

REPUBLIC OF GHANA
GHANA GRID COMPANY

330 kV KUMASI-BOLGATANGA TRANSMISSION LINE PROJECT

CONSULTING SERVICES FOR PROJECT MANAGEMENT, ENGINEERING
AND CONSTRUCTION SUPERVISION SERVICES

REQUEST FOR PROPOSALS
No. GTRC-1

MAY 2013

CONTENTS

SECTION 1. LETTER OF INVITATION	2
SECTION 2. INSTRUCTIONS TO CONSULTANTS	4
DATA SHEET	13
SECTION 3. TECHNICAL PROPOSAL - STANDARD FORMS	19
SECTION 4. FINANCIAL PROPOSAL - STANDARD FORMS	30
SECTION 5. TERMS OF REFERENCE	38
SECTION 6. FORM OF CONTRACT	67
I. FORM OF CONTRACT	71
II. GENERAL CONDITIONS OF CONTRACT	73
III. SPECIAL CONDITIONS OF CONTRACT	88
IV. APPENDICES	94

LUMP SUM PAYMENT CONTRACT (Activities 1, 2 and 4)

TIME-BASED PAYMENT CONTRACT (Activity 3)

Section 1. Letter of Invitation

Ghana, May 15, 2013

[Insert: Name and Address of Consultant]

Dear Mr. /Ms.:

1. The Ghana Grid Company (GRIDCo) (hereinafter called "Client") has received a grant (hereinafter called "the funds") from the Africa-EU Infrastructure Trust Fund of the European Union through the French Development Agency (hereinafter called "the Agency") toward the cost of 330 kV Kumasi-Bolgatanga Transmission Line Project. The Client intends to apply a portion of the funds to eligible payments under the contract for which this Request for Proposals is issued.
2. The Ghana Grid Company now invites proposals to provide the following consulting services: Project Management, Engineering and Construction Supervision Services for the 330 kV Kumasi-Bolgatanga Transmission Line Project. More details on the services are provided in the Terms of Reference.
3. This Request for Proposal (RFP) has been addressed to the following short-listed Consultants:

1.	TRANS-AFRICA PROJECTS (PTY) LTD/ INGEROP INTERNATIONAL CONSULTANT (PTY) LTD	SOUTH AFRICA
2.	FICHTNER	GERMANY
3.	POWERGRID CORPORATION	INDIA
4.	AECOM	CANADA
5.	AF CONSULT	SWITZERLAND
6.	PARSONS BRINCKERHOFF	UK
7.	SMEC / ARTELIA/ RUDAN/ ASARE TSIBU & PARTNERS	AUSTRALIA, FRANCE, GHANA
8.	NORCONSULT	NORWAY

4. A firm will be selected under Quality and Cost Based Selection (QCBS) method and procedures described in this RFP.
5. The RFP includes the following documents:

Section 1 - Letter of Invitation
 Section 2 - Instructions to Consultants (including Data Sheet)
 Section 3 - Technical Proposal - Model Forms
 Section 4 - Financial Proposal - Model Forms
 Section 5 - Terms of Reference
 Section 6 - Model Form of Contract

6. Please inform us in writing at the following address, upon receipt:

The Chief Executive,
 P. O Box CS 7979
 Tema
 Tel. : +233 0302 70 11 185
 Fax : + 233 0303 30 33 27: +233 0302 67 61 80

Email: ceo@gridcogh.com

Copied to

The Project Manager
330 kV WAPP Project
Ghana Grid Company

Tel.: +233 (0) 3430 212 89

Fax: +233 (0) 3430 212 90

Email: pcboip@gridcogh.com

- (a) that you received the Letter of Invitation; and
- (b) Whether you will submit a proposal alone or in association.

Yours sincerely,

.....
Charles Darku
CHIEF EXECUTIVE

Section 2. Instructions to Consultants

1. Introduction

- 1.1 The Client named in the Data Sheet will select a consulting firm/organization (the Consultant) from those listed in the Letter of Invitation, in accordance with the method of selection specified in the Data Sheet.
- 1.2 The short listed Consultants are invited to submit a Technical Proposal and a Financial Proposal for consulting services required for the assignment named in the Data Sheet. The Proposal will be the basis for contract negotiations and ultimately for a signed Contract with the selected Consultant.
- 1.3 The assignment shall be implemented in accordance with the phasing indicated in the Data Sheet. When the assignment includes several phases, the performance of the consultant under each phase must be to the Client's satisfaction before work begins on the next phase.
- 1.4 Consultants should familiarize themselves with local conditions and take them into account in preparing their Proposals. To obtain first-hand information on the assignment and local conditions, Consultants are encouraged to visit the Client before submitting a proposal and to attend a pre-proposal conference if one is specified in the Data Sheet. Attending the pre-proposal conference is optional. Consultants should contact the Client's representative named in the Data Sheet to arrange for their visit or to obtain additional information on the pre-proposal conference. Consultants should ensure that these officials are advised of the visit in adequate time to allow them to make appropriate arrangements.
- 1.5 The Client will timely provide at no cost to the Consultants the inputs and facilities specified in the Data Sheet, assist the firm in obtaining licenses and permits needed to carry out the services, and make available relevant project data and reports.
- 1.6 Consultants shall bear all costs associated with the preparation and submission of their proposals and contract negotiation. The Client is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to Contract award, without thereby incurring any liability to the Consultants.
- 1.7 The Agency only finances projects subject to its own conditions, which are set out in its financing agreement. No legal relationship exists between the Agency and any person other than the beneficiary of the financing. The Agency may be led to suspend or definitively terminate disbursements in the context of the project, without the Consultants being informed beforehand and without their being entitled to claim from the Agency any direct legal right to the amounts which, as the case may be, originate from such financing. The Consultants shall alone assume the possible consequences of unpaid amounts and disputes which may arise in the context of their relations with the beneficiary of the financing. Any communications which may be exchanged by any person other than the beneficiary of the financing and the Agency in the context of a project do not constitute, and shall not be interpreted so as to constitute, an undertaking or a stipulation by the Agency in favour of such person or to any third party.

