

添付資料

1. 調査団員・氏名

1. 調査団員・氏名

第一次現地調査

氏名	担当業務	現職
丹羽 顯	総括	独立行政法人 国際協力機構
黛 正伸	計画管理	独立行政法人 国際協力機構
小宮 雅嗣	業務主任／配電計画	八千代エンジニアリング(株)
野上 一成	副業務主任／配電設備 A	八千代エンジニアリング(株)
玉井 昌幸	配電設備 B	八千代エンジニアリング(株)
大村 健	環境社会配慮	八千代エンジニアリング(株)

第二次現地調査

氏名	担当業務	現職
加藤 俊伸	総括	独立行政法人 国際協力機構
黛 正伸	計画管理	独立行政法人 国際協力機構
小宮 雅嗣	業務主任／配電計画	八千代エンジニアリング(株)
野上 一成	副業務主任／配電設備 A	八千代エンジニアリング(株)
玉井 昌幸	配電設備 B	八千代エンジニアリング(株)
大村 健	環境社会配慮	八千代エンジニアリング(株)
小林 辰哉	調達・施工計画／積算	八千代エンジニアリング(株)
小田 幸司	業務調整／配電計画補助	八千代エンジニアリング(株)

第三次現地調査

氏名	担当業務	現職
木藤 耕一	総括	独立行政法人 国際協力機構
黛 正伸	計画管理	独立行政法人 国際協力機構
小宮 雅嗣	業務主任／配電計画	八千代エンジニアリング(株)
野上 一成	副業務主任／配電設備 A	八千代エンジニアリング(株)
大村 健	環境社会配慮	八千代エンジニアリング(株)

2. 調査行程

現地調査時の作業日程表(案)

1. 第一次現地調査

No.	月日	曜日	調査内容				宿泊地	
			官団員(JICA)		コンサルタント団員(八千代エンジニアリング㈱)			
			丹羽顯	黛正伸	Aグループ	Bグループ		
				小宮 雅嗣	野上 一成	玉井 昌幸	大村 建	
1	11月20日	土			・ 移動(東京12:30→フランクフルト16:45 by JL-407)			フランクフルト
2	11月21日	日			・ 移動(フランクフルト11:55→アクラ17:30 by LH-566)			アクラ
3	11月22日	月			・ JICAガーナ事務所表敬訪問及び本調査行程、内容の説明・協議 ・ エネルギー省(MOE)、ガーナ電力公社(ECG)及びボルタ河北部地域配電公社(VRA-NED)表敬訪問及び本調査行程等提出・説明・協議			アクラ
4	11月23日	火			・ MOEに上位計画、重点開発地域、地方電化計画確認 ・ 他ドナーとの協議 ・ ECG各支店に要請内容及びその選定理由確認 ・ VRA-NED各支店に要請内容及びその選定理由確認		環境社会配慮に係わる調査	アクラ
5	11月24日	水			・ 移動(車両) [アクラ→ホ] ・ ECG ボルタ州支店 訪問・協議 ・ クペベ BSP 供給区域調査 ・ クバンド BSP 供給区域調査			ホ
6	11月25日	木			・ ECG ボルタ州支店 訪問・協議 ・ クペベ BSP 供給区域調査 ・ 地域産業調査 ・ 移動(車両) [ホ→アクラ]			アクラ
7	11月26日	金			・ 移動(飛行機) [アクラ→スニヤニ] ・ スニヤニ BSP 供給区域調査 ・ 地域産業調査			スニヤニ
8	11月27日	土	・ 移動(東京12:30→フランクフルト16:45 by JL-407)		・ 移動(飛行機) [スニヤニ→アクラ] ・ 資料整理	・ 移動(車両) [スニヤニ→ワ] ・ ワ地域調査		アクラ ワ
9	11月28日	日	・ 移動(フランクフルト11:55→アクラ17:30 by LH-566)		・ 資料整理	・ 移動(車両) [ワ→スニヤニ] ・ 資料整理		アクラ スニヤニ
10	11月29日	月	・ 在ガーナ日本国大使館(EOJ)及びJICAガーナ事務所表敬訪問 ・ ECG及びVRA-NEDと要請箇所選定理由の再確認		・ 移動(飛行機) [スニヤニ→アクラ] ・ 資料整理			アクラ
12	11月30日	火			・ 移動(車両) [アクラ→ホ] ・ クペベ BSP 供給区域調査 ・ 移動(車両) [ホ→アクラ] ・ 前回協力の裨益状況調査(第5次協力「西アキム地区地方電化計画」地域)			アクラ
11	12月1日	水			・ MOE表敬訪問及び本調査行程、内容の説明・協議 ・ MOE、ECG及びVRA-NEDと要請内容に係るサイト選定クライテリア及び代替案の協議			アクラ
13	12月2日	木			・ MOE、ECG及びVRA-NEDと要請内容に係るサイト選定クライテリア及び代替案の協議 ・ 環境社会配慮に係わる調査			アクラ
14	12月3日	金			・ 移動(飛行機) [アクラ→タマレ] ・ VRA-NED 地域支店 訪問・協議 ・ タマレ BSP 供給区域調査 ・ 地域産業調査			タマレ
15	12月4日	土			・ 移動(飛行機) [タマレ→アクラ]			アクラ
16	12月5日	日			・ 団内協議 コンポーネント分けに係わる方針 要請内容の優先順位付けに係わる方針 電路張替工事に係る方針 代替案に係わる方針			アクラ
17	12月6日	月			・ MOE、ECGと合同協議 ・ MOE、VRA-NEDと合同協議 コンポーネント分けに係わる方針 要請内容の優先順位付けに係わる方針 電路張替工事に係る方針 追加のサイト状況踏査に係わる方針 「ガ」国側負担事項に係わる協議			アクラ
18	12月7日	火			・ ECG及びVRA-NEDの各地域支店と現地調査結果の報告及び技術的アウトライン協議			アクラ
19	12月8日	水			・ MD(案)に係わる協議 ・ VRA-NED、各事業支店と系統構成、要請箇所の最終確認			アクラ
20	12月9日	木			・ MD署名 ・ MOE、ECG、VRA-NEDと追加協議			アクラ

現地調査時の作業日程表(案)

No.	月日	曜日	調 査 内 容				宿 泊 地		
			官団員(JICA)		コンサルタント団員(八千代エンジニアリング㈱)				
			丹羽顯	黛正伸	Aグループ			Bグループ	
					小宮 雅嗣	野上 一成		玉井 昌幸	大村 建
21	12月10日	金	・ EOJ及びJICAガーナ事務所へ 帰国報告 ・ 移動{アクラ22:50→フランクフルト 06:15+1 by LH-567}	・ 団内協議 ・ Memorandum of the first field surveyの作成 ・ 環境・社会配慮予備的スコーピング案の作成		アクラ			
22	12月11日	土	・ 移動{→フランクフルト06:15 by LH-567} ・ 移動{フランクフルト20:25→ 東京15:55+1 by JL-408}	・ Memorandum of the first field surveyの作成 ・ 環境・社会配慮予備的スコーピング案の作成		アクラ			
23	12月12日	日		・ Memorandum of the first field surveyの作成		アクラ			
24	12月13日	月		・ MOE、ECG及びVRA-NEDへMemorandum of the first field surveyの 提出・説明 ・ 環境・社会配慮予備的スコーピング案の提出・説明 ・ GEDAP関係機関訪問、電力セクターへの支援動向調査、発電・送 配電整備の支援内容の確認 ・ ECG及びVRA-NEDの運転維持管理体制に係わる調査 ・ 補足資料・データの収集 ・ 第一次現地調査結果概要の作成		アクラ			
25	12月14日	火		・ 補足資料・データの収集 ・ 第一次現地調査結果概要の作成		アクラ			
26	12月15日	水		・ MOE、ECG及びVRA-NEDへMemorandum of the first field surveyの 協議 ・ 環境・社会配慮予備的スコーピング案の協議 ・ 第一次現地調査結果概要の作成		アクラ			
27	12月16日	木		・ MOE、ECG及びVRA-NEDよりMemorandum of the first field surveyの 承認取得 ・ 環境・社会配慮予備的スコーピング案の承認取得 ・ MOE、ECG及びVRA-NEDの帰国前報告 ・ EOJ及びJICAガーナ事務所へ第一次現地調査結果報告 ・ 移動{アクラ22:50→フランクフルト06:15+1 by LH-567}		機中泊			
28	12月17日	金		・ 移動{→フランクフルト06:15 by LH-567} ・ 移動{フランクフルト20:25→東京15:55+1 by JL-408}		機中泊			
29	12月18日	土		・ 移動{→東京15:55 by JL-408}					

【略語】

ECG	:Electricity Company of Ghana
EOJ	:Embassy of Japan
EPA	:Environmental Protection Agency
GEDAP	:Ghana Energy Development and Access Project
JICA	:Japan International Cooperation Agency
MOE	:Ministry of Energy
VRE-NED	:Volta River Authority - Northern Electricity Department

2. 調査行程

第二次現地調査

No.	月日	曜日	調査内容							宿泊地
			官団員(JICA)		コンサルタント団員(八千代エンジニアリング株)					
			加藤 俊伸	篠 正伸	Aグループ	Bグループ			Cグループ	
		小宮 雅嗣	玉井 昌幸	大村 健	小田 幸司	小林 辰哉	野上 一成			
1	1月23日	日	・移動(東京 → ドバイ)		・移動(東京12:30→フランクフルト16:45 by JL-407)					フランクフルト
2	1月24日	月	・移動(ドバイ → アクラ)		・移動(フランクフルト12:05→アクラ17:40 by LH-566)					アクラ
3	1月25日	火	・JICAガーナ事務所表敬訪問及び本調査行程、内容の説明・協議 ・EOJ表敬訪問及び本調査行程、内容の説明・協議 ・エネルギー省(MOE)、ガーナ電力公社(ECG)及びボルタ河北部地域配電公社(VRA-NED)表敬訪問、MOEへ第一次国内解析結果の報告、第一次調査結果概要(英)の説明、本調査行程、Questionnaire等提出・説明・協議							アクラ
4	1月26日	水	・VRA-NEDへMD(案)の説明		・市場調査(Questionnaire配布) ・再委託業者との打合せ					アクラ
5	1月27日	木	アソコンボ水力 発電所視察 ・WB訪問、情報交換 ・MOEへMD(案)の説明	再委託業者との契約			・WB情報交換 ・MOEへMD (案)の説明	・移動(東京 12:30→ロンドン 16:45 by JL- 407)	アクラ	
6	1月28日	金	・MOFEPへMD(案)の説明 ・EOJ報告 ・MD署名 ・移動(アクラ → ロンドン)	・移動(飛行機) [アクラ→スニヤニ] ・VRA-NED(スニヤニ)へ第一次国内解析結果の報告、協議			・移動(ロンドン 12:05→アクラ 17:40 by LH- 566)	アクラ スニヤニ		
7	1月29日	土	・移動(ロンドン) ・移動(ロンドン → 東京)	・移動(飛行機) [アクラ→スニヤニ] ・VRA-NED(スニヤニ)へ第一次国内解析結果の報告、協議 ・サイト状況踏査(スニヤニ)	・移動(飛行機) [アクラ→スニヤニ]			スニヤニ		
8	1月30日	日	・移動(東京)	・サイト状況踏査 ・団内協議					スニヤニ	
9	1月31日	月	・電力需要調査(チラ) ・移動(飛行機) [スニヤニ→アク ラ] ・ECG Tema Training Centre視察		・サイト状況踏査			アクラ スニヤニ		
10	2月1日	火	・JICAガーナ事務所報告 ・GRIDCo訪問、情報交換 ・移動(アクラ → ドバイ)	・機材仕様書(スニヤニ)の作成、協議 ・ネットワーク図(スニヤニ)の作成、協議 ・変電所の単線結線図(スニヤニ)の作成、協議 ・変電所レイアウト図(スニヤニ)の作成、協議 ・プロジェクト受益者調査(チラ)			アクラ スニヤニ			
11	2月2日	水	・移動(ドバイ) ・移動(ドバイ → 東京)	・移動(飛行機) [アクラ→スニヤニ]	・機材仕様書(スニヤニ)の作成、協議 ・ネットワーク図(スニヤニ)の作成、協議 ・変電所の単線結線図(スニヤニ)の作成、協議 ・変電所レイアウト図(スニヤニ)の作成、協議 ・プロジェクト受益者調査(コトクロム)			スニヤニ		
12	2月3日	木	・移動(東京)	・機材仕様書(スニヤニ)の作成、協議 ・ネットワーク図(スニヤニ)の作成、協議 ・変電所の単線結線図(スニヤニ)の作成、協議 ・変電所レイアウト図(スニヤニ)の作成、協議 ・プロジェクト受益者調査(スニヤニ)			スニヤニ			
13	2月4日	金	・スニヤニ地域ステークホルダーミーティングの開催 ・VRA-NED(スニヤニ)へ機材計画、据付計画、環境社会配慮の説明、協議							スニヤニ
14	2月5日	土	・VRA-NED(スニヤニ)へ機材計画、据付計画、環境社会配慮の説明、協議 ・団内協議					・移動(東京 12:30→フランク フルト16:45 by JL-407)	スニヤニ フランクフルト	
15	2月6日	日	・スニヤニ地域の追加調査事項の整理 ・団内協議					・移動(フランクフルト11:55→アクラ17:30 by LH-566)	スニヤニ アクラ	
16	2月7日	月	・移動(車両) [スニヤニ→タマレ] ・サイト状況踏査(タマレ) ・団内協議 ・VRA-NED(タマレ)へ第一次国内解析結果の報告、協議					・移動(飛行機) [アクラ→タマレ]	タマレ	
17	2月8日	火	・VRA-NED(本社)へ第一次国内解析結果の報告、協議 ・サイト状況踏査							タマレ
18	2月9日	水	・サイト状況踏査 ・JICAガーナ事務所員現地視察同行 ・プロジェクト受益者調査(トロン)							タマレ
19	2月10日	木	・機材仕様書(タマレ)の作成、協議 ・ネットワーク図(タマレ)の作成、協議 ・変電所の単線結線図(タマレ)の作成、協議 ・プロジェクト受益者調査(ニヤンバラ) ・変電所レイアウト図(タマレ)の作成、協議							タマレ
20	2月11日	金	・機材仕様書(タマレ)の作成、協議 ・ネットワーク図(タマレ)の作成、協議 ・変電所の単線結線図(タマレ)の作成、協議 ・プロジェクト受益者調査(タマレ) ・変電所レイアウト図(タマレ)の作成、協議							タマレ
21	2月12日	土	・タマレ地域の追加調査事項の整理							タマレ
22	2月13日	日	・Field Reportの作成							タマレ

