65	65	65	65	65	0	0	0	0
	IRR=							6480.0%												

# C. Ashanti

Tariff 1200 Cedi/AWh  
 Profitability 5%  
 Profit 60 Cedi/AWh

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
<b>Kumasi(BSP)</b>	129	0	0	0	0	0	0	0	0	525	0	0	0	0	0	0	0	0	0		
Investment (1000 USD)																					
Sale (GWh)	40	40	40	40	40	40	40	40	40	40	40	162	162	162	162	162	162	162	162		
Sales (1000 USD)	478	478	478	478	478	478	478	478	478	478	1946	1946	1946	1946	1946	1946	1946	1946	1946		
Cost (1000 USD)	454	454	454	454	454	454	454	454	454	454	1849	1849	1849	1849	1849	1849	1849	1849	1849		
<b>CF (1000 USD)</b>	-129	24	24	24	24	24	24	24	24	-501	97	97	97	97	97	97	97	97	97		
IRR=																				2.7%	
<b>Aidato</b>	107	426	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Investment (1000 USD)																					
Sale (GWh)	57	282	282	282	282	282	282	282	282	282	225	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sales (1000 USD)	679	3394	3394	3394	3394	3394	3394	3394	3394	3394	2705	0	0	0	0	0	0	0	0	0	
Cost (1000 USD)	645	3215	3215	3215	3215	3215	3215	3215	3215	3215	2569	0	0	0	0	0	0	0	0	0	
<b>CF (1000 USD)</b>	-107	-382	169	169	169	169	169	169	169	169	135	0	0	0	0	0	0	0	0	0	
IRR=																					28.4%
<b>Airport(C) Total</b>	213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Investment (1000 USD)																					
Sale (GWh)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sales (1000 USD)	576	576	576	576	576	576	576	576	576	576	576	0	0	0	0	0	0	0	0	0	
Cost (1000 USD)	547	547	547	547	547	547	547	547	547	547	547	0	0	0	0	0	0	0	0	0	
<b>CF (1000 USD)</b>	-213	29	29	29	29	29	29	29	29	29	29	0	0	0	0	0	0	0	0	0	
IRR=																					4.1%
<b>Magazine(B)</b>	0	0	213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Investment (1000 USD)																					
Sale (GWh)	0.0	0.0	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	
Sales (1000 USD)	0	0	612	612	612	612	612	612	612	612	612	612	612	612	612	612	612	612	612	612	
Cost (1000 USD)	0	0	581	581	581	581	581	581	581	581	581	581	581	581	581	581	581	581	581	581	
<b>CF (1000 USD)</b>	0	0	-213	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
IRR=																					5.5%
<b>Rakwai(P)</b>	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Investment (1000 USD)																					
Sale (GWh)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sales (1000 USD)	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	
Cost (1000 USD)	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	
<b>CF (1000 USD)</b>	-12	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
IRR=																					64.3%
<b>Neulu(S)</b>	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Investment (1000 USD)																					
Sale (GWh)	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sales (1000 USD)	252	252	252	252	252	252	252	252	252	252	252	0	0	0	0	0	0	0	0	0	
Cost (1000 USD)	239	239	239	239	239	239	239	239	239	239	239	0	0	0	0	0	0	0	0	0	
<b>CF (1000 USD)</b>	-67	13	13	13	13	13	13	13	13	13	13	0	0	0	0	0	0	0	0	0	
IRR=																					12.1%



C. Ashanti (contd.)

Tariff Profitability Profit	1200 Cedi/AWh 5% 60 Cedi/AWh	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026			
Obuasi (BSP)	Investment (1000 USD)	0.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	6.7	6.7	6.7		
	Sales (GWh)	0.0	2.2	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	6.0	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	
	Sales (1000 USD)	0	268	536	536	536	536	536	536	536	536	804	804	804	804	804	804	804	804	804	804	804	804
	Cost (1000 USD)	0	255	509	509	509	509	509	509	509	509	764	764	764	764	764	764	764	764	764	764	764	764
	CF (1000 USD)	0	-6	7	27	27	27	27	27	27	27	21	40	40	40	40	40	40	40	40	40	40	40
	IRR=																						
Dankwa (BSP)	Investment (1000 USD)	162.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Sales (GWh)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
	Sales (1000 USD)	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276
	Cost (1000 USD)	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282
	CF (1000 USD)	-162	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	IRR=																						