Conflict of Interest	<p>1.8 The Agency requires that Consultants provide professional, objective, and impartial advice and at all times hold the Client's interests paramount, strictly avoid conflicts with other assignments or their own corporate interests and act without any consideration for future work. Consultants shall not be hired for any assignment that would be in conflict with their prior or current obligations to other clients, or that may place them in a position of not being able to carry out the assignment in the best interest of the Client.</p>
Conflicting activities	<p>1.8.1 Without limitation on the generality of the foregoing, Consultants, and any of their affiliates, shall be considered to have a conflict of interest and shall not be recruited, under any of the circumstances set forth below:</p> <p>(i) A firm that has been engaged by the Client to provide goods, works or services other than consulting services for a project, and any of its affiliates, shall be disqualified from providing consulting services related to those goods, works or services. Conversely, a firm hired to provide consulting services for the preparation or implementation of a project, and any of its affiliates, shall be disqualified from subsequently providing goods or works or services other than consulting services resulting from or directly related to the firm's consulting services for such preparation or implementation.</p>
Conflicting assignments	<p>(ii) A Consultant (including its Personnel and Sub-Consultants) or any of its affiliates shall not be hired for any assignment that, by its nature, may be in conflict with another assignment of the Consultant to be executed for the same or for another Client.</p>
Conflicting relationships	<p>(iii) A Consultant (including its Personnel and Sub-Consultants) that has a business or family relationship with a member of the Client's staff who is directly or indirectly involved in any part of (i) the preparation of the Terms of Reference of the assignment, (ii) the selection process for such assignment, or (iii) supervision of the Contract, may not be awarded a Contract, unless the conflict stemming from this relationship has been resolved in a manner acceptable to the Agency throughout the selection process and the execution of the Contract.</p>
	<p>1.8.2 Consultants have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Client, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Consultant or the termination of its Contract.</p>
	<p>1.8.3 As pointed out in para. 1.8.1 (i) above, consultants may be hired for downstream work, when continuity is essential, in which case this possibility shall be indicated in the Data Sheet and the factors used for the selection of the consultant should take the likelihood of continuation into account. It will be the exclusive decision of the Client whether or not to have the downstream assignment carried out, and if it is carried out, which consultant will be hired for the purpose.</p>

Fraud and Corruption

- 1.9 The Agency requires that all beneficiaries of its funding, as well as Consultants participating in projects which it finances, adhere to the highest ethical standards, both during the selection process and throughout the execution of a contract.
- 1.10 In pursuance of this policy, the Agency defines the terms set forth below as follows:
- (a) “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the selection process or in contract execution;
 - (b) “fraudulent practice” means a misrepresentation or omission of facts in order to influence a selection process or the execution of a contract;
 - (c) “collusive practices” means a scheme or arrangement between two or more consultants with or without the knowledge of the Client, designed to establish prices at artificial, noncompetitive levels;
 - (d) “coercive practices” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract.
- 1.11 As a result of its own investigations and findings, and in accordance with its procedures, the Agency:
- (a) will reject a proposal for award if it determines that the Consultant recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the contract in question;
 - (b) will cancel the portion of the funding allocated to a contract if it determines at any time that representatives of the Client were engaged in corrupt, fraudulent, collusive or coercive practices during the selection process or the execution of the contract, without the Client having taken timely and appropriate action satisfactory to the Agency to remedy the situation;
 - (c) will declare a Consultant ineligible, either indefinitely or for a stated period of time, to be awarded a contract financed by the Agency if at any time determines that the Consultant has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a contract financed by the Agency.
- 1.12 The Agency reserves the right to declare a firm or individual ineligible for a stated period of time to be awarded a contract financed by the Agency, if an international or national organization has determined that such firm or individual has engaged in corrupt, fraudulent, collusive or coercive practices.
- 1.13 The Agency will have the right to require that a provision be included in contracts which it finances, requiring bidders, suppliers, contractors and consultants to permit the Agency to inspect their accounts and records and other documents relating to contract performance and to have them audited by auditors appointed by the Agency.

Environmental and Social Standards	1.14	The Consultants undertake to: <ul style="list-style-type: none"> (i) comply and procure that their Sub-consultants, if any, comply with international environmental and labour standards consistent with applicable law and regulations in the country of implementation of the Project, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties; (ii) adopt any environmental and social risk mitigations measures as defined in the environmental and social management plan or the notice of environmental and social impact issued by the Client.
	1.15	Short listed Consultants may only submit one proposal. If a Consultant submits or participates in more than one proposal, such proposals shall be disqualified. However, this does not limit the participation of the same Sub-Consultant, including individual experts, to more than one proposal.
Only one Proposal	2.1	Consultants may request a clarification of any of the RFP documents up to the number of days indicated in the Data Sheet before the proposal submission date. Any request for clarification must be sent in writing, or by standard electronic means to the Client's address indicated in the Data Sheet. The Client will respond in writing, or by standard electronic means and will send written copies of the response (including an explanation of the query but without identifying the source of inquiry) to all Consultants who notified the Client that they will submit a proposal.
	2.2	At any time before the submission of Proposals, the Client either at his initiative or in response to a request for clarifications may amend the RFP by issuing an addendum in writing or by electronic means. The addendum shall be sent to all Consultants and will be binding on them. Consultants shall acknowledge receipt of all amendments. To give Consultants reasonable time in which to take an amendment into account in their Proposals the Client may extend the deadline for the submission of Proposals.
2. Clarification and Amendment of RFP Documents		
3. Preparation of Proposals	3.1	The Proposal (see para. 1.2), as well as all related correspondence exchanged by the Consultants and the Client, shall be written in the language (s) specified in the Data Sheet.
	3.2	In preparing their Technical Proposal, Consultants are expected to examine in detail the documents comprising the RFP. Material deficiencies in providing the information requested may result in rejection of a Proposal.
Technical Proposal	3.3	While preparing the Technical Proposal, Consultants must give particular attention to the following: <ul style="list-style-type: none"> (i) If a Consultant considers that it may enhance its expertise for the assignment by associating with other Consultants in a joint venture or sub-consultancy, it may associate with either (a) non-short-listed Consultant(s), or (b) short-listed Consultants if so indicated in the Data Sheet. A short-listed Consultant must first obtain the approval of the Client if it wishes to enter into a joint venture with non-short-listed or short-listed Consultant(s). (ii) The estimated number of Professional staff-months or the budget for executing the assignment shall be shown in the Data Sheet. However, the Proposal shall be based on the number of

Professional staff-months or budget estimated by the Consultants. If the selection method is Selection under Fixed-Budget, the available budget is given in the Data Sheet, and the Financial Proposal shall not exceed this budget.