2. 調査行程

No.	月日	曜日	調査内容							宿泊地
			官団員(JICA)		コンサルタント団員(八千代エンジニアリング㈱)					
			加藤 俊伸	黛 正伸	Aグループ	Bグループ			Cグループ	
		小宮 雅嗣	玉井 昌幸	大村 健	小田 幸司	小林 辰哉	野上 一成			
23	2月14日	月			・VRA-NED(タマレ)へ機材計画、据付計画、環境社会配慮の説明、協議 ・VRA-NED(タマレ・スニヤニ)へField Reportの説明、協議					タマレ
24	2月15日	火			・第二次現地調査結果概要の作成					タマレ
25	2月16日	水			・第二次現地調査結果概要の作成					タマレ
26	2月17日	木			・第二次現地調査結果概要の作成					タマレ
27	2月18日	金			・タマレ地域ステークホルダーミーティングの開催					タマレ
28	2月19日	土			・移動(飛行機) [タマレ→アクラ] ・第二次現地調査結果概要の作成					アクラ
29	2月20日	日			・第二次現地調査結果概要の作成					アクラ
30	2月21日	月			・VRAへのField Report 説明・協議 ・MOEへのField Report 説明・協議					アクラ
31	2月22日	火			・市場調査(Questionnaire回答収集) ・再委託業者との打合せ、再委託調査報告書の精査					アクラ
32	2月23日	水			・JICAガーナ事務所報告 ・移動[アクラ23:59→ロンドン06:45+1 by BA-078]					機中泊
33	2月24日	木			・移動[ロンドン06:15 by BA-078] ・移動[ロンドン19:00→東京16:05+1 by JL-402]					機中泊
34	2月25日	金			・移動[→東京16:05 by JL-402]					

【略語】

ECG	:Electricity Company of Ghana
EOJ	:Embassy of Japan
EPA	:Environmental Protection Agency
GEDAP	:Ghana Energy Development and Access Project
JICA	:Japan International Cooperation Agency
MD	:Minutes of Discussion
MOE	:Ministry of Energy
MOFEP	:Ministry of Finance and Economic Planning
VRE-NED	:Volta River Authority - Northern Electricity Department
WB	:World Bank

2. 調査行程

第三次現地調査

No.	月日	曜日	調査内容			宿泊地	
			官団員(JICA)	コンサルタント団員(八千代エンジニアリング株)			
			黛 正伸	小宮 雅嗣	野上 一成	大村 健	
1	5月21日	土	・移動(東京12:15→フランクフルト17:20 by JL407)			フランクフルト	
2	5月22日	日	・移動(フランクフルト14:25→アクラ18:50 by LH-566)			アクラ	
3	5月23日	月	・JICAガーナ事務所表敬訪問及び本調査行程、内容の説明・協議 ・EOJ表敬訪問及び本調査行程、内容の説明・協議 ・エネルギー省(MOE)、ボルタ河開発公社北部地域配電公社(VRA-NED)表敬訪問			アクラ	
4	5月24日	火	・財務計画省(MOFEP)表敬訪問 ・ボルタ河開発公社北部地域配電公社(VRA-NED)と概略設計概要書、機材仕様書に基づく技術協議 ・ボルタ河開発公社北部地域配電公社(VRA-NED)と環境社会配慮に係る協議			アクラ	
5	5月25日	水	・ボルタ河開発公社北部地域配電公社(VRA-NED)とMD(案)に係る協議 ・ボルタ河開発公社北部地域配電公社(VRA-NED)との協議を踏まえた概略設計概要書、機材仕様書のレビュー			アクラ	
6	5月26日	木	・ボルタ河開発公社北部地域配電公社(VRA-NED)と概略設計概要書、機材仕様書に基づく技術協議			アクラ	
7	5月27日	金	・ボルタ河開発公社北部地域配電公社(VRA-NED)とMD署名 ・EOJ表敬訪問及び調査結果報告			アクラ	
8	5月28日	土	・移動(アクラ 22:45 → (ロンドン))			機中泊	
9	5月29日	日	・移動((アクラ) → ロンドン 06:25 by BA078) ・移動(ロンドン 19:15 → (東京))			機中泊	
10	5月30日	月	・移動((ロンドン) → 東京 15:00 by JL402)				

【略語】

ECG	:Electricity Company of Ghana
EOJ	:Embassy of Japan
EPA	:Environmental Protection Agency
GEDAP	:Ghana Energy Development and Access Project
JICA	:Japan International Cooperation Agency
MD	:Minutes of Discussion
MOE	:Ministry of Energy
MOFEP	:Ministry of Finance and Economic Planning
VRE-NED	:Volta River Authority - Northern Electricity Department
WB	:World Bank

3. 関係者（面会者）リスト

3. 関係者(面会者)リスト

財務・経済計画省

Ministry of Finance and Economic Planning (MOFEP)

Mr. Yaw Okyere-Nyako Director of External Resource Mobilization-Bilateral

エネルギー省

Ministry of Energy (MOE)

Prof. Thomas Mba Akabzaa Chief Director
Mr. Okyere-Darko Ababio Ag. Chief Director (第一次現地調査時)
Mr. Joseph Amakyi Ag. Director of Power
Mr. E. D. Osafo Ag. Deputy Director of Power
Mr. Solomon Adjetye Deputy Director of Power
Mr. Wisdom Ahiataku-Togobo Director of Renewable Energy
Mr. Suleman Abubakan Electrical Engineer
Mr. Arthor Gracm Assistant Engineer

環境保護庁

Environmental Protection Agency (EPA)

Mr. Larry Kotoe Assistant Officer in Environmental/Assessment Section

ガーナ送電会社 本社

Ghana Grid Co. Ltd (GRIDCo), Head Office

Mr. Benjamin Ntsin Manager of Power System Planning
Mr. Benjamin Kwame Ahunu Senior Electrical Engineer

ガーナ配電会社 本社

Electricity Company of Ghana (ECG), Head Office

Mr. Cephas Gakpo Ag. Managing Director
Mr. Julius Kwame Kpekpena Director of Engineering
Mr. Kwadwo Ayensu Obeng Div. Manager Planning
Mr. Godfred Meusah Sectional Manager / System Planning
Mr. Stephen Akuoku Economist

ガーナ配電会社 ボルタ州事業所

Electricity Company of Ghana (ECG), Volta Region

Ing. Delali K. Oklu Regional Engineer
Mr. Castro Dogbeda Ag. Regional Engineer

ガーナ配電会社 西部州事業所

Electricity Company of Ghana (ECG), Western Region

Mr. Daniel Acquah-H Labi	Regional Engineer
Mr. Kwame Anyomedie	District Manager
Mr. Buane W.	District Engineer
Mr. Willian Fua	Project Officer
Mr. Mark Netty	Planning Advisor
Mr. Solomon Woolley	Maintenance Engineer
Mr. Kingsley Appiah	Assistant Electrical Engineer
Mr. Issahaku Seidu	Assistant Electrical Engineer

ガーナ配電会社 中央州事業所

Electricity Company of Ghana (ECG), Central Region

Mr. S. Techie-Menson	District Manager
----------------------	------------------

ガーナ配電会社 タルクワ事業所

Electricity Company of Ghana (ECG) Tarkwa District Office

Mr. Emmanuel Akinie	District Manager
---------------------	------------------

ガーナ配電会社 タコラディ変電所 (C)

Electricity Company of Ghana (ECG), Takoradi Substation (C)

Mr. Augustine Edwards	Operator
-----------------------	----------

ガーナ配電会社 タルクワ BSP 変電所

Electricity Company of Ghana (ECG), Tarkwa BSP Substation

Mr. Charles K. Abraham	Ag. District Engineer
------------------------	-----------------------

ガーナ配電会社 テマトレーニングセンター

Electricity Company of Ghana (ECG), Tema Training Center

Mr. Geoge Yaw Marfo	Sectional Manager Technical
---------------------	-----------------------------

ボルタ河開発公社 本社

Volta River Authority (VRA), Head Office

Ing. I. Kirk Koffi	Deputy Chief Executive
Ing. William E. Sam-Appiah	Director, Engineering Services Dept.
Mr. Isaac Bedu	Ag. Manager of Project
Mr. Randolph Essandoh	Principal Electrical Engineer

ボルタ河開発公社 環境・持続開発部

Volta River Authority (VRA), Environment and Sustainable Development Department

Mr. P. O. Kwakye	Director
Mr. E. M. K. Amekor	Manager
Mr. Benjamin Arhin Sackey	Environmental Officer

ボルタ河開発公社 北部地域配電部・本部

Volta River Authority-Northern Electricity Department (VRA-NED)

Ing. John Kwame Nuworklo	Director of NED
Mr. Nathaniel Baena	Ag. Director
Ing. Frank E. K. Akligo	Area Manager
Mr. Robert Ato Mensah	Principal Planning Engineer
Mr. John Teiko	Chief Engineer
Mr. J. Y. Asante	Assistant Chief Manager
Mr. Tampuri Tayeb	Assistant Electrical Engineer

ボルタ河開発公社 北部地域配電部・タマレ事業所

Volta River Authority-Northern Electricity Department (VRA-NED), Tamale

Mr. Francis Babereyir	Ag. Area Manager
Mr. Collins Osei-Antini	District Supervisor
Mr. Gbemu Edmund	Area Engineer
Mr. Musah Ziblim	Assistant Chief Technical Engineer

ボルタ河開発公社 北部地域配電部・スンヤニ事業所

Volta River Authority-Northern Electricity Department (VRA-NED), Sunyani

Mr. Noble Dormenu	Area Manager
Mr. Edward Ayyee Aryeetey	District Supervisor
Mr. J. A. Koranteng	Assistant Chief Technical Engineer

ボルタ河開発公社 北部地域配電部・テチマン事業所

Volta River Authority-Northern Electricity Department (VRA-NED), Techiman

Mr. Charles Kwashie Dzikunu	Area Manager
Mr. Yamoah	Area Engineer
Mr. Joseph Arizie	District Supervisor
Mr. Hansen	Electrical Maintenance
Mr. Albert Dzeaku-Une	Line Maintenance

ボルタ河開発公社 北部地域配電部・アテブブ営業所

Volta River Authority-Northern Electricity Department (VRA-NED), Atebubu

Mr. Ofori Oduro-F	Station Supervisor
-------------------	--------------------

ボルタ河開発公社 北部地域配電部・イエジ営業所

Volta River Authority-Northern Electricity Department (VRA-NED), Yeji

Mr. Bless Yao Fiagbedzi Station Supervisor

ボルタ河開発公社 アコソンボ水力発電所

Volta River Authority (VRA) Akosombo Hydraulic Power Station

Mr. Akim Tijani Mghle Manager of Protection & Control, Hydro Generation Dept.

タマレ市役所 都市計画局

Tamale Municipal Assembly, Town & Country Planning Department

Mr. Zikiru Sulley Shittu Metro Director

開発学大学（農学部・再生可能資源学部）

University of Development Studies (UDS)

Mr. Kuname Ohene-Ampofo Facility Officer

タマレ技術専門学校

Tamale Polytechnic

Mr. Yakabu Iddrisu Registrar

タマレ教員養成学校

Tamale Collage of Education

Alh. Yakubu Bukari Principal of School

バガバガ教員養成学校

Baga-Baga Collage of Education

Mr. Issah Yakubu Vice President Administrator

タマレ職業訓練学校

Tamale Vocational Training Institute

Mr. Daniel Nortei Master of School

私立グリッチ・ビジネス学校

Grich Business Collage

Mrs. Gifty Opoku Head of School

ガーナ語学学校

Ghana Institute of Language

Mr. Benjamin Gbeglo Head of School

タマレ高等学校

Tamale Senior High School (TAMASCO)

Mr. Eugene Bawah

Assistant Head Master

トロン高等学校

Tolon Senior High School

Ms. Alice D. Achana

Head Master

ゴッド・ケアーズ・コミュニティ病院

God Cares Community Hospital

Dr. Opoku

Head of Hospital

ニャンパラヘルスセンター

Nyampala Health Centre

Ms. Mulika Fasasi

Head of Centre

トロンヘルスセンター

Tolon Health Centre

Mr. Adam Ali

Head of Centre

スンヤニ市役所 都市計画局

Sunyani Municipal Assembly, Town & Country Planning Department

Mr. Augustine Kusi

Municipal Town Planning Officer

私立スンヤニ・ビジネス高等学校

Sunyani Business Secondary School

Mr. Albert Lartey

Assistant Head Master

私立カトリック職業訓練学校

Catholic Technical Institute

Mr. Kaac Appiedu

Vice Catholic Association

チラ高等学校

Chiraa Senior High School

Mr. L.V. Tawiah

Assistant Head Master

スニヤニ州病院（ガーナヘルスサービス）

Sunyani Regional Hospital (Ghana Health Service / GHS)

Mr. A. Asare-Bediako Head of Administration

Mr. Vincent J. E. Tawiah Head of Finance

スニヤニ看護師訓練校

Nurse Training School Sunyani

Ms. Elisabeth Mensah Teacher

チラヘルスセンター

Chiraa Health Centre

Ms. Maccella Tenzagh Superintendent

ペキ教員養成学校

Peki College of Education

Mr. J.N.M. Bakko Principal

姫野 美子 青年海外協力隊（JOCV）

ペキ公立病院

Peki Governmental Hospital

Dr. Lawrence Yaw Kumi Doctor

Mr. Felix Korkor Accountant

Mr. Wisoom D. Adaku Pharmacy

Ms. Vincentia Hlorgbey Staff

アゴナ・ヌクワント診療所

Agona-Nkwanta Clinic

Ms. Gladys Kakraba Principal Enrolled Nurse

世界銀行ガーナ事務所

The World Bank Ghana Office

Mr. Sunil Mathranl Senior Energy Specialist

スイス大使館

Swiss State Secretariat for Economic Affaires

Mr. Seth Adjei Boye Programme Officer

Ms. Agatha Quayson Trade/Private Sector Development Specialist

フランス開発庁

Agence Francaise Development

Mr. Bruno Leclerc

Director

在ガーナ日本国大使館

Embassy of Japan in Ghana

望月 寿信

参事官

本田 真一

一等書記官

茂田 剛

一等書記官

倉田 裕史

二等書記官

JICA ガーナ事務所

JICA Ghana Office

稲村 次郎

所長

木藤 耕一

次長

相良 冬木

次長

大草 真紀

所員

4. 討議議事録 (M/D)

**Minutes of Discussions
on the Preparatory Survey on the Project for
Improvement of Power Distribution System in Ghana
(First Field Survey)**

In response to the request from the Government of the Republic of Ghana (hereinafter referred to as "Ghana"), the Government of Japan decided to conduct a Preparatory Survey (hereinafter referred to as "the Survey") on the Project for Improvement of Power Distribution System in Ghana (hereinafter referred to as "the Project") and entrusted the study to Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Ghana the Preparatory Survey Team (hereinafter referred to as "the Team"), which was headed by Dr. Akira Niwa, Senior Advisor, JICA, and the Team is scheduled to stay in the country from 21st November to 16th December, 2010.

The Team held discussions with the officials of authorities concerned of the Government of Ghana (hereinafter referred to as "the Ghanaian side"), and conducted a field survey.

In the course of the discussions, both the Ghanaian side and the Team (hereinafter referred to as "Both parties") have confirmed the main items described in the attachment.

Accra, Ghana, 9th December 2010

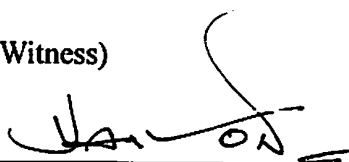


Dr. Akira Niwa
Team Leader
Preparatory Survey Team
Japan International Cooperation Agency



Mr. Okyere-Darko Ababio
Ag. Chief Director
Ministry of Energy
The Republic of Ghana

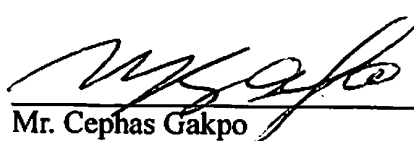
(Witness)



Mr. Yaw Okyere-Nyako
Director, ERM- Bilateral
Ministry of Finance and Economic Planning
The Republic of Ghana



Ing. I. Kirk Koffi
Deputy Chief Executive
(Engineering & Operations)
Volta River Authority
The Republic of Ghana



Mr. Cephas Gakpo
Managing Director
Electricity Company of Ghana
The Republic of Ghana

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve the distribution system to provide reliable and stable electricity for the benefit of communities within the Project sites.