# D. Western

Tariff 1200 Cedi/AWh  
 Profitability 5%  
 Profit 60 Cedi/AWh

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>Awaso</b>	0	0	0	0	0	0	0	0	0	123	0	0	0	0	0	0	0	0	0
Investment (1000 USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sale (GWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8
Sales (1000 USD)	0	0	0	0	0	0	0	0	0	0	2136	2136	2136	2136	2136	2136	2136	2136	2136
Cost (1000 USD)	0	0	0	0	0	0	0	0	0	0	2029	2029	2029	2029	2029	2029	2029	2029	2029
<b>CF (1000 USD)</b>	0	0	0	0	0	0	0	0	0	-123	107	107	107	107	107	107	107	107	107
IRR=											82.5%								
<b>Atiubo</b>	312	200	0	0	1564	100	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4
Investment (1000 USD)	312	200	0	0	1564	100	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4
Sale (GWh)	9.8	16.1	16.1	16.1	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
Sales (1000 USD)	1177	1931	1931	1931	7431	7431	7431	7431	7431	7431	7431	7431	7431	7431	7431	7431	7431	7431	7431
Cost (1000 USD)	1118	1835	1835	1835	7439	7439	7439	7439	7439	7439	7439	7439	7439	7439	7439	7439	7439	7439	7439
<b>CF (1000 USD)</b>	-312	-141	97	97	-1467	282	410	410	410	410	352	314	314	314	314	314	314	314	314
IRR=											12.1%								
<b>Axim</b>	0	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0
Investment (1000 USD)	0	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0
Sale (GWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Sales (1000 USD)	0	0	0	0	0	0	0	432	432	432	432	432	432	432	432	432	432	432	432
Cost (1000 USD)	0	0	0	0	0	0	0	410	410	410	410	410	410	410	410	410	410	410	410
<b>CF (1000 USD)</b>	0	0	0	0	0	0	0	-200	22	22	22	22	22	22	22	22	22	22	22
IRR=																			
<b>Takonadi A Tot</b>	304	0	269	0	0	0	0	0	0	0	74	0	0	0	0	0	0	0	0
Investment (1000 USD)	304	0	269	0	0	0	0	0	0	0	74	0	0	0	0	0	0	0	0
Sale (GWh)	35	35	64	64	64	64	64	64	64	64	38	38	38	38	38	38	38	38	38
Sales (1000 USD)	4163	4163	7711	7711	7711	7711	7711	7711	7711	7711	4561	4561	4561	4561	4561	4561	4561	4561	4561
Cost (1000 USD)	3955	3955	7325	7325	7325	7325	7325	7325	7325	7325	4333	4333	4333	4333	4333	4333	4333	4333	4333
<b>CF (1000 USD)</b>	-304	208	-51	386	386	386	386	386	386	386	312	228	228	228	228	228	228	228	228
IRR=											67.8%								
<b>Takonadi B Tot</b>	248	0	0	0	205	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment (1000 USD)	248	0	0	0	205	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sale (GWh)	12	12	12	12	12	12	22	22	22	22	10	10	10	10	10	10	10	10	10
Sales (1000 USD)	1432	1432	1432	1432	1432	1432	2616	2616	2616	2616	1184	1184	1184	1184	1184	1184	1184	1184	1184
Cost (1000 USD)	1361	1361	1361	1361	1361	1361	2485	2485	2485	2485	131	131	131	131	131	131	131	131	131
<b>CF (1000 USD)</b>	-248	72	72	72	72	72	131	131	131	131	59	59	59	59	59	59	59	59	59
IRR=											25.0%								
<b>Bihanti</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment (1000 USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sale (GWh)	0.0	0.0	0.0	0.0	0.0	0.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Sales (1000 USD)	0	0	0	0	0	0	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920	1920
Cost (1000 USD)	0	0	0	0	0	0	1824	1824	1824	1824	1824	1824	1824	1824	1824	1824	1824	1824	1824
<b>CF (1000 USD)</b>	0	0	0	0	0	0	-602	96	96	96	96	96	96	96	96	96	96	96	96
IRR=											1.9%								