- (iii) It is desirable that the majority of the key professional staff proposed be permanent employees of the firm or has an extended and stable working relationship with it.
- (iv) Proposed professional staff must, at a minimum, have the experience indicated in the Data Sheet, preferably working under conditions similar to those prevailing in the country of the assignment.
- (v) Alternative professional staff shall not be proposed, and only one curriculum vitae (CV) may be submitted for each position.
- (vi) Documents to be provided by the Consultants to the Client as part of this assignment must be in the language(s) specified in the Data Sheet. It is desirable that the firm's Personnel have a working knowledge of the Client's national language.

Language

Technical Proposal Format and Content

- 3.4 The Technical Proposal shall provide the following information using the attached Standard Forms (Section 3):
- (i) A brief description of the firm's organization and an outline of recent experience on assignments (Section 3B) of a similar nature. For each assignment, the outline should indicate, *inter alia*, the profiles of the staff proposed, duration of the assignment, contract amount, and firm's contribution.
 - (ii) Any comments or suggestions on the Terms of Reference and on the data, a list of services, and facilities to be provided by the Client (Section 3C).
 - (iii) A description of the methodology and work plan for performing the assignment (Section 3D).
 - (iv) The list of the proposed staff team by specialty, the tasks that would be assigned to each staff team member, and their timing (Section 3E).
 - (v) CVs recently signed by the proposed professional staff and the authorized representative submitting the proposal (Section 3F). Key information should include number of years working for the firm/entity and degree of responsibility held in various assignments during the last ten (10) years.
 - (vi) Estimates of the total staff input (professional and support staff; staff time) needed to carry out the assignment, supported by bar chart diagrams showing the time proposed for each professional staff team member (Sections 3E and 3G).
 - (vii) A detailed description of the proposed methodology, staffing, and monitoring of training, if the Data Sheet specifies training as a major component of the assignment.
 - (viii) Any additional information requested in the Data Sheet.
- 3.5 The Technical Proposal shall not include any financial information.

Financial Proposals

- 3.6 In preparing the Financial Proposal, consultants are expected to take into account the requirements and conditions outlined in the RFP documents. The Financial Proposal should follow Standard Forms (Section 4). It lists all costs associated with the assignment, including (a) remuneration for staff (foreign and local, in the field and at headquarters), and (b) reimbursable expenses such as subsistence (per diem, housing), transportation (international and local, for mobilization and demobilization), services and equipment (vehicles, office equipment, furniture, and supplies), office rent, insurance, printing of documents, surveys, and training, if it is a major component of the assignment. If appropriate, these costs should be broken down by activity and, if appropriate, into foreign and local expenditures.
- 3.7 The Financial Proposal should clearly estimate, as a separate amount, the taxes (including social security), duties, fees, levies, and other charges imposed in the Client's country under the applicable law, on the consultants, the sub-consultants, and their personnel (other than nationals or permanent residents of the Client's country).
- 3.8 Consultants may express the price of their services in the currency (ies) designated in the Data Sheet.
- 3.9 Commissions and gratuities, if any, paid or to be paid by consultants and related to the assignment will be listed in the Financial Proposal submission form (Section 4A).
- 3.10 The Data Sheet indicates how long the proposals must remain valid after the submission date. During this period, the consultant is expected to keep available the professional staff proposed for the assignment. The Client will make its best effort to complete negotiations within this period. If the Client wishes to extend the validity period of the proposals, the consultants who do not agree have the right not to extend the validity of their proposals.

4. Submission, Receipt, and Opening of Proposals

- 4.1 The original proposal (Technical Proposal and Financial Proposal) shall be prepared in indelible ink. It shall contain no interlineations or overwriting, except as necessary to correct errors made by the Consultants themselves. The person who signed the proposal must initial such corrections.
- 4.2 An authorized representative of the Consultants shall initial all pages of the original Technical and Financial Proposals. The authorization shall be in the form of a written power of attorney accompanying the Proposal or in any other form demonstrating that the representative has been duly authorized to sign.
- 4.3 The number of copies of the Proposals is indicated in the Data Sheet. The Technical and Financial Proposals shall be marked "ORIGINAL" or "COPY" as appropriate. If there are discrepancies between the original and the copies of the Proposal, the original governs.
- 4.4 The original and all copies of the Technical Proposal shall be placed in a sealed envelope clearly marked "TECHNICAL PROPOSAL". Similarly, the original and all copies of the Financial Proposal shall be placed in a sealed envelope clearly marked "FINANCIAL PROPOSAL" followed by the name of the assignment, and with a warning "**DO NOT OPEN WITH THE TECHNICAL PROPOSAL.**" The

envelopes containing the Technical and Financial Proposals shall be placed into an outer envelope and sealed. This outer envelope shall bear the submission address, the data indicated in the Data Sheet, and be clearly marked “**DO NOT OPEN, EXCEPT IN PROPOSAL OPENING CEREMONY, IN THE PRESENCE OF THE OFFICIAL APPOINTED]**”.

4.5 The Proposals must be sent to the address/addresses indicated in the Data Sheet and received by the Client no later than the time and the date indicated in the Data Sheet. Any proposal received by the Client after the deadline for submission shall be returned unopened.

4.6 The Client shall open the Technical Proposal immediately after the deadline for their submission. The envelopes with the Financial Proposal shall remain sealed and securely stored.

5. Proposal Evaluation

5.1 From the time the Proposals are opened to the time the Contract is awarded, Consultants who wish to contact the Client on any matter related to its Proposal should do so in writing only at the address indicated in the Data Sheet. Any effort by Consultants to influence the Client in the examination, evaluation, ranking of Proposals, and recommendation for award of Contract may result in the rejection of the Consultants' Proposal.

5.2 Evaluators of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation is concluded, and the Agency issues its “no objection” if required.

Evaluation of Technical Proposals

5.3 The evaluation committee appointed by the Client shall evaluate the Technical Proposals on the basis of their responsiveness to the Terms of Reference, applying the evaluation criteria, sub-criteria, and point system specified in the Data Sheet. Each responsive Proposal will be given a technical score (St). A Proposal shall be rejected at this stage if it does not respond to important aspects of the Terms of Reference or if it fails to achieve the minimum technical score indicated in the Data Sheet.

Financial Proposals for QBS

5.4 Following the ranking of technical Proposals, when selection is based on quality only (SBQ), the first ranked Consultant is invited to negotiate its proposal and the Contract in accordance with the instructions given under para. 6 of these Instructions.