2. Project Site

The Project Site will be identified through the Survey. The sites for the Survey presented by the Ghanaian side are as shown in Annex-1.

3. Responsible and Implementing Organizations

- (1) The responsible organization is the Ministry of Energy (MOE).
- (2) The implementing organizations are Volta River Authority (VRA) and Electricity Company of Ghana (ECG)
- (3) The organization chart of MOE, VRA and ECG are shown in Annex-2, Annex-3 and Annex-4 respectively.

4. Components Confirmed by Both parties

Both parties confirmed components for the Project proposed by Ghanaian side, which are shown in Annex-5.

JICA will assess the appropriateness of the components for Japan's Grant Aid and report the finding to the Government of Japan.

5. Japan's Grant Aid Scheme

- (1) The Ghanaian side has understood the Japan's Grant Aid Scheme explained by the Team as described in Annex-6.
- (2) The Ghanaian side will take the necessary measures, as described in Annex-7, for smooth implementation of the Project as prerequisites for the Japan's Grant Aid to be implemented.

6. Schedule of the Survey

The Team will continue the Survey in Ghana until December 16, 2010 and report the result to the Government of Japan. Based on the results of the Survey, JICA will send the next Preparatory Survey Team for Outline Design to Ghana subject to the approval of the Government of Japan.

7. Environmental and Social Considerations

- (1) The Ghanaian side agreed to ensure access to the site and undertake expropriation if necessary in order to secure the Project sites.
- (2) The Ghanaian side agreed to conduct the required environmental works, and obtain approval on environmental clearance for implementation of the Project.
- (3) The Ghanaian side agreed to comply with the JICA Guidelines for Environmental and Social Consideration (hereinafter referred to as "JICA Guidelines") as well as Ghanaian laws and regulations, and requested to prepare Environmental Checklist and Monitoring Form which are designated by JICA Guidelines for an outline design.

- (4) The Ghanaian side agreed to secure funding for and execution of the above environmental matters in a schedule as required for smooth execution of the Project.

8. Other Relevant Issues

(1) Status of the Survey

The Team explained that the purpose of the Survey is: to collect necessary information and data for 1) the evaluation of the relevance and appropriateness of the Project, 2) the identification of the priorities of the components of the Project, and 3) the identification of the issues to be cleared for the implementation of the Project.

Therefore, Project sites and components confirmed by Both parties would not necessarily be approved by the Government of Japan.

(2) Project organization

MOE shall organize related organizations for the implementation of the Project.

(3) Coordination among relevant agencies

The Team requested the Ghanaian side to ensure coordination among relevant donors and agencies for smooth implementation of the Project.

(4) Operation and Maintenance of the Facilities

The Team requested the Ghanaian side to secure proper operation and maintenance of the facilities provided under the Project.

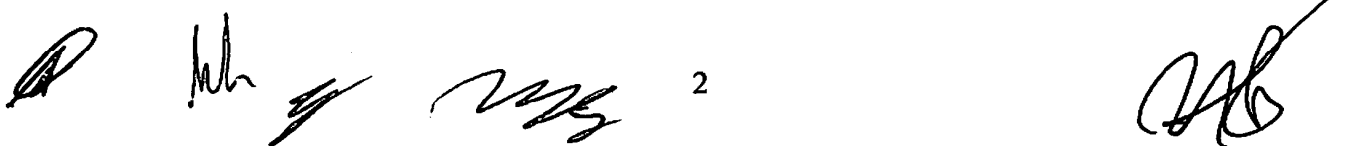
(5) Counterpart Personnel

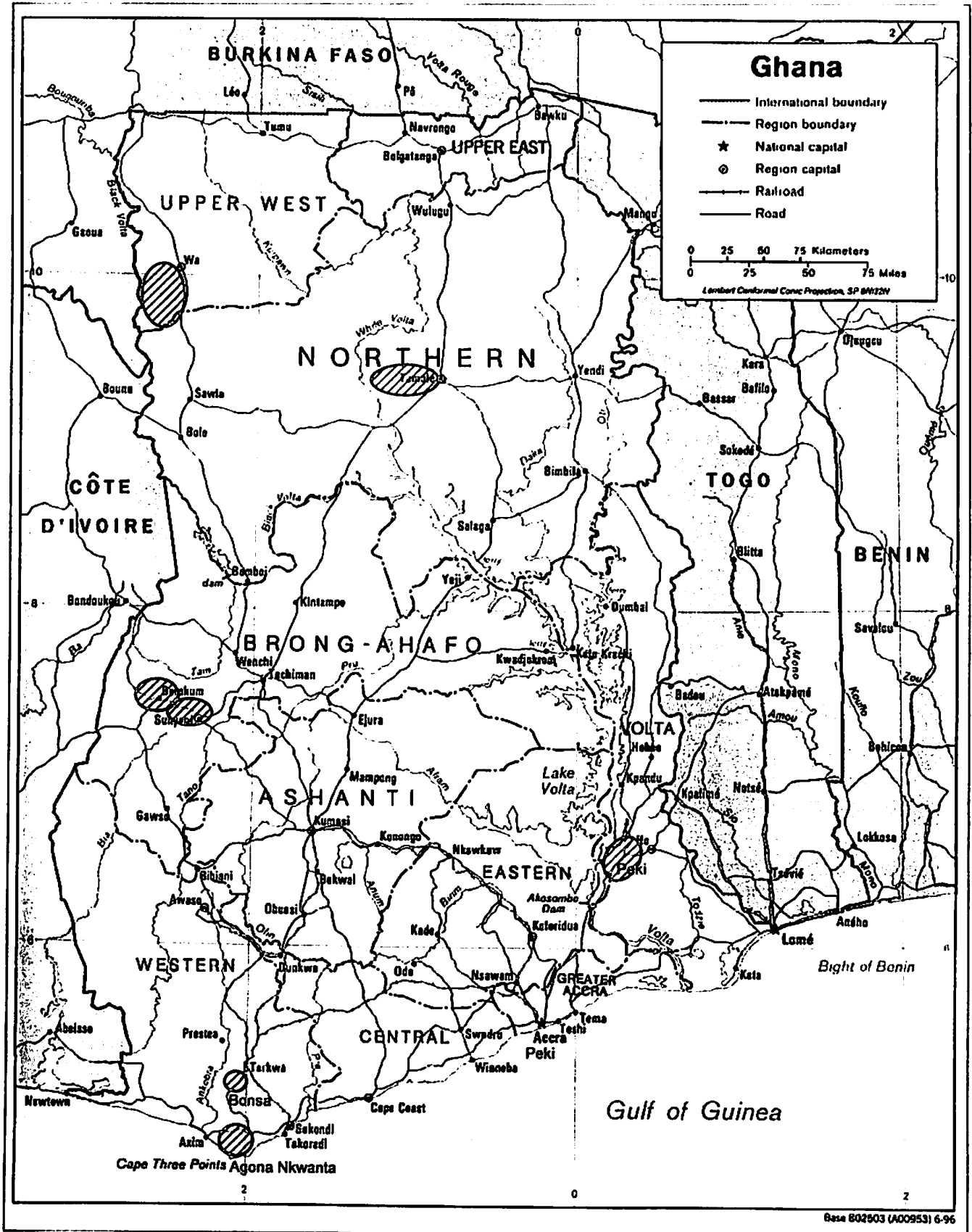
The Team requested the Ghanaian side that necessary number of counterpart personnel shall be assigned to the Team and necessary arrangements with related organizations shall be made during the Survey in Ghana.

(6) Questionnaires

The Team requested the Ghanaian side that the answers to the questionnaires which the Team had already submitted to the Ghanaian side shall be given to the Team by December 15, 2010.

(End)

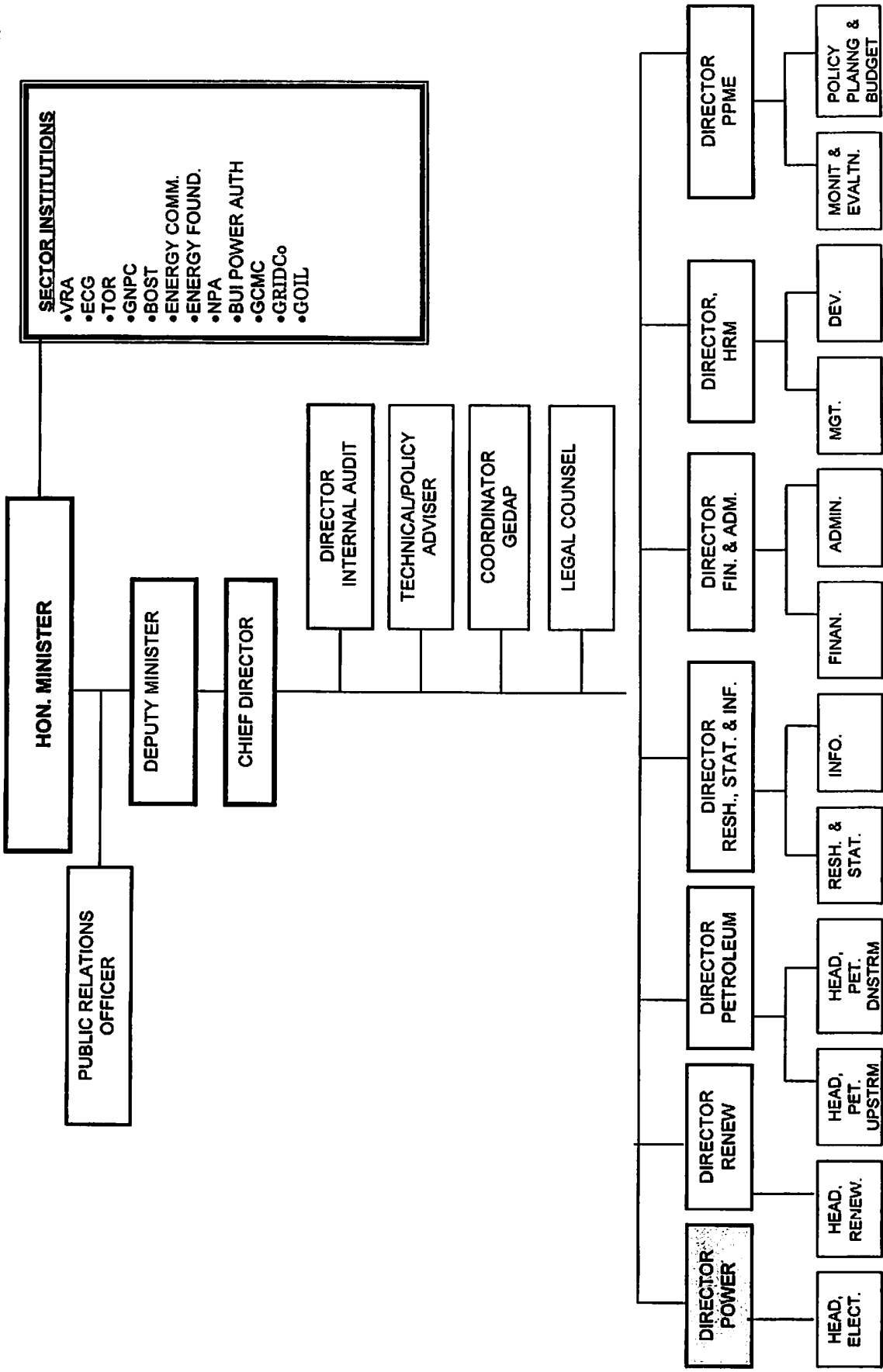
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The sites for the Survey

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Organization Chart of MOE

(Counterpart for the Project)

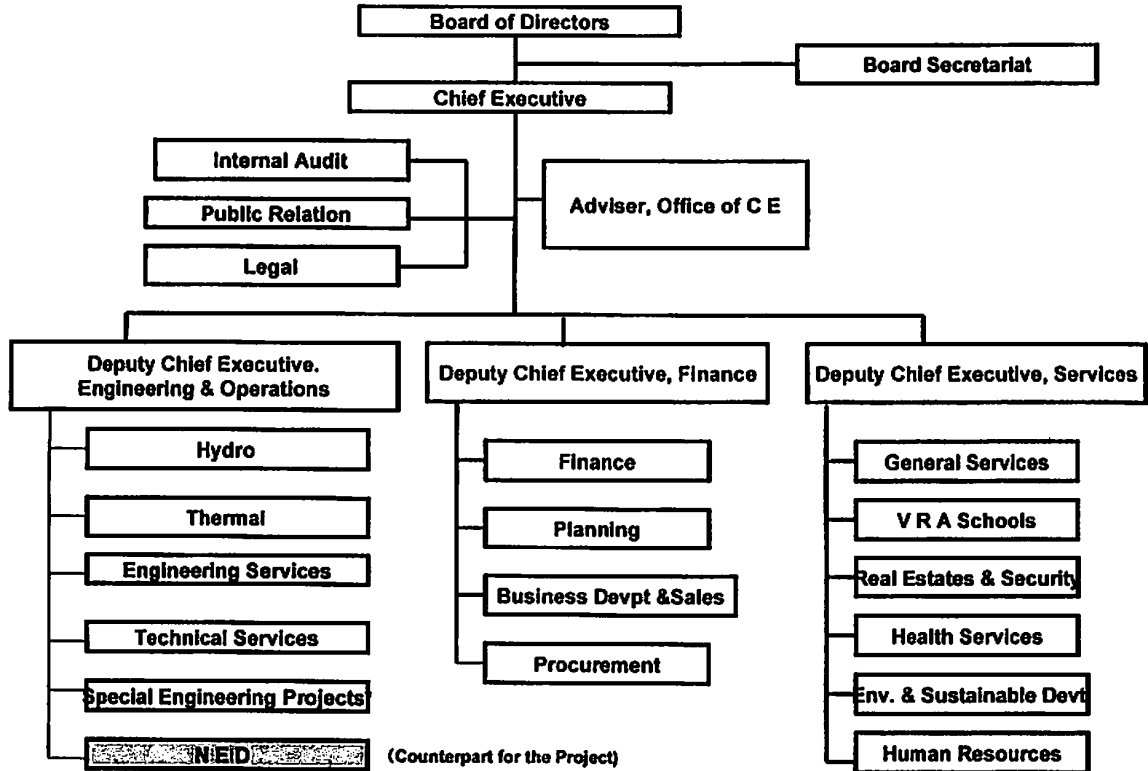
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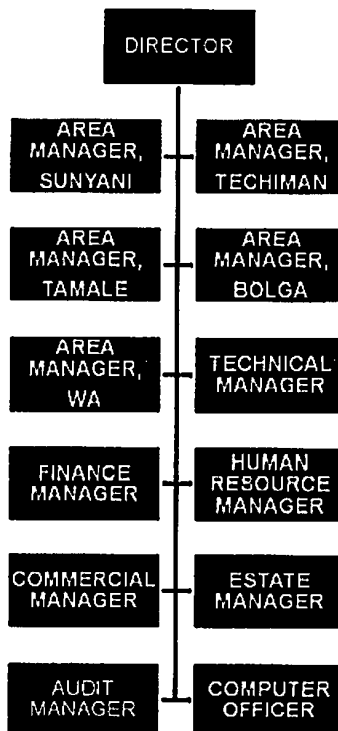
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VRA