# E. Eastern

Tariff 1200 Cedi/AWh  
 Profitability 5%  
 Profit 60 Cedi/AWh

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>Alwaha (BSP)</b>	2,932	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment (1000 USD)		325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325
Sale (GWh)		3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900
Sales (1000 USD)		3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705	3,705
Cost (1000 USD)		185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185
CF (1000 USD)		-2,932	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850	1,850
IRR=		-9.2%																	
<b>Nawakaw (BSP)</b>	189	0	888	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment (1000 USD)		33	33	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	15.6	15.6	0.0	0.0	0.0	0.0	0.0	0.0
Sale (GWh)		384	384	2,268	2,268	2,268	2,268	2,268	2,268	2,268	2,268	1,874	1,874	0	0	0	0	0	0
Sales (1000 USD)		375	375	2,155	2,155	2,155	2,155	2,155	2,155	2,155	2,155	1,780	1,780	0	0	0	0	0	0
Cost (1000 USD)		20	-878	113	113	113	113	113	113	113	113	94	94	0	0	0	0	0	0
CF (1000 USD)		-189	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
IRR=		-12%																	
<b>Olda Total</b>	374	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment (1000 USD)		6.1	6.1	6.1	6.1	9.3	9.3	9.3	9.3	9.3	9.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Sale (GWh)		727	727	727	727	1,116	1,116	1,116	1,116	1,116	1,116	389	389	389	389	389	389	389	389
Sales (1000 USD)		691	691	691	691	1,060	1,060	1,060	1,060	1,060	1,060	369	369	369	369	369	369	369	369
Cost (1000 USD)		36	36	36	-164	56	56	56	56	56	56	19	19	19	19	19	19	19	19
CF (1000 USD)		-374	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
IRR=		-2.6%																	
<b>Talo (BSP)</b>	3,517	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment (1000 USD)		44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Sale (GWh)		5,328	5,328	5,328	5,328	5,328	5,328	5,328	5,328	5,328	5,328	5,328	5,328	5,328	5,328	5,328	5,328	5,328	5,328
Sales (1000 USD)		5,062	5,062	5,062	5,062	5,062	5,062	5,062	5,062	5,062	5,062	5,062	5,062	5,062	5,062	5,062	5,062	5,062	5,062
Cost (1000 USD)		266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266
CF (1000 USD)		-3,517	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660	2,660
IRR=		-7.0%																	

# F. Central

Tariff  
 Profitability  
 Profit

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
<b>Cape Coast(BSP)</b>	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment (1000 USD)																				
Sale (GWh)	0.0	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sales (1000 USD)	0	3,516	3,516	3,516	3,516	3,516	3,516	3,516	3,516	3,516	3,516	3,516	0	0	0	0	0	0	0	0
Cost (1000 USD)	0	3,340	3,340	3,340	3,340	3,340	3,340	3,340	3,340	3,340	3,340	3,340	0	0	0	0	0	0	0	0
CF (1000 USD)	0	-2	176	176	176	176	176	176	176	176	176	176	0	0	0	0	0	0	0	0
IRR																				
<b>Winneba(BSP)</b>	1	0	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment (1000 USD)																				
Sale (GWh)	0.3	0.3	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.6	24.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sales (1000 USD)	35	35	2,988	2,988	2,988	2,988	2,988	2,988	2,988	2,988	2,988	2,953	2,953	0	0	0	0	0	0	0
Cost (1000 USD)	33	33	2,839	2,839	2,839	2,839	2,839	2,839	2,839	2,839	2,839	2,806	2,806	0	0	0	0	0	0	0
CF (1000 USD)	-1	2	-83	149	149	149	149	149	149	149	149	148	148	0	0	0	0	0	0	0
IRR																				
<b>Sullpond</b>	1	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment (1000 USD)																				
Sale (GWh)	0.0	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sales (1000 USD)	3	648	648	648	648	648	648	648	648	648	648	645	645	0	0	0	0	0	0	0
Cost (1000 USD)	3	616	616	616	616	616	616	616	616	616	613	613	0	0	0	0	0	0	0	0
CF (1000 USD)	-1	-200	32	32	32	32	32	32	32	32	32	32	0	0	0	0	0	0	0	0
IRR																				