Public Opening and Evaluation of Financial Proposals (only for QCBS, FBS, and LCS)

5.5 After the technical evaluation is completed the Client shall inform the Consultants who have submitted proposals the technical scores obtained by their Technical Proposals, and shall notify those Consultants whose Proposals did not meet the minimum qualifying mark or were considered non responsive to the RFP and TOR, that their Financial Proposals will be returned unopened after completing the selection process. The Client shall simultaneously notify in writing Consultants that have secured the minimum qualifying mark, the date, time and location for opening the Financial Proposals. The opening date should not be earlier than 14 days after the date of notification; such notification may be sent by registered mail, fac simile or electronic mail.

5.6 Financial Proposals shall be opened publicly in the presence of the Consultants' representatives who choose to attend. The name of the Consultants, the technical scores, and the total prices shall be

read aloud and recorded in minutes. Copy of the minutes shall be sent to all Consultants and the Agency.

- 5.7 The Evaluation Committee will verify that the Financial Proposal is fully complete, (i.e. that all items of the Technical Proposal have been costed, failing which the Client will estimate the missing cost and add the estimate to the offered price), and correct any computational errors. Prices shall be converted to a single currency using the selling rates of exchange, source and date indicated in the Data Sheet. The evaluation shall exclude those taxes, duties, fees, levies, and other charges imposed under the applicable law; and to be applied to foreign and non-permanent resident consultants (and to be paid under the contract, unless the consultant is exempted), and estimated as per para. 3.7.
- 5.8 In case of QCBS, the lowest evaluated Financial Proposal (Fm) will be given the maximum financial score (Sf) of 100 points. The financial scores (Sf) of the other Financial Proposals will be computed as indicated in the Data Sheet. Proposals will be ranked according to their combined technical (St) and financial (Sf) scores using the weights (T = the weight given to the Technical Proposal; P = the weight given to the Financial Proposal; T + P = 1) indicated in the Data Sheet: $S = St \times T\% + Sf \times P\%$. The firm achieving the highest combined technical and financial score will be invited for negotiations.
- 5.9 In the case of Fixed-Budget Selection, the Client will select the firm that submitted the highest ranked Technical Proposal within the budget. Proposals that exceed the indicated budget will be rejected. In the case of the Least-Cost Selection, the Client will select the lowest proposal among those that passed the minimum technical score. In both cases the selected firm is invited for negotiations.

6. Negotiations

Technical negotiations

- 6.1 Negotiations will be held at the address indicated in the Data Sheet.
- 6.2 Negotiations will include a discussion of the Technical Proposal, the proposed technical approach and methodology, work plan, and organization and staffing, and any suggestions made by the Consultant to improve the Terms of Reference. The Client and the Consultants will finalize the Terms of Reference, staffing schedule, work schedule, logistics, and reporting. These documents will then be incorporated in the Contract as "Description of Services".

Financial negotiations

- 6.3 The financial negotiations will include a clarification (if any) of the firm's tax liability in the Client's country, and the manner in which it will be reflected in the Contract; and will reflect the agreed technical modifications in the cost of the services. In the cases of QCBS, Fixed-Budget Selection, and the Least-Cost Selection methods, unless there are exceptional reasons, the financial negotiations will involve neither the remuneration rates for staff nor other proposed unit rates. In the case of Selection Based on Quality, Consultants will provide the Client with the information on remuneration rates described in the Appendix attached to Section 4 - Financial Proposal - Standard Forms.

Availability of Professional staff/experts

- 6.4 Having selected the Consultant on the basis of, among other things, an evaluation of proposed Professional staff, the Client expects to negotiate a Contract on the basis of the Professional staff named in the Proposal. Before contract negotiations, the Client will require

assurances that the Professional staff will be actually available. The Client will not consider substitutions during contract negotiations unless both parties agree that undue delay in the selection process makes such substitution unavoidable or for reasons such as death or medical incapacity. If this is not the case and if it is established that Professional staff were offered in the proposal without confirming their availability, the Consultant may be disqualified.

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|---------------------------------------|-----|--|
| Conclusion of the negotiations | 6.5 | Negotiations will conclude with a review of the draft Contract. To complete negotiations the Client and the Consultant will initial the agreed Contract. If negotiations fail, the Client will invite the Consultant whose Proposal received the second highest score to negotiate a Contract. |
| 7. Award of Contract | 7.1 | After completing negotiations the Client shall award the Contract to the selected Consultant, and promptly notify all Consultants who have submitted proposals. After Contract signature, the Client shall return the unopened Financial Proposals to the Consultants whose technical proposal did not obtain the specified minimum technical score. |
| | 7.2 | The Consultant is expected to commence the assignment on the date and at the location specified in the Data Sheet. |
| 8. Confidentiality | 8.1 | Information relating to evaluation of Proposals and recommendations concerning awards shall not be disclosed to the Consultants who submitted the Proposals or to other persons not officially concerned with the process, until the notification of the award of Contract. |

Instructions to Consultants

Data Sheet

Paragraph Reference	
1.1	<p>Name of the Client: Ghana Grid Company</p> <p>Method of selection: Quality and Cost Based Selection (QCBS)</p>
1.2	<p>The 330 kV Kumasi-Bolgatanga Transmission Line Project consists of the following components, as of the present bidding process:</p> <ul style="list-style-type: none"> • Construction of 185 km 330 kV transmission line from Kumasi to Kintampo and 350 km 330 kV transmission line from Kintampo to Bolgatanga • Expansion of the proposed 330 kV Substation at Kumasi for the take-off of the 330 kV line to Kintampo • Construction of new 330 kV Substations at Kintampo, Tamale and Bolgatanga including the provision of 330/161 kV Autotransformers, and • Associated SCADA and Power Line Communication
1.3	<p>The assignment is phased: No</p>
1.4	<p>A pre-proposal conference will be held: No</p> <p>The Client's representative is:</p> <p>Project Manager 330 kV WAPP Project Ghana Grid Company (GRIDCo) P. O. Box CS 7979 Tema Ghana</p> <p>Telephone: +233-03430-21290 Facsimile: +233-03430-21289 E-mail: pcboip@gridcogh.com</p>
1.5	<p>The Client will provide the following inputs and facilities listed below to the selected consultant to carry out the Contract:</p> <ul style="list-style-type: none"> • Feasibility Study Report for the 330 kV Kumasi-Bolgatanga Transmission Line Project, by SNC Lavallin • Environmental and Social (E&S) documentation (when reports available): <ul style="list-style-type: none"> ○ Scoping report ○ Environmental and Social Impact Assessment (ESIA) ○ Resettlement Plan Framework (RPF) ○ Resettlement Action Plan (RAP), including Property Impact Assessment (PIA) and Environmental Impact Assessment (EIA) ○ (draft) Environmental and Social Management Plan (E&SMP) ○ Environmental Permit (EP) • Project Agreements with Funding Agencies • Draft Bidding Documents • Other documents required by the Consultant on demand that are available