NED

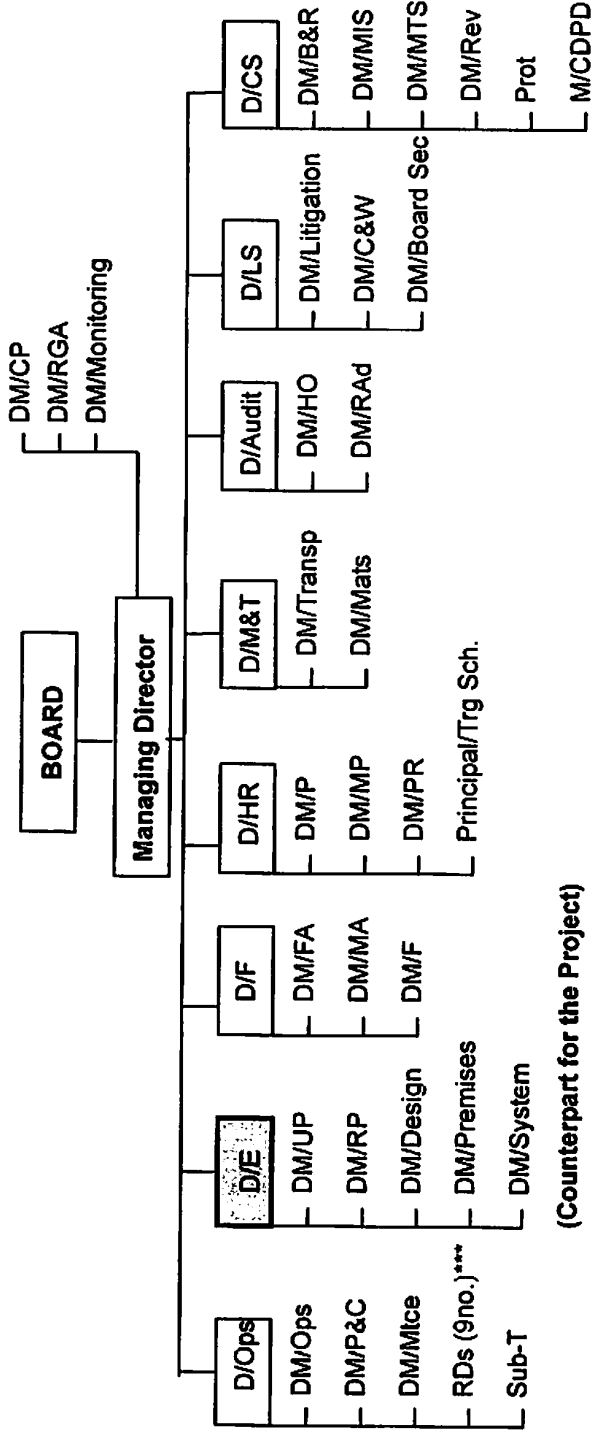


Organization Chart of VRA and NED

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(Counterpart for the Project)

B&R	- Billing & Revenue	Mtce	-	Maintenance	PR	-	Public Relation
C&W	- Contract & Wayleaves	Mat	-	Materials	RAAd	-	Regional Audit
D&C	- Design & Construction	MIS	-	Management Information Systems	RP	-	Rural Projects
DM	- Divisional Manager	MTS	-	Metering and Technical Services	Rev Prot	-	Revenue Protection
FA	- Financial Accounting	MP	-	Manpower	Sub-T	-	Sub-Transmission
F	- Finance	Ops	-	Operations	UP	-	Urban Projects
HO	- Head Office	P	-	Personnel	E	-	Engineering
MA	- Management Accounting	P&C	-	Protection & Control			

*** The 78no. District Offices operate under the 9no. Regional Directors

Organization Chart of ECG

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Components for the Project proposed by the Ghanaian side

BSP	Primary Substation	Contents of the main components	
[Improvement of Tamale distribution system in Northern Region]			
Tamale	Tamale	(1) Construction of UDS Primary Substation	
		1) Installation of a 34.5/11.5kV transformer (5MVA)	
		2) Installation of 34.5kV switchgears	
		3) Installation of 11.5kV switchgears	
		4) Installation of 11.5kV outgoing feeders	
		(2) Installation of a 34.5kV feeder line from Tamale BSP to UDS Primary Substation	
		1) Installation of a 34.5kV feeder line (Approx. 18km)	
		(3) Installation of an additional switchgear at Tamale BSP	
		1) Installation of a 34.5kV switchgear	
[Improvement of Sunyani distribution system in Brong-Ahafo Region]			
Sunyani	Sunyani	(1) Construction of Kotokrom Primary Substation	
		1) Installation of a 34.5/11.5kV transformer (5MVA)	
		2) Installation of 34.5kV switchgears	
		3) Installation of 11.5kV switchgears	
		4) Installation of 11.5kV outgoing feeders	
		(2) Installation of a 34.5kV feeder line from Sunyani BSP to Kotokrom Primary Substation	
		1) Installation of a 34.5kV feeder line (Approx. 23km)	
		(3) Installation of an additional switchgear at Sunyani BSP Substation	
		1) Installation of a 34.5kV switchgear	
[Improvement of Berekum distribution system in Brong-Ahafo Region]			
Sunyani	Berekum	(1) Construction of Berekum-II Primary Substation	
		1) Installation of a 34.5/11.5kV transformer (5MVA)	
		2) Installation of 34.5kV switchgears	
		3) Installation of 11.5kV switchgears	
		4) Installation of 11.5kV outgoing feeders	
		(2) Installation of a 34.5kV feeder line from Sunyani BSP to Berekum-II Primary Substation	
		1) Installation of a 34.5kV feeder line (Approx. 10km)	
		(3) Installation of an additional switchgear at Sunyani BSP	
		1) Installation of a 34.5kV switchgear	
[Improvement of Wa distribution system in Upper West Region]			
Sawla	Wa	(1) Construction of Wechiau Primary Substation	
		1) Installation of a 34.5/11.5kV transformer (2MVA)	
		2) Installation of 34.5kV switchgears	
		3) Installation of a 11.5kV switchgear	
		4) Installation of a 11.5kV outgoing feeder	
		(2) Installation of a 34.5kV feeder line from Charia to Wechiau Primary Substation	
		1) Installation of a 34.5kV feeder line (Approx. 50km)	
		(3) Installation of 34.5kV load break switches at Charee Junction	
		1) Installation 34.5kV load break switches	
[Improvement of Agona Nkwanta distribution system in Western Region]			
Essilama	Western C	(1) Construction of Agona-Nkwanta Primary Substation	
		1) Installation of a 33/11kV transformer (10MVA)	
		2) Installation of 33kV switchgears	
		3) Installation of 11kV switchgears	
		4) Installation of 11kV outgoing feeders	
		(2) Installation of a 33kV feeder line from Essilamae BSP to Agona-Nkwanta Primary Substation	
		1) Installation of a 33kV feeder line (Approx. 1km)	
[Improvement of Peki distribution system in Volta Region]			
Kpeve	Kpeve	(1) Installation of a 11kV line (Approx. 5km)	
	Tsito		(1) Construction of Peki Primary Substation
			1) Installation of a 33/11kV transformer (10MVA)
			2) Installation of 33kV switchgears
			3) Installation of 11kV switchgears
			4) Installation of 11kV outgoing feeders
			(2) Installation of a 33kV feeder line from Anum Bosso Junction to Peki Primary Substation
			1) Installation of a 33kV feeder line (Approx. 12km)
			(3) Installation of 33kV load break switches at Anum Bosso Junction
		1) Installation 33kV load break switches	
[Improvement of Bonsa distribution system in Western Region]			
Tarkwa	Atuabo	(1) Construction of Bonsa Primary Substation	
		1) Installation of a 33/11kV transformer (10MVA)	
		2) Installation of 33kV switchgears	
		3) Installation of 11kV switchgears	
		4) Installation of 11kV outgoing feeders	

JAPAN'S GRANT AID

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as a part of this realignment, a new JICA law was entered into effect on October 1, 2008. Based on this law and the decision of the GOJ, JICA has become the executing agency of the Grant Aid for General Projects, for Fisheries and for Cultural Cooperation, etc.

The Grant Aid is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

The Japanese Grant Aid is supplied through following procedures:

- Preparatory Survey
 - The Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
 - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
 - Agreement concluded between JICA and a recipient country
- Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.

- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed based on the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the Government of the recipient country or its designated authority deem it necessary, the Grant Aid may be used for the purchase of the products or

services of a third country. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals".

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant Aid, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant Aid.

(7) "Export and Re-export"

The products purchased under the Grant Aid should not be exported or re-exported from the recipient country.

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Social and Environmental Considerations

A recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.

Major undertakings to be taken by each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	to secure [a lot] /[lots] of land necessary for the implementation of the Project and to clear the [site]/[sites];		●
2	To construct the following facilities		
	1) The building	●	
	2) The gates and fences in and around the site		●
	3) The parking lot	●	
	4) The road within the site	●	
	5) The road outside the site		●
3	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the [site]/[sites]		
	1) Electricity		
	a. The distributing power line to the site		●
	b. The drop wiring and internal wiring within the site	●	
	c. The main circuit breaker and transformer	●	
	2) Water Supply		
	a. The city water distribution main to the site		●
	b. The supply system within the site (receiving and elevated tanks)	●	
	3) Drainage		
	a. The city drainage main (for storm sewer and others to the site)		●
	b. The drainage system (for toilet sewer, common waste, storm drainage and others) within the site	●	
	4) Gas Supply		
	a. The city gas main to the site		●
	b. The gas supply system within the site	●	
	5) Telephone System		
	a. The telephone trunk line to the main distribution frame/panel (MDF) of the building		●
	b. The MDF and the extension after the frame/panel	●	
	6) Furniture and Equipment		
	a. General furniture		●
	b. Project equipment	●	
4	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products		
	1) Marine (Air) transportation of the Products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the Products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services [be exempted] / [be borne by the Authority without using the Grant]		●
6	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
7	To ensure that [the Facilities and the products]/[the Facilities]/ [the products] be maintained and used properly and effectively for the implementation of the Project		●
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
9	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
10	To give due environmental and social consideration in the implementation of the Project.		●

*1 B/A : Banking Arrangement, A/P : Authorization to pay) *2 If the environmental screening category is C, No. 10 is unnecessary

**Minutes of Discussions
on the Preparatory Survey on the Project for
Improvement of Power Distribution System in Ghana
(Second Field Survey)**

In response to the request from the Government of the Republic of Ghana (hereinafter referred to as "Ghana"), Japan International Cooperation Agency (hereinafter referred to as "JICA"), in consultation with the Government of Japan, decided to conduct a Preparatory Survey (hereinafter referred to as "the Survey") on the Project for Improvement of Power Distribution System in Ghana (hereinafter referred to as "the Project").

JICA conducted a first field survey and through discussions and field survey, JICA examined the appropriateness of requested sites and components.

In order to explain the result of the first field survey and conduct further study, JICA sent a Second Preparatory Survey Team (hereinafter referred to as "the Team"), which was headed by Mr. Toshinobu Kato, Deputy Director General, Industrial Development Department of JICA, and the Team is scheduled to stay in the country from 25th January to 23rd February, 2011.

The Team held discussions with the officials of the Government of Ghana and relevant agencies (hereinafter referred to as "the Ghanaian side"), and conducted a field survey.

In the course of the discussions, both the Ghanaian side and the Team (hereinafter referred to as "Both parties") have confirmed the main items described in the attachment.

Accra, Ghana, 28th January 2011

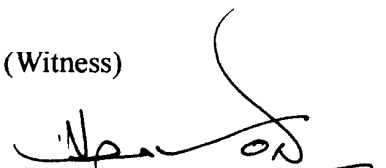


Mr. Toshinobu Kato
Team Leader
Preparatory Survey Team
Japan International Cooperation Agency



Mr. Okyere-Darko Ababio
Ag. Chief Director
Ministry of Energy
The Republic of Ghana

(Witness)



Mr. Yaw Okyere-Nyako
Director, ERM- Bilateral
Ministry of Finance and Economic Planning
The Republic of Ghana



Ing. I. Kirk Koffi
Deputy Chief Executive
(Engineering & Operations)
Volta River Authority
The Republic of Ghana

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve the distribution system to provide reliable and stable electricity in the Project sites.

2. Project Site

Through the result of the first field survey and discussions, both parties confirmed that the Project sites are selected as below and as shown in Annex-1.

- (1) Tamale in Northern Region
- (2) Sunyani in Brong-Ahafo Region

3. Responsible and Implementing Organizations

- (1) The responsible organization is the Ministry of Energy (MOE).
- (2) The implementing organization is Volta River Authority (VRA).
- (3) The organization chart of MOE and VRA are shown in Annex-2 and Annex-3 respectively.

4. Components Requested by the Government of Ghana

Both parties confirmed the following components for the Project to be studied and designed.

- (1) Improvement of Tamale distribution system in Northern Region
 - 1) Construction of UDS Primary Substation (34.5/11.5kV, 5MVA)
 - 2) Installation of a 34.5kV feeder line from Tamale BSP to UDS Primary Substation (Approx. 18km)
- (2) Improvement of Sunyani distribution system in Brong-Ahafo Region
 - 1) Construction of Kotokrom Primary Substation (34.5/11.5kV, 5MVA)
 - 2) Installation of a 34.5kV feeder line from Sunyani BSP to Kotokrom Primary Substation (Approx. 6km)

JICA will assess the appropriateness of the components for Japan's Grant Aid and report the finding to the Government of Japan.

5. Japan's Grant Aid Scheme

- (1) The Ghanaian side has understood the Japan's Grant Aid Scheme explained by the Team as described in Annex-4.
- (2) The Ghanaian side will take the necessary measures, as described in Annex-5, for smooth implementation of the Project as prerequisites for the Japan's Grant Aid to be implemented.

6. Schedule of the Survey

- (1) The Team will continue the Survey in Ghana until February 23rd, 2011.
- (2) JICA will prepare a Draft Final Report in English and send a mission around May 2011 to explain the contents of the Draft Final Report.

- (3) In case that the contents of the Draft Final Report are accepted in principle by the Government of Ghana, JICA will complete the Final Report and send it to the Government of Ghana around July 2011.