1.6	The Client envisages the need for continuity for downstream work: No	
2.1	<p>Clarifications may be requested not later than 14 days before the submission date.</p> <p>The address for requesting clarifications is:</p> <p>Project Manager 330 kV WAPP Project Ghana Grid Company (GRIDCo) P. O. Box CS 7979 Tema Ghana</p> <p>Telephone: +233-03430-21290 Facsimile: +233-03430-21289 E-mail: pcboip@gridcogh.com</p>	
3.1	Proposals shall be submitted in the following language: English	
3.3 (i)	<p>Short listed Consultants may associate with other short listed Consultants: No</p> <p>a. All potential short-listed joint ventures shall appoint one of the firms to represent the association as a lead partner. All members of the joint venture shall sign the contract, and shall be jointly and severally liable for the entire assignment. The joint venture agreement shall stipulate the tasks/services that each firm shall perform. All firms of the joint venture shall initial the draft agreement which shall be presented with the proposal.</p> <p>b. When a firm is known as a sub consultant to a shortlisted firm, its role should be described in the proposal.</p>	
3.3 (ii)	The estimated number of key staff months for key experts required for the assignment is 208.5 person months.	
3.3 (iv)	The minimum required experience of proposed key professional staff is:	
	Title	Number of Years of Professional Experience
	a. Project Director	Engineer with at least Fifteen (15) years of experience of which at least five (5) shall have been as Project Director on at least three (3) no. transmission/power system projects and be fluent in English.
	b1. Resident Manager (Team Leader)	Engineer with at least Fifteen (15) years of experience of which at least five (5) shall have been as Resident Manager/Engineer on at least two (2) no transmission/power system projects and be fluent in English (reading, speaking, writing).
	b2. Deputy Resident Manager (Deputy Team Leader)	Engineer with at least Ten (10) years of experience of which at least five (5) shall have been as Resident or Deputy Manager/Engineer on at least two (2) no transmission/power system projects and be fluent in English (reading, speaking, writing).

	c. Power Systems / Electrical Construction Engineer	Engineer with at least Ten (10) years of experience of which at least five (5) shall have been responsible for Electrical Construction activities on at least two (2) no transmission/power system projects and in Site Safety and shall be fluent in English (reading, speaking, writing).
	d. Substations Design Engineer	Engineer with at least Ten (10) years of experience of which at least five (5) shall have been a Design Engineer in EHV/HV Substation development on at least two (2) no transmission/power system projects and shall be fluent in English (reading, speaking, writing).
	e. Transmission Line Expert	Engineer with at least Ten (10) years experience as a qualified Engineer in the design, design review, testing and/or construction of transmission line structures with particular experience in HV lattice tower design of which at least five (5) shall have been responsible for transmission line design and review on at least two (2) no transmission/power system projects and shall be fluent in English (reading, speaking, writing).
	f. Protection and Control Engineer	Engineer with at least Ten (10) years of experience of which at least five (5) shall have had responsibility for Protection and Control Activities in EHV/HV Line and Substation development on at least two (2) no transmission/power system projects and shall be fluent in English (reading, speaking, writing).
	g. SCADA and Communication Expert	Engineer with at least Ten (10) years of experience in the design, installation and commissioning of SCADA and Communication Facilities for Power Systems using Power Line Carrier and fiber optic technology of which at least three (3) shall have been responsible for SCADA design and installation works on at least two (2) no transmission/power system projects and shall be fluent in English (reading, speaking, writing).
	h. Transformer Expert	Ten (10) years experience in as an Electrical Engineer of which at least five (5) shall have been responsible for EHV transformer designs, review of design documentation, participated in FAT for EHV and HV transformers on at least two similar projects and shall be fluent in English (reading, speaking, writing).
	i1. Commissioning Engineer - Line	Engineer with at least Ten (10) years of experience in the site testing and commissioning of EHV/HV Lines and major electro-mechanical equipment of which at least five (5) shall have been as Commissioning Engineer on at least two (2) no transmission/power system projects, and shall be fluent in English (reading, speaking, writing).
	i2. Commissioning Engineer - Substations	Engineer with at least Ten (10) years of experience in the site testing and commissioning of EHV/HV Substations and major electro-mechanical equipment of which at least five (5) shall have been as Commissioning Engineer on at least two (2) no transmission/power system projects, and shall be fluent in English (reading, speaking, writing).

	i. Quality Assurance/ Factory acceptance and Audit Expert	Ten (10 years experience in factory audits, reviewing manufacturing, test and quality control procedures and witnessing in equipment acceptance tests (FAT) as well as the review and approval of quality plans and procedures and testing programmes of which three (3) shall have been as a senior engineer on at least two similar projects, and shall be fluent in English (reading, speaking, writing).
	k. Environmental and Social Expert	Ten (10) years experience and practice in Environmental monitoring and management of which at least five (5) shall have had responsibility as Environmental Expert on at least two similar projects and shall be fluent in English and conversant with National and funding agency environmental guidelines.
3.3 (vi)	Reports that are part of the assignment must be written in the following language: English	
3.4 (vii)	Training is a component of this assignment: Yes	
3.6	The applicable Reimbursable expenses are to be broken down as indicated in Section 4, Table 4E.	
3.7	<p>Information on the Consultant's tax obligations in the Client's country can be found:</p> <p><i>Applicable Laws include: Internal Revenue Act – 2000 (Act 592), Value Added Tax (VAT) – 1995 (Act 498) and LI 1675 on Taxes.</i></p> <p>See also Section 6, <i>Form of Contract</i>, Clauses 1.10 respectively in General Conditions and Specific Conditions.</p>	
3.8	<p>Consultants may state their price component for cost incurred in the country of the Client in the national currency of the Client.</p> <p>Consultants who intend to incur cost in other currencies for the assignment may state the corresponding price component in United States Dollars.</p>	
3.10	Proposals must remain valid 120 days after the submission date.	
4.3	Consultant must submit the original and three (3) copies of the Proposal.	
4.4	<p>The Proposal submission address is:</p> <p>The Chief Executive Ghana Grid Company P. O. Box CS 7979 Tema, Ghana</p> <p>Location : Head Office Room106 (Off the Tema-Aflao Highway) Tel. : +233 0302 70 11 185 Fax : + 233 0303 30 33 27: +233 0302 67 61 80 Email: gridco@gridcogh.com</p> <p>Proposals must be submitted no later than the following date and time: June 13, 2013 at 15.00 hrs GMT.</p>	