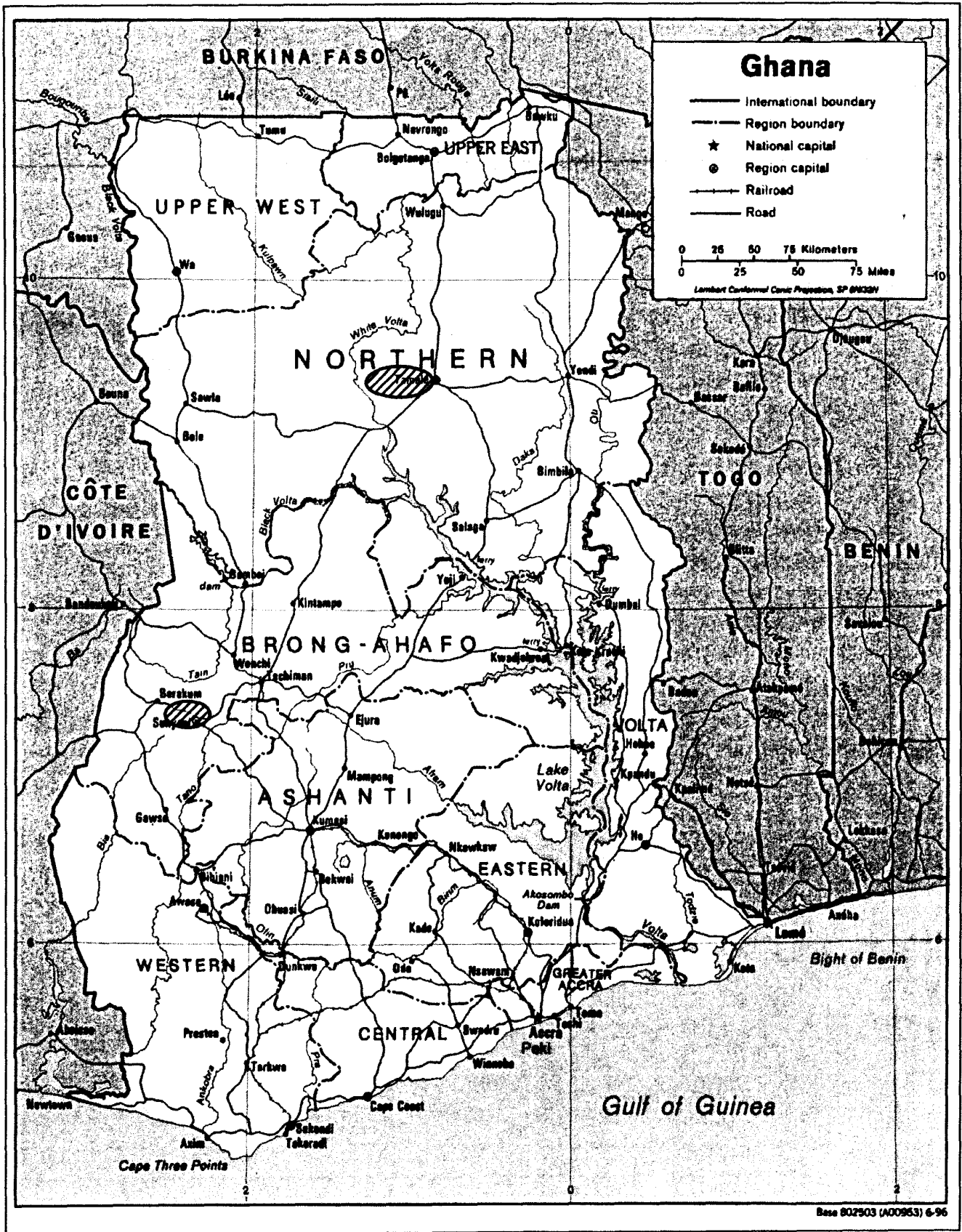
7. Environmental and Social Considerations

- (1) The Ghanaian side agreed to comply with the JICA Guidelines for Environmental and Social Consideration (hereinafter referred to as "JICA Guidelines") as well as Ghanaian laws and regulations, and is requested to prepare Environmental Checklist and Monitoring Form which are designated by JICA Guidelines for an outline design.
- (2) The Ghanaian side agreed to secure lands necessary for implementation of the Project by the beginning of May 2011.
- (3) The Ghanaian side agreed to conduct the required environmental works, and obtain approval on environmental clearance for implementation of the Project by the beginning of May 2011.
- (4) The Ghanaian side agreed to secure funding for and execution of the above environmental and social matters in a schedule as required for smooth execution of the Project.

8. Other Relevant Issues

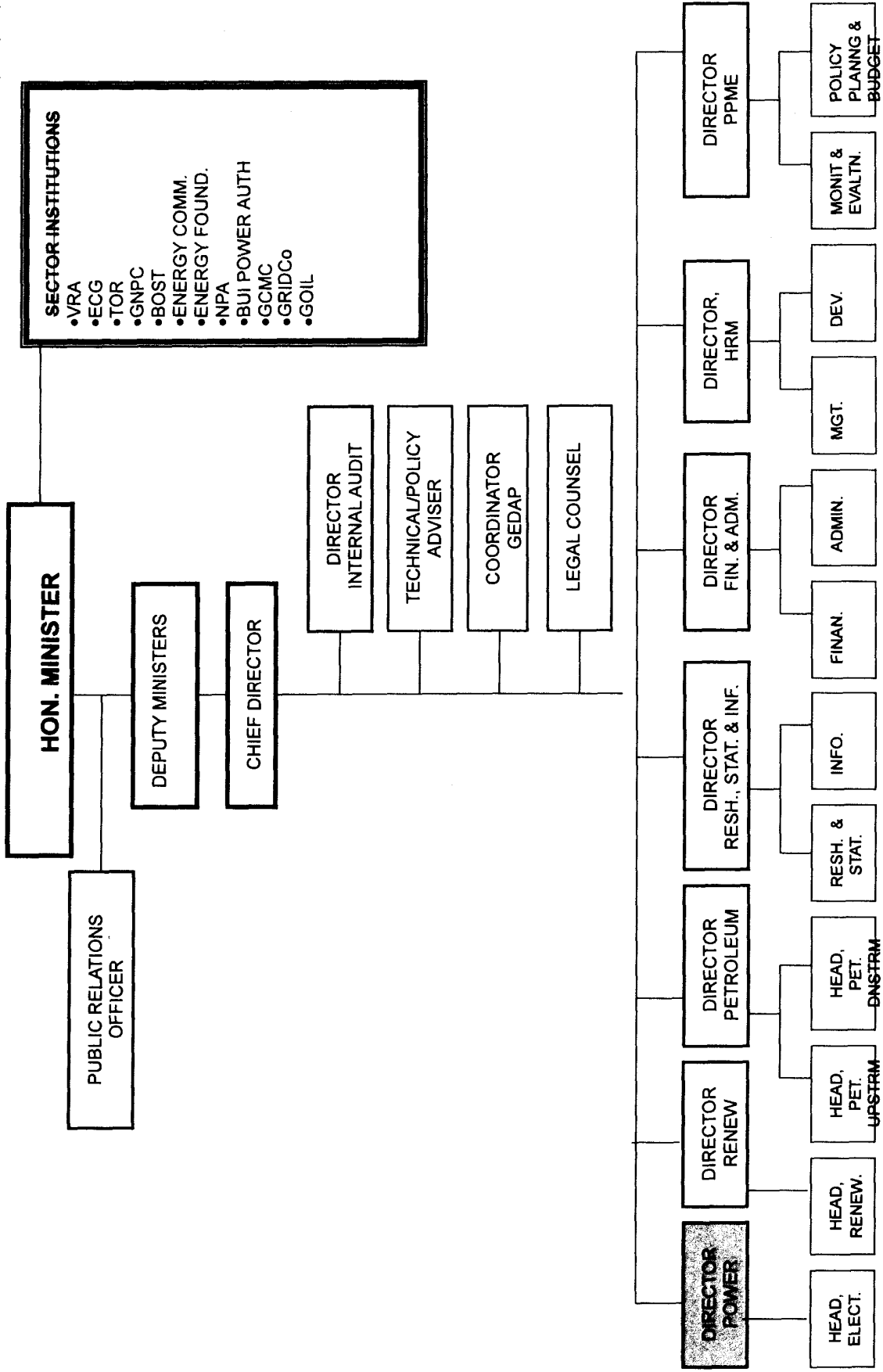
- (1) The Team requested the Ghanaian side that the answers to the questionnaires which the Team had already submitted to the Ghanaian side shall be given to the Team by February 14, 2011.
- (2) The Team requested the Ghanaian side that necessary number of counterpart personnel shall be assigned to the Team and necessary arrangements with related organizations shall be made during the Survey in Ghana.
- (3) MOE ensured that there is no overlap of similar support by other donor agencies for the Project.

(End)



The Location Map for the Project sites

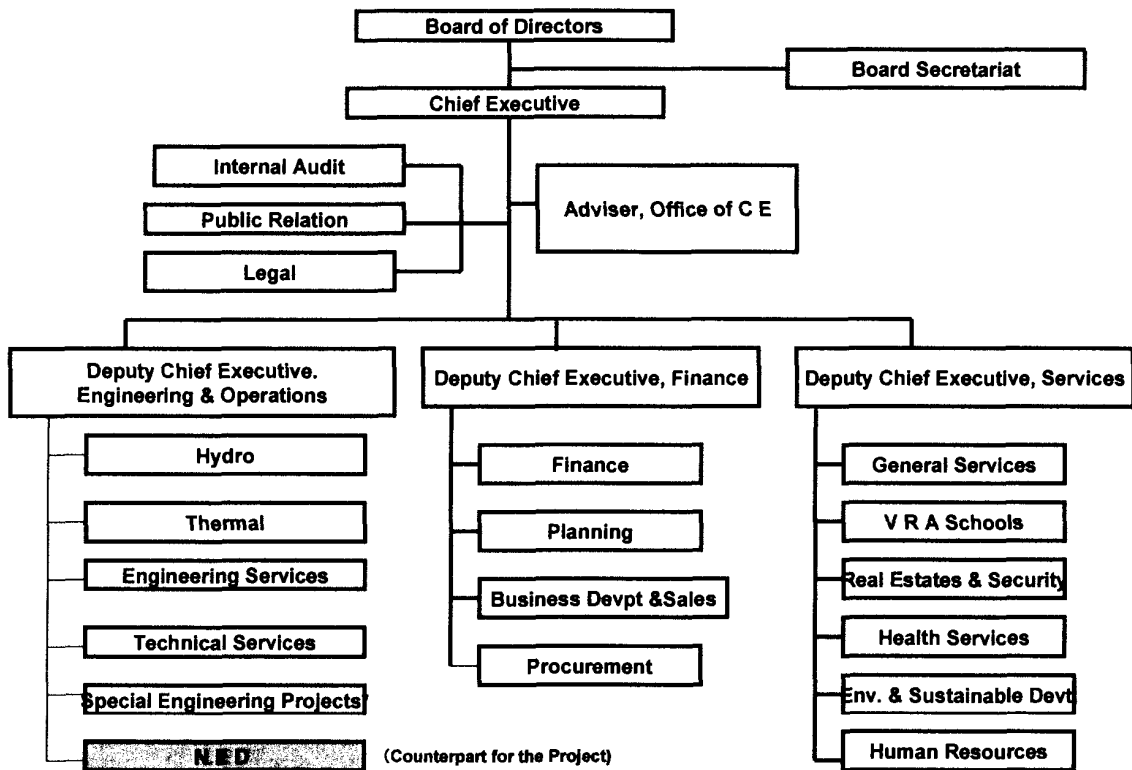
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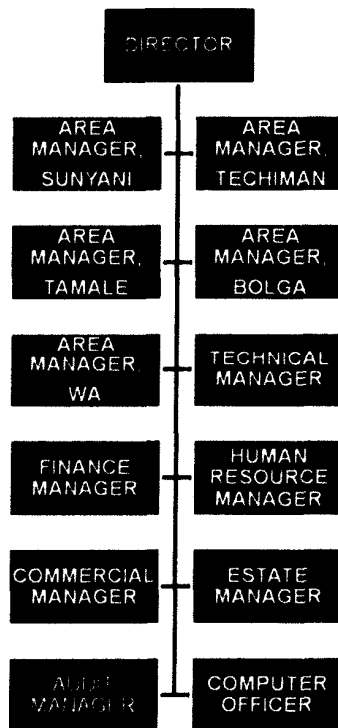
(Counterpart for the Project)

Organization Chart of MOE

VRA



NED



Organization Chart of VRA and NED

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JAPAN'S GRANT AID

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as a part of this realignment, a new JICA law was entered into effect on October 1, 2008. Based on this law and the decision of the GOJ, JICA has become the executing agency of the Grant Aid for General Projects, for Fisheries and for Cultural Cooperation, etc.

The Grant Aid is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

The Japanese Grant Aid is supplied through following procedures:

- Preparatory Survey
 - The Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
 - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
 - Agreement concluded between JICA and a recipient country
- Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey**(1) Contents of the Survey**

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.

- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed based on the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the Government of the recipient country or its designated authority deem it necessary, the Grant Aid may be used for the purchase of the products or

services of a third country. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals".

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant Aid, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant Aid.

(7) "Export and Re-export"

The products purchased under the Grant Aid should not be exported or re-exported from the recipient country.

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Social and Environmental Considerations

A recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.

2

Major undertakings to be taken by each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	to secure [a lot] /[lots] of land necessary for the implementation of the Project and to clear the [site]/[sites];		●
2	To construct the following facilities		
	1) The building	●	
	2) The gates and fences in and around the site		●
	3) The parking lot	●	
	4) The road within the site	●	
	5) The road outside the site		●
3	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the [site]/[sites]		
	1)Electricity		
	a. The distributing power line to the site		●
	b. The drop wiring and internal wiring within the site	●	
	c. The main circuit breaker and transformer	●	
	2) Water Supply		
	a. The city water distribution main to the site		●
	b. The supply system within the site (receiving and elevated tanks)	●	
	3) Drainage		
	a. The city drainage main (for storm sewer and others to the site)		●
	b. The drainage system (for toilet sewer, common waste, storm drainage and others) within the site	●	
	4) Gas Supply		
	a. The city gas main to the site		●
	b. The gas supply system within the site	●	
	5) Telephone System		
	a. The telephone trunk line to the main distribution frame/panel (MDF) of the building		●
	b. The MDF and the extension after the frame/panel	●	
	6) Furniture and Equipment		
	a. General furniture		●
	b. Project equipment	●	
4	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products		
	1) Marine (Air) transportation of the Products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the Products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services [be exempted] / [be borne by the Authority without using the Grant]		●
6	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
7	To ensure that [the Facilities and the products]/[the Facilities]/ [the products] be maintained and used properly and effectively for the implementation of the Project		●
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
9	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
10	To give due environmental and social consideration in the implementation of the Project.		●

*1 B/A : Banking Arrangement, A/P : Authorization to pay) *2 If the environmental screening category is C, No. 10 is unnecessary

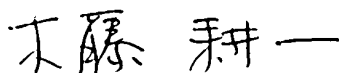
**Minutes of Discussions
on the Preparatory Survey on the Project for
Improvement of Power Distribution System in Ghana
(Third Field Survey)**

In response to the request from the Government of the Republic of Ghana (hereinafter referred to as “Ghana”), Japan International Cooperation Agency (hereinafter referred to as “JICA”), in consultation with the Government of Japan, decided to conduct a Preparatory Survey (hereinafter referred to as “the Survey”) on the Project for Improvement of Power Distribution System in Ghana (hereinafter referred to as “the Project”).

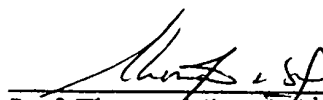
In order to facilitate the implementation of the project preparation, JICA sent to Ghana the 3rd Preparatory Survey Team (hereinafter referred to as “the Team”), headed by Mr. Koichi Kito, Senior Representative of JICA Ghana office, from 22nd May to 28th May, 2011.

In the course of the discussions, both the Ghanaian side and the Team (hereinafter referred to as “Both parties”) have confirmed the main items described in the attachment.