5.1	<p>The address for contacting the Client is:</p> <p>Project Manager 330 kV WAPP Project Ghana Grid Company (GRIDCo) P. O. Box CS 7979 Tema Ghana</p> <p>Telephone: +233-03430-21289 Facsimile: +233-03430-21290 E-mail: pcboip@gridcogh.com</p>																																																												
5.3	<p>Criteria, sub-criteria, and point system for the evaluation of Technical Proposals are:</p> <table border="0"> <thead> <tr> <th></th><th style="text-align: right;"><u>Points</u></th></tr> </thead> <tbody> <tr> <td>(i) Specific experience of the Consultants relevant to the assignment:</td><td style="text-align: right;">5</td></tr> <tr> <td>(ii) Adequacy of the proposed methodology and work plan in responding to the Terms of Reference:</td><td></td></tr> <tr> <td> a) Technical approach and methodology</td><td style="text-align: right;">15</td></tr> <tr> <td> b) Work plan</td><td style="text-align: right;">10</td></tr> <tr> <td> c) Organization and staffing</td><td style="text-align: right;">10</td></tr> <tr> <td style="text-align: right;">Total points for criterion (ii):</td><td style="text-align: right;">35</td></tr> <tr> <td>(iii) Key professional staff qualifications and competence for the assignment:</td><td></td></tr> <tr> <td> a) Project Director</td><td style="text-align: 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	<ul style="list-style-type: none"> Qualifications of training specialists 1 <p>Total points for criterion (iii): 5</p> <p>Total points for the four criteria: 100</p> <p>The minimum technical score S_t required to pass is: 75 Points</p>
5.7	<p>The single currency for price conversions is: United States Dollar</p> <p>The source of official selling rates is: The London Financial Times</p> <p>The date of exchange rates is: Twenty Eight (28) Days before the Submission of the Proposals</p>
5.8	<p>The formula for determining the financial scores is the following:</p> <p>$S_f = 100 \times F_m / F$, in which S_f is the financial score, F_m is the lowest price and F the price of the proposal under consideration.</p> <p>The weights given to the Technical (T) and Financial (F) Proposals are:</p> <p>$T = 0.80$ and</p> <p>$F = 0.20$</p>
6.1	<p>Address for contract negotiations::</p> <p>Head Office Ghana Grid Company (Located off the Tema-Aflao Road) Tema, Ghana</p>
7.2	<p>Expected date and location for commencement of consulting services: November 2013 at Akuse/Tema</p>

Section 3. Technical Proposal - Standard Forms

Refer to paragraph 3.4 of Section 2 of the RFP for Standard Forms required and number of pages recommended.

3A	Technical Proposal Submission Form
3B	Consultant's Experience
3C	Comments or Suggestions on the Terms of Reference and on Counterpart Staff and Facilities to be Provided by the Client
3D	Description of the Approach, Methodology and Work Plan for Performing the Assignment
3E	Team Composition and Task Assignments
3F	Curriculum Vitae (CV) for Proposed Key Professional Staff
3G	Staffing Schedule
3H	Work Schedule

FORM 3A - TECHNICAL PROPOSAL SUBMISSION FORM

[Location, Date]

To: [Name and address of Client]

Dear Sirs:

We, the undersigned, offer to provide the consulting services for [Insert title of assignment] in accordance with your Request for Proposal dated [Insert Date] and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal, and a Financial Proposal sealed under a separate envelope.

If negotiations are held during the period of validity of the Proposal, i.e., before [insert date], we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature [In full and initials]: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

FORM 3B CONSULTANT'S EXPERIENCE

Assignments carried out during three last five years which best illustrate the candidate's qualifications for the proposed assignment

[Using the format below, provide information on each assignment for which your firm, and each associate for this assignment, was contracted either individually as a corporate entity or as one of the major companies within an association, for carrying out consulting services similar to the ones requested under this assignment. Use 20 pages max.]

Assignment name:	Country/location:
Name of Client:	Total N° of staff-months of the assignment for staff provided by your firm:
Address:	Approx. value of the services provided by your firm under the contract (in current Euro):
Start date (month/year): Completion date (month/year):	N° of professional staff-months provided by associated Consultants:
Name of associated Consultants, if any:	Key personnel provided by your firm (positions):
Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader, Key Experts):	
Narrative description of Project:	
Description of actual services provided by your staff within the assignment:	

Firm's Name: _____

FORM 3C - COMMENTS AND SUGGESTIONS ON THE TERMS OF REFERENCE AND ON COUNTERPART STAFF AND FACILITIES TO BE PROVIDED BY THE CLIENT

A - On the Terms of Reference

[Present and justify here any modifications or improvement to the Terms of Reference you are proposing to improve performance in carrying out the assignment (such as deleting some activity you consider unnecessary, or adding another, or proposing a different phasing of the activities, a different breakdown of the person months per staff within the person months as stipulated in the Data sheet,...). Such suggestions should be concise and to the point, and incorporated in your Proposal.]

B - On Counterpart Staff and Facilities

[Comment here on counterpart staff and facilities to be provided by the Client according to Paragraph Reference 1.4 of the Data Sheet including: administrative support, office space, local transportation, equipment, data, etc.]

FORM 3D DESCRIPTION OF APPROACH, METHODOLOGY AND WORK PLAN FOR PERFORMING THE ASSIGNMENT

[Technical approach, methodology and work plan are key components of the Technical Proposal. You are suggested to present your Technical Proposal (50 pages max, inclusive of charts and diagrams) divided into the following three chapters:

- a) Technical Approach and Methodology,*
- b) Work Plan, and*
- c) Organization and Staffing,*

a) Technical Approach and Methodology. In this chapter you should explain your understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output. You should highlight the problems being addressed and their importance, and explain the technical approach you would adopt to address them. You should also explain the methodologies you propose to adopt and highlight the compatibility of those methodologies with the proposed approach.

b) Work Plan. In this chapter you should propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Client), and delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan. A list of the final documents, including reports, drawings, and tables to be delivered as final output, should be included here. The work plan should be consistent with the Work Schedule of Form 3H.

c) Organization and Staffing. In this chapter you should propose the structure and composition of your team. You should list the main disciplines of the assignment, the key expert responsible, and proposed technical and support staff.]