Accra, Ghana, 27th May, 2011



Mr. Koichi Kito
Team Leader
Preparatory Survey Team
Japan International Cooperation Agency



Prof. Thomas Mba Akabzaa
Chief Director
Ministry of Energy
The Republic of Ghana

(Witness)



Mr. Yaw Okyere-Nyako
Director, ERM- Bilateral
Ministry of Finance and Economic Planning
The Republic of Ghana



Ing. I. Kirk Koffi
Deputy Chief Executive
(Engineering & Operations)
Volta River Authority
The Republic of Ghana

ATTACHMENT

1. Situation around the Project

The Team explained to the Ghanaian side that due to unexpected circumstances caused by earthquake in Japan, JICA cannot conclude discussions yet on the Project with the authorities concerned of the Government of Japan, therefore, it is also difficult to assume when and whether the cabinet approval for the project would be obtained.

However, in order to prepare for the appraisal by the Government of Japan, Both parties confirmed in principle the contents of a proposed Draft Final Report and agreed that the attached Draft Minutes of Discussions should be signed without major revisions after Draft Final Report is accepted by the authorities concerned of the Government of Japan.

2. Environmental and Social Considerations

- (1) The Ghanaian side agreed to secure lands necessary for implementation of the Project by the beginning of August 2011.
- (2) The Ghanaian side agreed to conduct the required environmental works, and obtain approval on environmental clearance for implementation of the Project by the beginning of August 2011.
- (3) The Ghanaian side agreed to secure funding for and execution of the above environmental and social matters in a schedule as required for smooth execution of the Project.

3. Confidentiality of the Project

Both parties agreed that all the information related to the Project including the estimated cost to be borne by the Ghanaian side for the Project should never be disclosed to any outside parties before the conclusion of all contracts for the Project.

(End)

[List of Annex]

Annex-1: Draft Minute of Discussions for the Explanation on Draft Final Report

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Annex-1

**(Draft) Minutes of Discussions
on the Preparatory Survey on the Project for
Improvement of Power Distribution System in Ghana
(Explanation on Draft Final Report)**

In response to the request from the Government of the Republic of Ghana (hereinafter referred to as “Ghana”), Japan International Cooperation Agency (hereinafter referred to as “JICA”), in consultation with the Government of Japan, decided to conduct a Preparatory Survey (hereinafter referred to as “the Survey”) on the Project for Improvement of Power Distribution System in Ghana (hereinafter referred to as “the Project”).

In order to explain and to consult with the officials of the Government of Ghana and relevant agencies (hereinafter referred to as “the Ghanaian side”) on the components of the Draft Final Report, JICA sent to Ghana the 4th Preparatory Survey Team (hereinafter referred to as “the Team”), headed by **, from ** to **.

In the course of the discussions, both the Ghanaian side and the Team (hereinafter referred to as “Both parties”) have confirmed the main items described in the attachment.

Accra, Ghana, ****

Mr. Koichi Kito
Team Leader
Preparatory Survey Team
Japan International Cooperation Agency

Prof. Thomas Mba Akabzaa
Chief Director
Ministry of Energy
The Republic of Ghana

(Witness)

Mr. Yaw Okyere-Nyako
Director, ERM- Bilateral
Ministry of Finance and Economic Planning
The Republic of Ghana

Ing. I. Kirk Koffi
Deputy Chief Executive
(Engineering & Operations)
Volta River Authority
The Republic of Ghana

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ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve the distribution system to provide reliable and stable electricity in the Project sites.

2. Contents of the Draft Final Report

The Ghanaian side accepted in principle the contents of the Draft Final Report explained by the Team.

3. Components of the Project

The outline of the Project components selected through 1st and 2nd Preparatory Survey is shown in Annex-1. Annex-2 shows the location of project sites.

4. Responsible and Implementing Organizations

- (1) The responsible organization is the Ministry of Energy (MOE).
- (2) The implementing organization is Volta River Authority (VRA).
- (3) The organization chart of MOE and VRA are shown in Annex-3 and Annex-4 respectively.

5. Japan's Grant Aid Scheme

- (1) The Ghanaian side has understood the Japan's Grant Aid Scheme explained by the Team as described in Annex-5.
- (2) The Ghanaian side will take the necessary measures, as described in Annex-6, for smooth implementation of the Project as prerequisites for the Japan's Grant Aid to be implemented.

6. Project Cost

The Team explained that the estimated cost for the Project as described in Annex-7 contains procurement cost of equipment, transportation cost up to the Project site, installation cost and the Consultant fee.

The Ghanaian side understood that the estimated cost for the Project is not final and is subject to change as a result of further examination by the Government of Japan for the approval of the Grant Aid.

7. Confidentiality of the Project

Both parties agreed that all the information related to the Project including the outline design drawings, technical specifications, and estimated cost for the Project should never be duplicated or disclosed to any outside parties before the conclusion of all contracts for the Project.

8. Environmental and Social Considerations

- (1) The Ghanaian side agreed to comply with the JICA Guidelines for Environmental and Social Consideration (hereinafter referred to as "JICA Guidelines") as well as Ghanaian laws and regulations.
- (2) The environmental and social considerations including major impacts and mitigation measures

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for the Project are summarized in the Environmental Checklist agreed in the Draft Final Report.

- (3) Monitoring for Environmental and Social considerations will be conducted by VRA in accordance with the Monitoring Plan for the Project agreed in the Draft Final Report. The results will be provided to JICA by filling in the Monitoring Form as described in Annex-8, as part of progress reports during the construction phase.
- (4) Both parties confirmed that lands necessary for implementation of the Project had been secured as described in Annex-9.
- (5) Both parties confirmed that Environmental Permission for the Project had been obtained as described in Annex-10.

9. Other Relevant Issues

- (1) The Team requested the Ghanaian side that necessary number of counterpart personnel shall be assigned to the Team and necessary arrangements with related organizations shall be made during the implementing stage in Ghana.
- (2) The Ghanaian side agreed that authorizations and permissions required for the construction works of the Project shall be obtained by the Ghanaian side.
- (3) The Ghanaian side agreed to undertake the following particular items out of general undertakings described in Annex-4.
 - 1) Securing of the necessary land for the new substations, 34.5 kV sub-transmission lines and 11.5 kV distribution lines
 - 2) Leveling, preparation, weeding and removal of obstacles at the construction sites
 - 3) Implementation of road work (Access roads to the project sites)
 - 4) Auxiliary works for the new substations (Water supply work, drainage work, telephone work, procurement of furniture)
 - 5) Tax exemption and custom clearance at the port of landing of the materials and equipment for the Project
 - 6) Exemption or payment of VAT on locally procured materials
 - 7) Payment of expenses not include in the grant aid
 - 8) Payment for commissions for banking arrangement

(End)

[List of Annex]

- Annex-1: Outline of the Project components
- Annex-2: Project Sites
- Annex-3: Organization Chart of MOE
- Annex-4: Organization Chart of VRA
- Annex-5: Japan's Grant Aid
- Annex-6: Major Undertakings to be taken by Each Government
- Annex-7: Estimated Project Cost (Confidential)
- Annex-8: Monitoring Form
- Annex-9: Lands Permission.
- Annex-10: Environmental Permission

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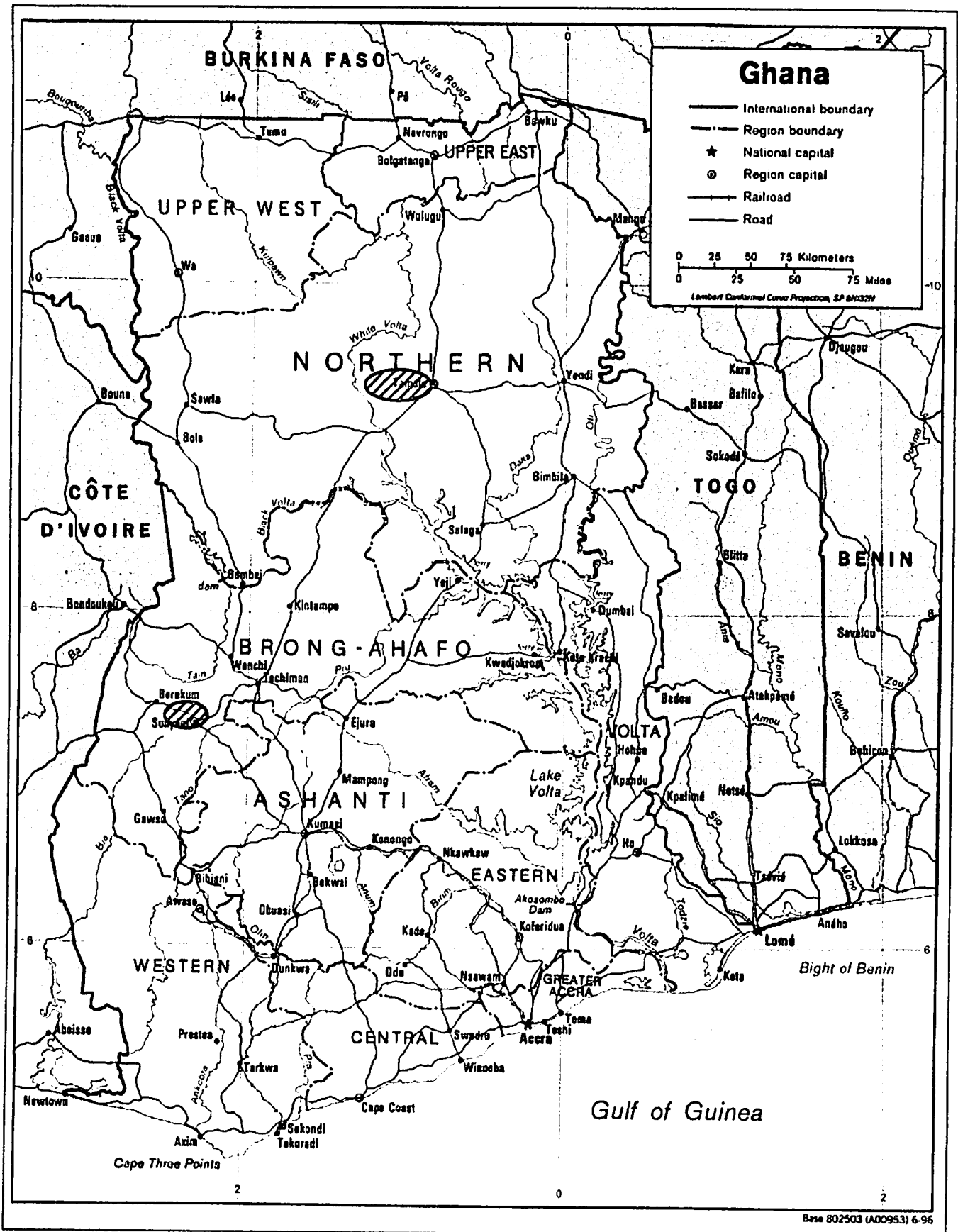
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Component of the Project

Category	Improvement of Distribution System in Tamale Area (Northern Region)	Improvement of Distribution System in Sunyani Area (Brong-Ahafo Region)
Procurement and Installation of Equipment	<ol style="list-style-type: none"> 1. Construction of UDS Primary Substation <ol style="list-style-type: none"> (1) Transformer (34.5/11.5 kV, 7.5 MVA): 1 set (2) 34.5 kV Switchgear Cubicle: 2 sets (3) 11.5 kV Switchgear Cubicle: 5 sets (4) Station transformer (11.5/0.43 kV, 100 kVA): 1 set (5) Substation building (single story, floor area of some 260 m²) 2. 34.5 kV Sub-transmission line (between Tamale BSP and the UDS Primary Substation): approx. 19 km (including underground section: approx.. 5 km) 3. 11.5 kV distribution lines (from new UDS Primary Substation to the existing distribution lines) <ol style="list-style-type: none"> (1) UDS feeder: approx. 0.2 km (2) Tolon feeder: approx. 0.7 km (3) Cheshegu feeder: approx. 0.3 km 4. Extension 34.5 kV Switchgear at Tamale BSP: 3 sets 	<ol style="list-style-type: none"> 1. Construction of Kotokrom Primary Substation <ol style="list-style-type: none"> (1) Transformer (34.5/11.5 kV, 7.5 MVA): 1 set (2) 34.5 kV Switchgear Cubicle: 2 sets (3) 11.5 kV Switchgear Cubicle: 5 sets (4) Station transformer (11.5/0.43 kV, 100 kVA): 1 set (5) Substation building (single story, floor area of some 260 m²) 2. 34.5 kV Sub-transmission line (between Sunyani BSP to new Kotokrom Primary Substation): approx. 8.5 km (including underground section: approx.. 0.5 km) 3. 11.5 kV distribution lines (from new Kotokrom Primary Substation to the existing distribution lines) <ol style="list-style-type: none"> (1) Hospital feeder: approx. 4.3 km (2) New Dormaa feeder: approx. 0.6 km (3) Chiraa feeder: approx. 0.7 km 4. Extension 34.5 kV Switchgear at Sunyani BSP: 3 sets 5. Ring main unit (RMU): 1 set
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The Location Map for the Project sites

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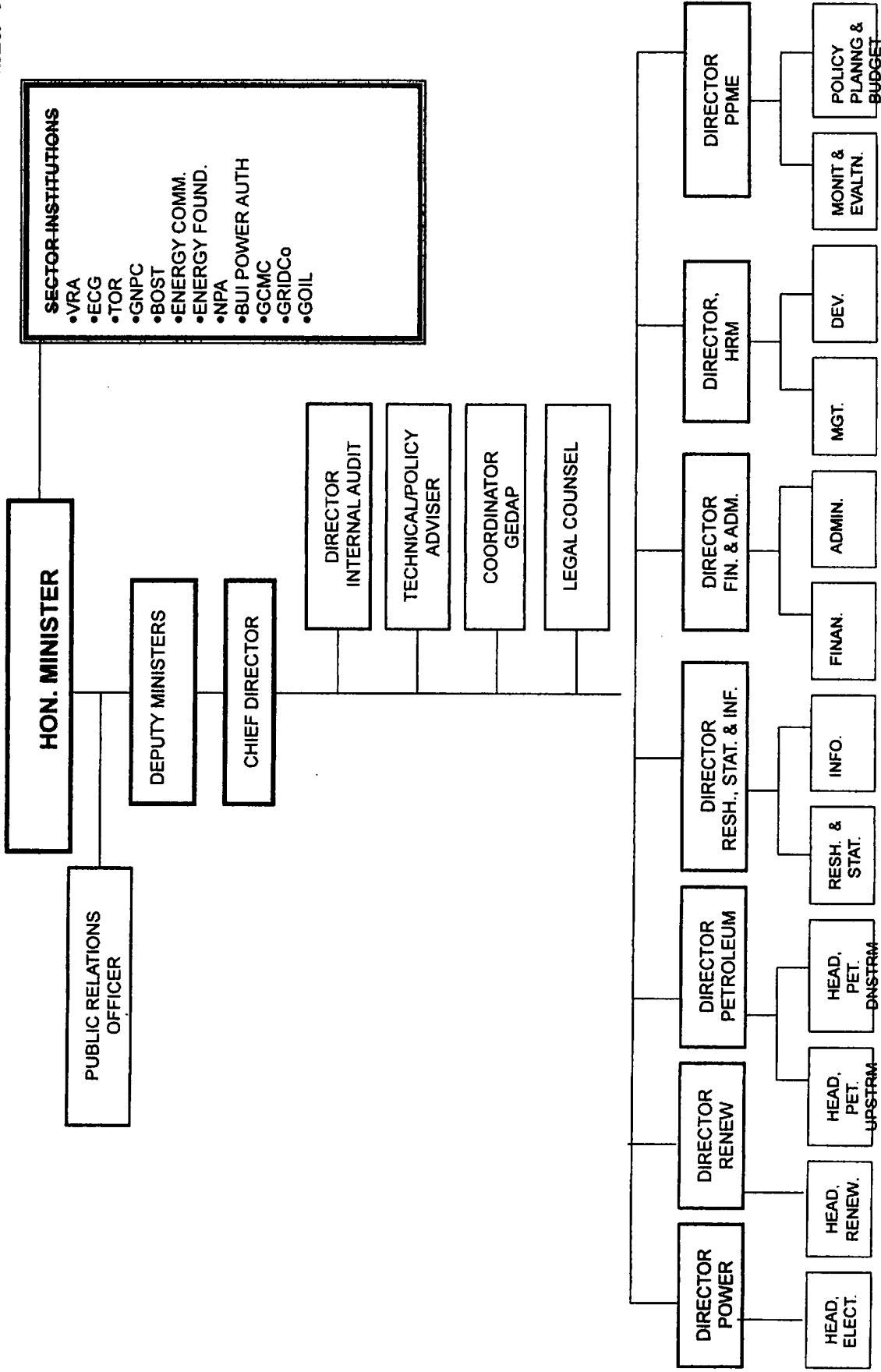
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Annex-3

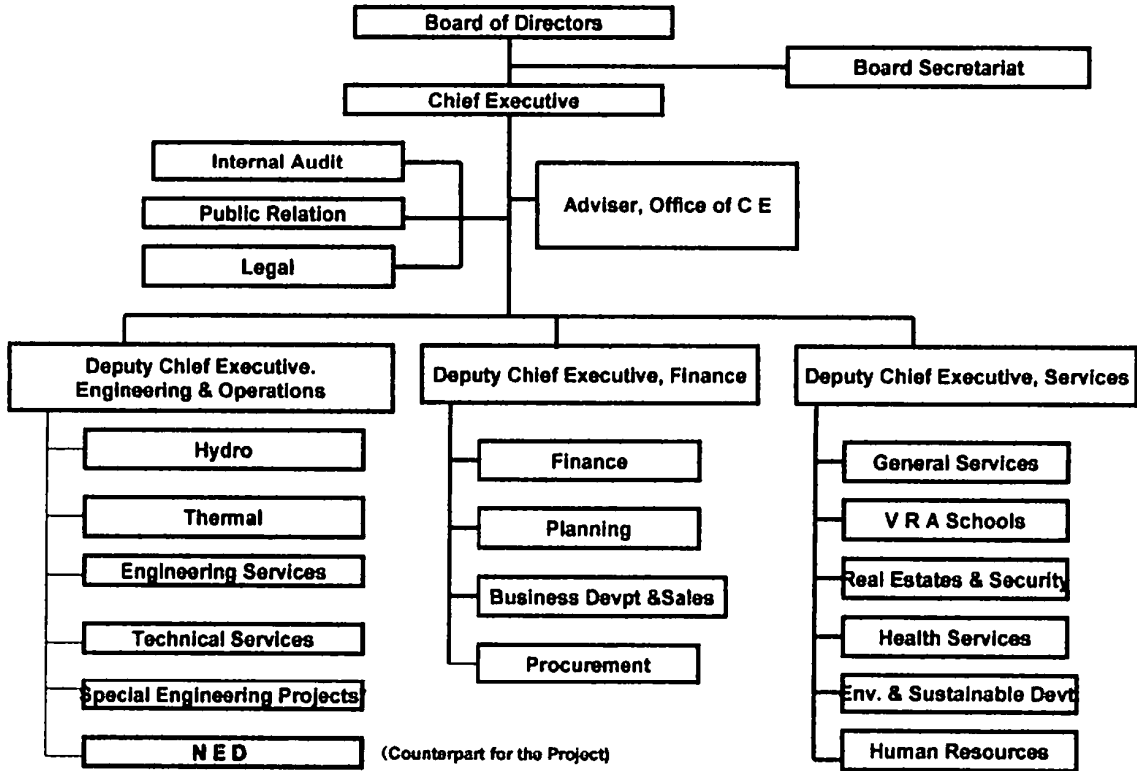


(Counterpart for the Project)

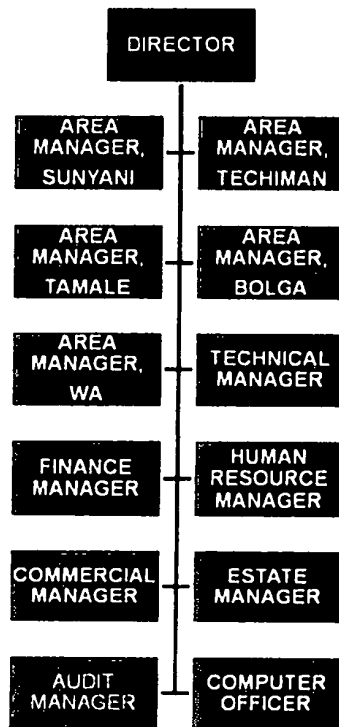
Organization Chart of MOE

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VRA



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Organization Chart of VRA and NED

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JAPAN'S GRANT AID

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2. Preparatory Survey

(1) Contents of the Survey

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- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
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- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

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services of a third country. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals".

(4) Necessity of "Verification"

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(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex.

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The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant Aid, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant Aid.

(7) "Export and Re-export"

The products purchased under the Grant Aid should not be exported or re-exported from the recipient country.

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Social and Environmental Considerations

A recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.

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Major undertakings to be taken by each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	to secure [a lot] /[lots] of land necessary for the implementation of the Project and to clear the [site]/[sites];		•
2	To construct the following facilities		
	1) The building	•	
	2) The gates and fences in and around the site		•
	3) The parking lot	•	
	4) The road within the site	•	
	5) The road outside the site		•
3	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the [site]/[sites]		
	1)Electricity		
	a. The distributing power line to the site		•
	b. The drop wiring and internal wiring within the site	•	
	c. The main circuit breaker and transformer	•	
	2) Water Supply		
	a. The city water distribution main to the site		•
	b. The supply system within the site (receiving and elevated tanks)	•	
	3) Drainage		
	a. The city drainage main (for storm sewer and others to the site)		•
	b. The drainage system (for toilet sewer, common waste, storm drainage and others) within the site	•	
	4) Gas Supply		
	a. The city gas main to the site		•
	b. The gas supply system within the site	•	
	5) Telephone System		
	a. The telephone trunk line to the main distribution frame/panel (MDF) of the building		•
	b. The MDF and the extension after the frame/panel	•	
	6) Furniture and Equipment		
	a. General furniture		•
	b. Project equipment	•	
4	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products		
	1) Marine (Air) transportation of the Products from Japan to the recipient country	•	
	2) Tax exemption and custom clearance of the Products at the port of disembarkation		•
	3) Internal transportation from the port of disembarkation to the project site	•	
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services [be exempted] / [be borne by the Authority without using the Grant]		•
6	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		•
7	To ensure that [the Facilities and the products]/[the Facilities]/ [the products] be maintained and used properly and effectively for the implementation of the Project		•
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		•
9	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		•
	2) Payment commission		•
10	To give due environmental and social consideration in the implementation of the Project.		•

*1 B/A : Banking Arrangement, A/P : Authorization to pay) *2 If the environmental screening category is C, No. 10 is unnecessary

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Project Cost Estimation (Confidential)

The cost of the Project will be approximately JPY (to be determined) in total. The content of the project cost are shown separately for the Japanese borne portion and the Ghanaian side borne portion in accordance with the conditions in item (3) below.

This cost estimate is provisional and would be further examined by the Government of Japan for the approval of the Grant.

1. Cost to be borne by the Japanese side: approximately JPY (to be determined)

Approximate Total cost for Japanese Portion

Cost Items	Approximate Cost (million JPY)
Equipment Procurement, Installation and Trainings	(to be determined)
Detailed Design & Consultant's Supervision	(to be determined)
Total	(to be determined)

2. Cost to be borne by the Ghanaian side: GHC 764,400 (approximately JPY44.17 million)

The above cost includes bank commissions of GHC 35,200 (JPY2.03 million), which is amount of 0.1% of the total cost for Japanese portion.

3. Conditions for estimation

(1) Time of estimation: February, 2011

(2) Foreign exchange rates:

1US\$ = JPY 84.46

1GHC = JPY 57.80

1EURO = JPY112.73

(3) Others:

The above estimation was carried out in accordance with relevant rules and the guideline of the Japanese Grant Aid.

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Monitoring Forms

Monitoring Item: 1. Explanation of the Project Schedule for the Local People - The local people on the Project routes will be informed the Project schedule before the installation work starts.					
No.	Date	Location	Method	Note	Frequency
1					6 months before the works, Every Community
2					
3					
1					Just before the works, Every 1.0km
2					
3					

Monitoring Item: 2. Stalls moved in the Road Reserve - The stalls on the Project routes in the road reserve will be informed the installation schedule before the work starts and they will be moved if necessary.					
No.	Location	Type of Stall	Condition	Reason	Frequency
1					Every 0.5km
2					
3					

Monitoring Item: 3. Trees felled - If the installation works affect on the trees on the Project routes, valuable trees (Mango, Shea Butter) and landmark trees will be left according to the communication with the local people along the Project routes.					
No.	Location	Type of Tree	Condition	Reason	Frequency
1					Every 0.5km
2					
3					

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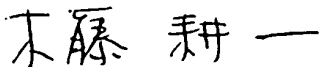
Minutes of Discussions
on the Preparatory Survey on the Project for
Improvement of Power Distribution System in Ghana
(Explanation on Draft Final Report)

In response to the request from the Government of the Republic of Ghana (hereinafter referred to as “Ghana”), Japan International Cooperation Agency (hereinafter referred to as “JICA”), in consultation with the Government of Japan, decided to conduct a Preparatory Survey (hereinafter referred to as “the Survey”) on the Project for Improvement of Power Distribution System in Ghana (hereinafter referred to as “the Project”).


In order to explain and to consult with the officials of the Government of Ghana and relevant agencies (hereinafter referred to as “the Ghanaian side”) on the components of the Draft Final Report, JICA sent to Ghana the 4th Preparatory Survey Team (hereinafter referred to as “the Team”), headed by Mr. Koichi Kito, Senior Representative of JICA Ghana Office.

In the course of the discussions, both the Ghanaian side and the Team (hereinafter referred to as “Both parties”) have confirmed the main items described in the attachment.

Accra, Ghana, 22nd August, 2011

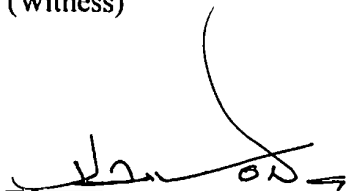


Mr. Koichi Kito
Team Leader
Preparatory Survey Team
Japan International Cooperation Agency



Prof. Thomas Mba Akabzaa
Chief Director
Ministry of Energy
The Republic of Ghana

(Witness)



Mr. Yaw Okyere-Nyako
Director, ERM- Bilateral
Ministry of Finance and Economic Planning
The Republic of Ghana



Mr. Kweku Awotwi
Chief Executive
Volta River Authority
The Republic of Ghana

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve the distribution system to provide reliable and stable electricity in the Project sites.

2. Contents of the Draft Final Report

The Ghanaian side accepted in principle the contents of the Draft Final Report explained by the Team.

3. Components of the Project

The outline of the Project components selected through 1st and 2nd Preparatory Survey is shown in Annex-1. Annex-2 shows the location of project sites.

4. Responsible and Implementing Organizations

- (1) The responsible organization is the Ministry of Energy (MOE).
- (2) The implementing organization is Volta River Authority (VRA). Northern Electricity Distribution Company (NEDCo), a subsidiary company of VRA, cooperates with VRA to implement the Project.
- (3) The organization chart of MOE and VRA are shown in Annex-3 and Annex-4 respectively.

5. Japan's Grant Aid Scheme

- (1) The Ghanaian side has understood the Japan's Grant Aid Scheme explained by the Team as described in Annex-5.
- (2) The Ghanaian side will take the necessary measures, as described in Annex-6, for smooth implementation of the Project as prerequisites for the Japan's Grant Aid to be implemented.

6. Project Cost

The Team explained that the estimated cost for the Project as described in Annex-7 contains procurement cost of equipment, transportation cost up to the Project site, installation cost and the Consultant fee.

The Ghanaian side understood that the estimated cost for the Project is not final and is subject to change as a result of further examination by the Government of Japan for the approval of the Grant Aid.

7. Confidentiality of the Project

Both parties agreed that all the information related to the Project including the outline design drawings, technical specifications, and estimated cost for the Project should never be duplicated or disclosed to any outside parties before the conclusion of all contracts for the Project.

8. Environmental and Social Considerations

- (1) The Ghanaian side agreed to comply with the JICA Guidelines for Environmental and Social Consideration (hereinafter referred to as "JICA Guidelines") as well as Ghanaian laws and regulations.

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- (2) The environmental and social considerations including major impacts and mitigation measures for the Project are summarized in the Environmental Checklist agreed in the Draft Final Report.
- (3) Monitoring for Environmental and Social considerations will be conducted by VRA in accordance with the Monitoring Plan for the Project agreed in the Draft Final Report. The results will be provided to JICA by filling in the Monitoring Form as described in Annex-8, as part of progress reports during the construction phase.
- (4) Both parties confirmed that lands necessary for implementation of the Project will be secured by the end of August 2011.
- (5) Both parties confirmed that Environmental Permission for the Project will be obtained by the end of August 2011.

9. Other Relevant Issues

- (1) The Team requested the Ghanaian side that necessary number of counterpart personnel shall be assigned to the Team and necessary arrangements with related organizations shall be made during the implementing stage in Ghana.
- (2) The Ghanaian side agreed that authorizations and permissions required for the construction works of the Project shall be obtained by the Ghanaian side.
- (3) The Ghanaian side agreed to undertake the following particular items in relation with general undertakings described in Annex-6.
 - 1) Securing of the necessary land for the new substations, 34.5 kV sub-transmission lines and 11.5 kV distribution lines
 - 2) Leveling, preparation, weeding and removal of obstacles at the construction sites
 - 3) Implementation of road work (Access roads to the project sites)
 - 4) Auxiliary works for the new substations (Water supply work, drainage work, telephone work, procurement of furniture)
 - 5) Tax exemption and custom clearance at the port of landing of the materials and equipment for the Project
 - 6) Exemption or payment of VAT on locally procured materials
 - 7) Payment of expenses not include in the grant aid
 - 8) Payment for commissions for banking arrangement
- (4) Both sides recognized that NEDCo has been established on June 1, 2011 as a subsidiary distribution company of VRA, and that VRA remains to be the implementation organization of the Project with support of NEDCo.