On item c) - *Organization and Staffing*, Consultants are to note that the project spans from Kumasi, the start point through to Bolgatanga. The Consultant is expected to explain in his proposal how experts/representatives on the four specific sites which are Kumasi, Kintampo, Tamale and Bolgatanga would be deployed for effective site supervision.

If following key staffs, that is at least (b1) Resident Manager (Team Leader), (b2) Deputy Resident Manager (Deputy Team Leader), and (c) Power Systems/Electrical Construction Engineer (see Data Sheet, 3.3. (iv), will have to be fully resident in Ghana during the Activity 3 (Control of the Works), the Consultant will have then to make proposals regarding the deployment in Ghana for (i) these key staffs during other Activities and (ii) for all other staffs (see also Section 5, Terms of Reference).

FORM 3E TEAM COMPOSITION AND TASK ASSIGNMENTS

1. Technical Key /Managerial Staff		
Name	Position	Task

2. Support Staff		
Name	Position	Task

FORM 3F**CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF**

Proposed Position: _____

Name of Firm: _____

Name of Staff: _____

Profession: _____

Date of Birth: _____

Years with Firm/Entity: _____ Nationality: _____

Membership in Professional Societies: _____
_____Detailed Tasks Assigned: _____
_____**Key Qualifications:**

[Give an outline of staff member's experience and training most pertinent to tasks on assignment. Describe degree of responsibility held by staff member on relevant previous assignments and give dates and locations. Use about half a page.]

_____**Education:**

[Summarize college/university and other specialized education of staff member, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]

_____**Employment Record:**

[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of assignments. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.]

_____**Languages:**

[For each language indicate proficiency: excellent, good, fair, or poor in speaking, reading, and writing.]

_____**Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

_____ Date: _____

[Signature of staff member and authorized representative of the firm]

Day/Month/Year

Full name of staff member: _____

Full name of authorized representative: _____

FORM 3G STAFFING SCHEDULE

Name	Position	Reports Due/Activities	Months (in the Form of a Bar Chart)													Number of Months
			1	2	3	4	5	6	7	8	9	10	11	12		
																Subtotal (1)
																Subtotal (2)
																Subtotal (3)
																Subtotal (4)

Full-time: _____
 Reports Due: _____
 Activities Duration: _____

Part-time: _____

Signature: _____
 (Authorized representative)

Full Name: _____
 Title: _____
 Address: _____

3H. ACTIVITY (WORK) SCHEDULE**A. Field Investigation and Study Items**

	<i>[1st, 2nd, etc. are months from the start of assignment.]</i>												
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	
Activity (Work)													

B. Completion and Submission of Reports

Reports	Date
1. Inception Report	
2. Monthly Progress Report	
(a) Special Reports (as necessary)	
(b) FAT Reports	
3. Draft Completion Report	
4. Final Completion Report	

Section 4. Financial Proposal - Standard Forms

[Comments in brackets [] provide guidance to the short listed Consultants for the preparation of their Financial Proposals; they should not appear on the Financial Proposals to be submitted.]

Financial Proposal Standard Forms shall be used for the preparation of the Financial Proposal according to the instructions provided under Para. 3.6 of Section 2. Such Forms are to be used whichever is the selection method indicated in Para. 4 of the Letter of Invitation.

- 4A. Financial Proposal submission form.
- 4B. Summary of costs.
- 4C. Breakdown of price per activity.
- 4D. Breakdown of remuneration per activity.
- 4E. Reimbursable per activity.
- 4F. Miscellaneous expenses.

4A. FINANCIAL PROPOSAL SUBMISSION FORM

[Location, Date]

To: [Name and address of Client]

Ladies/Gentlemen:

We, the undersigned, offer to provide the consulting services for [Title of consulting services] in accordance with your Request for Proposal dated [Date] and our Proposal (Technical and Financial Proposals). Our attached Financial Proposal is for the sum of [Amount in words and figures]. This amount is exclusive of the local taxes, which we have estimated at [Amount(s) in words and figures].

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal, i.e., [Date].

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature:

Name and Title of Signatory:

Name of Firm:

Address:

4B. SUMMARY OF COSTS

Costs	Currency(ies) ¹	Amount(s)
Subtotal		
Local Taxes		
Total Amount of Financial Proposal		_____

¹ Local currency and Euros.

4C. BREAKDOWN OF PRICE PER ACTIVITY

Activity No.:_____		Description:_____
Price Component	Currency(ies)	Amount(s)
Activity 1 (and sub-activities) (Lump Sum LS) <ul style="list-style-type: none"> - Review of available studies - Review of draft Bidding Documents and issuance of new Bidding Documents Activity 2 (and sub-activities) (LS) <ul style="list-style-type: none"> - Assistance to Call of Bids - Evaluations, Negotiations, till signature of Contract Remuneration (Activity 3) Activity 4 (and sub-activities) (LS) Activity 5 (Specific training) (see Section 5) (LS) Re-imburseables (see 4E below) Miscellaneous Expenses (see 4F below) Subtotal		<div style="text-align: center; margin-top: 10px;">_____</div>

Please see also Section 5, *Terms of reference*, para. 4.11.

4D. BREAKDOWN OF REMUNERATION PER ACTIVITY

Activity No. _____			Name: _____	
Names	Position	Input ²	Remuneration Currency(ies) Rate	Amount
International staff		- Home - Ghana		
Local staff				_____
Grand Total				

See also Section 5. *Terms of Reference*

² Staff months, days, or hours as appropriate.