(End)

[List of Annex]

- Annex-1: Outline of the Project components
- Annex-2: Project Sites
- Annex-3: Organization Chart of MOE
- Annex-4: Organization Chart of VRA and NEDCo
- Annex-5: Japan's Grant Aid
- Annex-6: Major Undertakings to be taken by Each Government
- Annex-7: Estimated Project Cost (Confidential)
- Annex-8: Monitoring Form

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Component of the Project

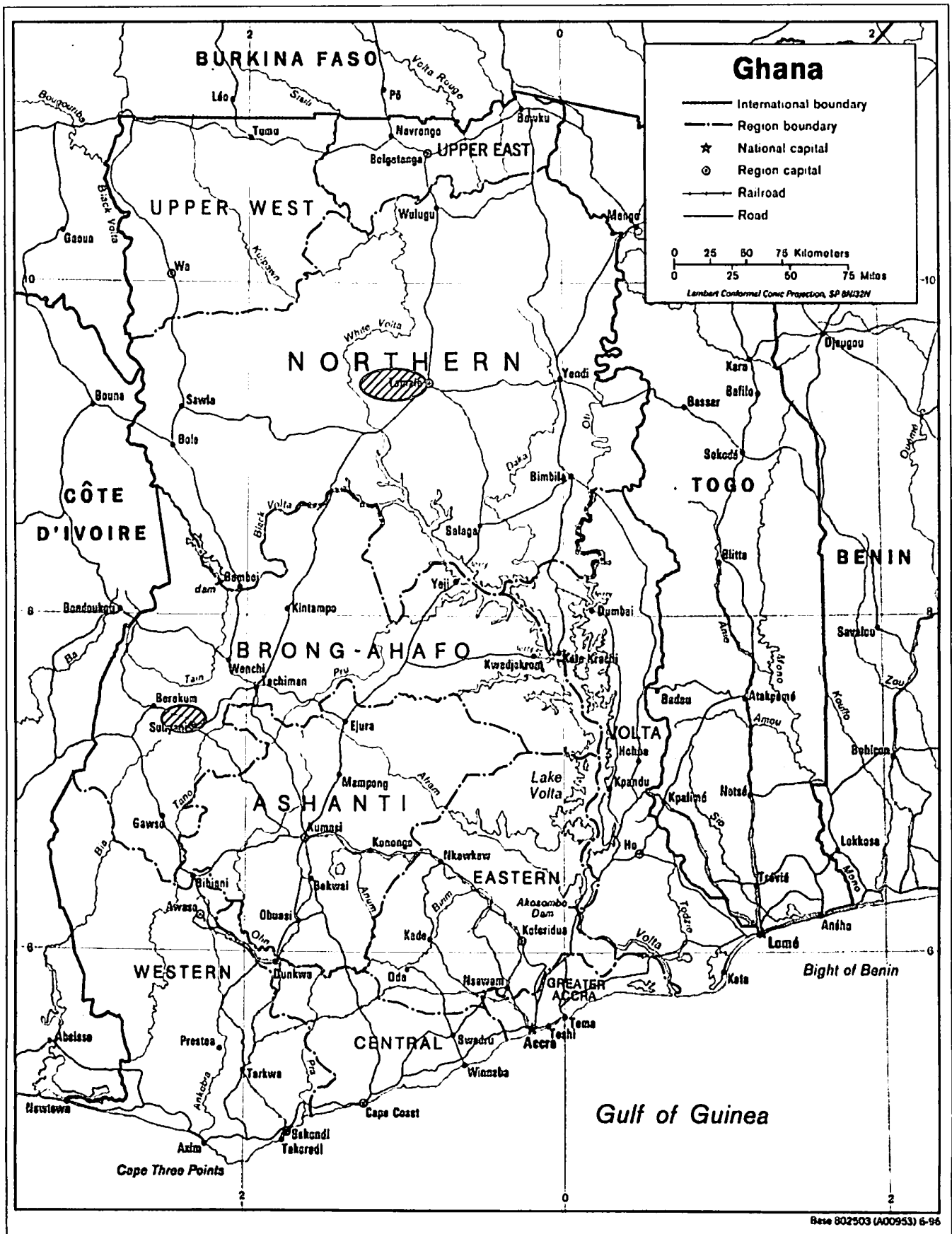
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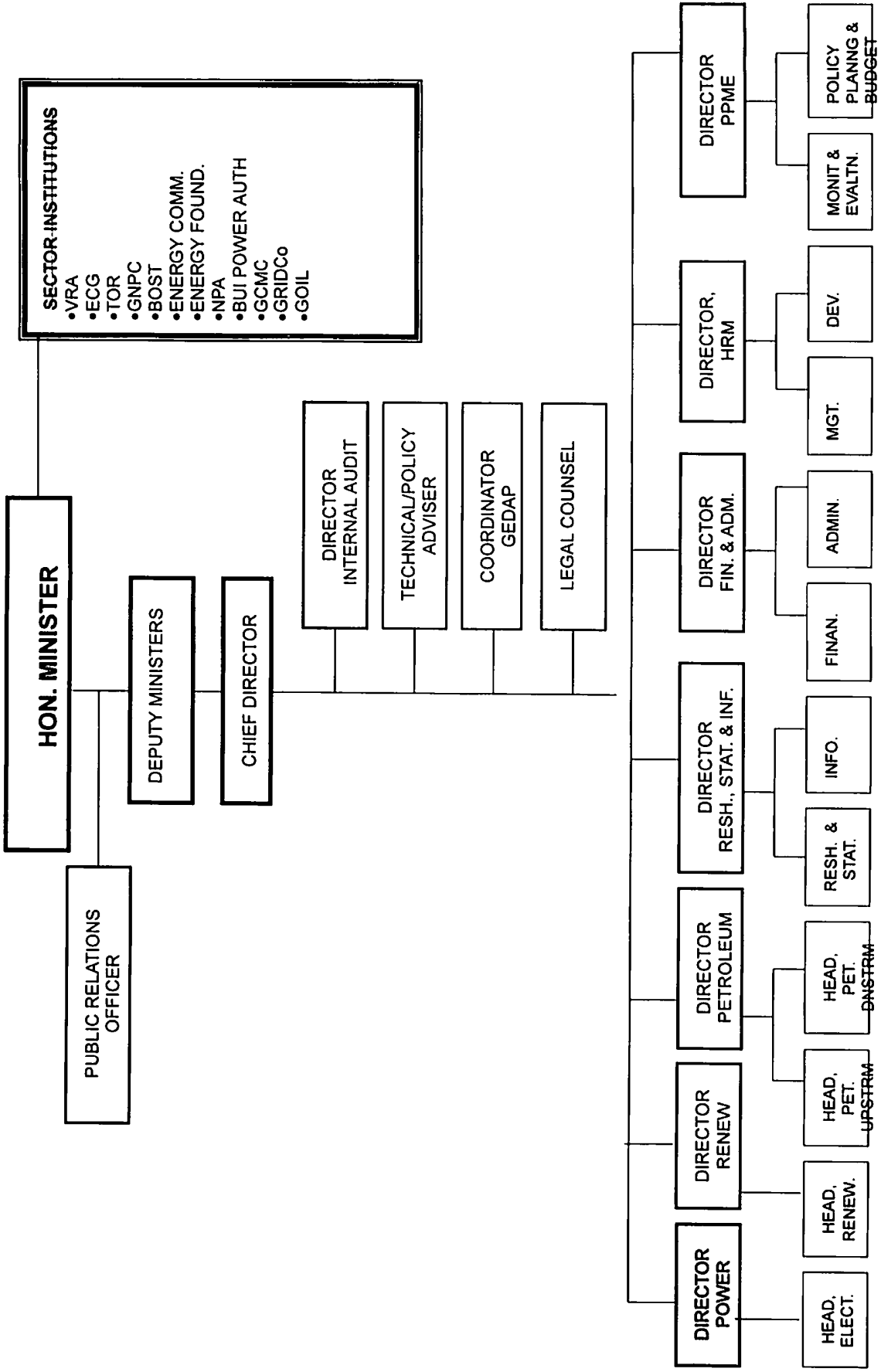
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The Location Map for the Project sites

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(Counterpart for the Project)

Organization Chart of MOE

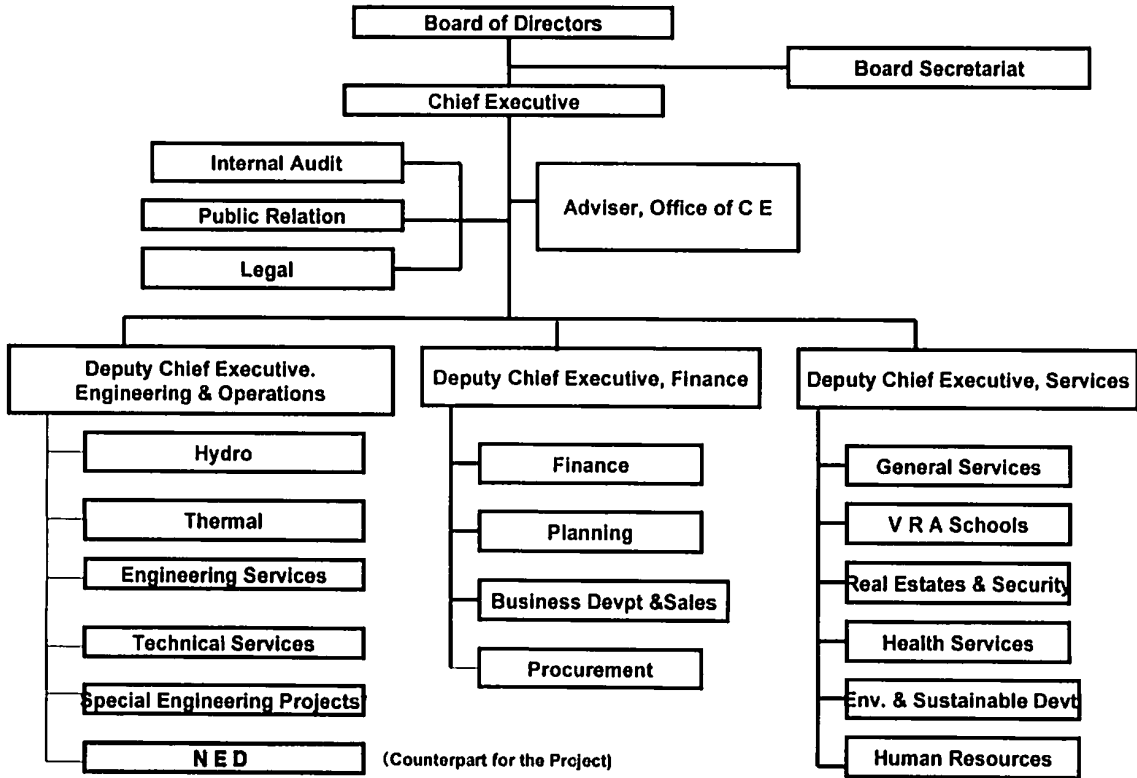
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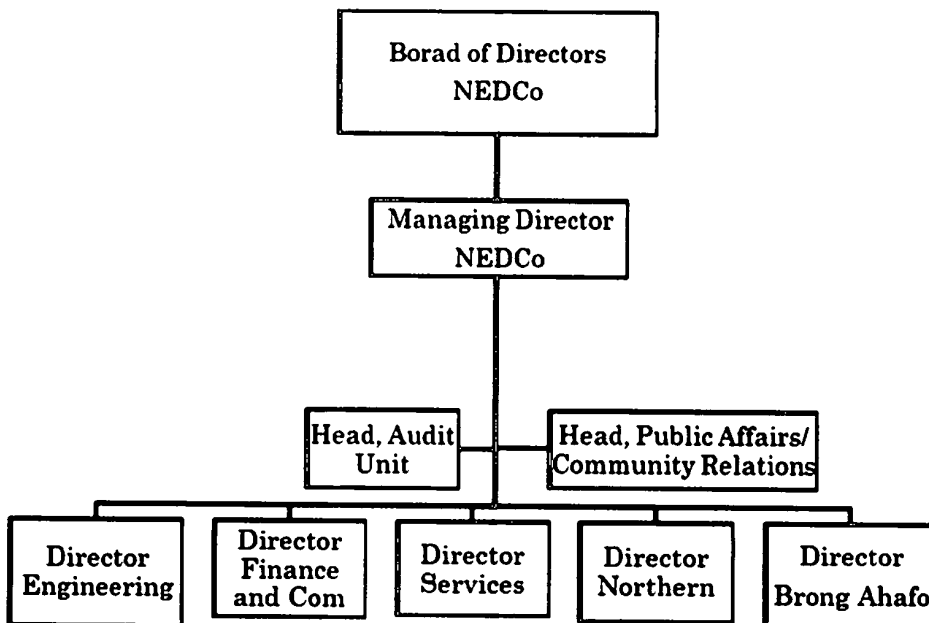
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VRA



NEDCo



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(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Social and Environmental Considerations

A recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.

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Major undertakings to be taken by each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	to secure [a lot] / [lots] of land necessary for the implementation of the Project and to clear the [site]/[sites];		●
2	To construct the following facilities		
	1) The building	●	
	2) The gates and fences in and around the site		●
	3) The parking lot	●	
	4) The road within the site	●	
	5) The road outside the site		●
3	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the [site]/[sites]		
	1) Electricity		
	a. The distributing power line to the site		●
	b. The drop wiring and internal wiring within the site	●	
	c. The main circuit breaker and transformer	●	
	2) Water Supply		
	a. The city water distribution main to the site		●
	b. The supply system within the site (receiving and elevated tanks)	●	
	3) Drainage		
	a. The city drainage main (for storm sewer and others to the site)		●
	b. The drainage system (for toilet sewer, common waste, storm drainage and others) within the site	●	
	4) Gas Supply		
	a. The city gas main to the site		●
	b. The gas supply system within the site	●	
	5) Telephone System		
	a. The telephone trunk line to the main distribution frame/panel (MDF) of the building		●
	b. The MDF and the extension after the frame/panel	●	
	6) Furniture and Equipment		
	a. General furniture		●
	b. Project equipment	●	
4	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products		
	1) Marine (Air) transportation of the Products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the Products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	●	
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services [be exempted] / [be borne by the Authority without using the Grant]		●
6	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
7	To ensure that [the Facilities and the products]/[the Facilities]/ [the products] be maintained and used properly and effectively for the implementation of the Project		●
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
9	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
10	To give due environmental and social consideration in the implementation of the Project.		●

*1 B/A : Banking Arrangement, A/P : Authorization to pay) *2 If the environmental screening category is C, No. 10 is unnecessary

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Project Cost Estimation (Confidential)

This page is closed due to the confidentiality

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Monitoring Forms

Monitoring Item: 1. Explanation of the Project Schedule for the Local People					
- The local people on the Project routes will be informed the Project schedule before the installation work starts.					
No.	Date	Location	Method	Note	Frequency
1					6 months before the works, Every Community
2					
3					
1					Just before the works, Every 1.0km
2					
3					

Monitoring Item: 2. Stalls moved in the Road Reserve					
- The stalls on the Project routes in the road reserve will be informed the installation schedule before the work starts and they will be moved if necessary.					
No.	Location	Type of Stall	Condition	Reason	Frequency
1					Every 0.5km
2					
3					

Monitoring Item: 3. Trees felled					
- If the installation works affect on the trees on the Project routes, valuable trees (Mango, Shea Butter) and landmark trees will be left according to the communication with the local people along the Project routes.					
No.	Location	Type of Tree	Condition	Reason	Frequency
1					Every 0.5km
2					
3					

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