1 Form FIN-4 (4D Table) should be filled for each of the Forms FIN-3 (4C Table) provided, if needed.

4E. REIMBURSABLES PER ACTIVITY

Group of Activities (Phase): _____								
N°	Description ²	Unit	Unit Cost ³	Quantity	[Indicate Foreign Currency # 1] ⁴	[Indicate Foreign Currency # 2] ⁴	[Indicate Foreign Currency # 3] ⁴	[Indicate Local Currency] ⁴
	Per diem allowances	Day						
	International flights ⁵	Trip						
	Miscellaneous travel expenses and local transportation costs	Trip						
	Mobilization/Demobilization							
	Accommodation—Office	An office shall be provided for the Resident Manager in the PIU Offices and Guest offices for Consultant Personnel on short term visits to the PIU Office Office(s) to be provided by the Client- for Activities 1, 2 and 4 – by the Contractor(s) for Activity 3						
	Office rent, clerical assistance							
Total Costs								

2 Delete items that are not applicable or add other items according to Paragraph Reference 3.6 of the Data Sheet.

3 Indicate unit cost and currency.

4 Indicate between brackets the name of the foreign currency. Use the same columns and currencies of Form FIN-2. Indicate the cost of each reimbursable item in the column of the relevant currency. Cost = Unit Cost x Quantity.

5 Indicate route of each flight, and if the trip is one- or two-ways.

6 Only if the training is a major component of the assignment, defined as such in the TOR.

4F. MISCELLANEOUS EXPENSES

Activity No. _____

Activity Name: _____

No.	Description	Qty.	No.	Unit Price	Total Amount
1.	Communication costs between Home Office and Ghana (telephone, telegram, telex)	LS			
2.	Drafting, reproduction of reports	LS			
3.	Laptops and software (see Section 5, para 8.0)	No.		4	
4.	Vehicles	No.		6	
	Grand Total				

Section 5. Terms of Reference

1.0 STATEMENT OF INTENT

The Ghana Grid Company (GRIDCo) intends to implement a 330 kV transmission project from Kumasi to Bolgatanga, to reinforce its network and also establish the necessary requirements to export energy to Burkina Faso and other Sahelian Countries. GRIDCo has therefore secured a Credit Facility from the French Development Agency (AFD) for the implementation of the Projects and intends to apply the proceeds of the grant to eligible payment under a contract for the Project Management, Engineering and Construction Supervision Consulting Services on the Project.

The Project Management and Engineering Supervision Consultant to be engaged by GRIDCo will assist its Project Implementation Unit (PIU) among others in the overall project management, engineering, environmental monitoring, procurement/inspection, construction coordination/quality assurance and testing/commissioning of the facilities on the Project.

2.0 BACKGROUND AND CONTEXT

2.1 The Ghana Grid Company (GRIDCo)

GRIDCo was incorporated in accordance with the Energy Commission Act, 1997 (Act 541) and the Volta River Development (Amendment) Act, 2005 Act 692, for the exclusive operation of the National Interconnected Transmission System as an independent Utility to take over the transmission functions of the Volta River Authority (VRA) within the framework of the Ghana Power Sector Reforms.

GRIDCo was incorporated on December 15, 2006 as a private limited liability company wholly owned by the Government of Ghana under the Companies Code, 1963, Act 179 and granted a certificate to commence business on December 18, 2006. The company became operational on August 1, 2008 following the transfer of the core staff and power transmission assets from VRA to GRIDCo

2.2 Ghana's Transmission Network

The National Interconnected Transmission System (NITS) of Ghana comprises approximately 5000 circuit km of lines and over 45 switching and transformer stations. The transmission network consists of about 3700 km of 161kV transmission lines spread across the country, 128 km of 161 kV double-circuit and a 75 km 225 kV single circuit interconnection lines with Togo and Benin in the east and Cote d'Ivoire in the west respectively. There is also about 100 km of 69 kV transmission line in the eastern part of the country east of Lake Volta as well as a 219km 330 kV Transmission Line interconnecting the Aboadze Thermal Power Plant Complex in the west to the Volta Substation in Tema in the east.

Construction of approximately 140 km, 330 kV Transmission Line from the Volta Substation in Ghana to the Lome substation in Togo to link up with the 330 kV Ikeja West (Nigeria) - Sakete (Benin) transmission line is in progress and is expected to be completed by end of 2013. The commissioning of this line will complete the Ghana segment of the 330 kV WAPP Coastal Transmission Backbone (CTB) from Ikeja West (Nigeria) through Sakete (Benin), Volta (Ghana) to Aboadze (Ghana). There is also currently a study for the construction of an additional 330 kV interconnection between Ghana and Cote d'Ivoire.

A 330 kV Transmission is also to be constructed from Aboadze to Prestea to Kumasi and northwards to Bolgatanga to provide the power transfer capability for power supply and interconnection to the Sahelian countries including Mali, Burkina Faso and Niger. The funding arrangements for the Prestea - Kumasi and Kumasi - Bolgatanga transmission systems are closed and arrangements towards the implementation of the Project are in progress.

2.3 WEST AFRICA POWER POOL (WAPP) INITIATIVE

In pursuit of its strategic goal of regional energy integration, the fifteen (15) member states of the Economic Community of West Africa States (ECOWAS) have resolved to establish a well-functioning, cooperative, power pooling mechanism for West Africa. The West Africa Power Pool is envisaged as a means to provide the citizenry of the community increased access to stable and reliable electricity at affordable costs.

The ultimate objective is to interconnect the national power systems of ECOWAS Member States by 2020 by implementing an infrastructure program that would lead to the establishment of a regional electricity market.

The 330 kV transmission line from Aboadze through Kumasi to Bolgatanga will form part of the WAPP Inter-zonal Hub. The 330 kV Reinforcement Project from Kumasi - Bolgatanga will form part of the interzonal

Hub and will reinforce the Ghana Transmission System and also ensure the export of at least 100 MW of power to Burkina Faso and increase the reliability of the Ghana-Burkina Faso Interconnection as well as power supply to the Sahelian Region.

2.3.1 330 kV Kumasi - Bolgatanga Transmission Line Project

The 330 kV Kumasi-Bolgatanga Transmission Line Project consists of the following components:

- Construction of 185 km 330 kV transmission line from Kumasi to Kintampo and 350 km 330 kV transmission line from Kintampo to Bolgatanga
- Expansion of the proposed 330 kV Substation at Kumasi for the take - off of the 330 kV line to Kintampo
- Construction of new 330 kV Substations at Kintampo, Tamale and Bolgatanga including the provision of 330/161 kV autotransformers.
- Implementation of relevant Environmental Mitigation Measures and Resettlement Action Plan for the Project.
- Supply of one (1) Spare 330/161 kV Auto transformer (ATR) for the Aboadze-Volta Transmission System, ATR to be set in Tema (another ATR is to be installed in Aboadze, financed by IDA).

The detailed description of the proposed packages under the Project is as in Annex 1 of the TOR.

2.4 PROJECT FINANCING

GRIDCo has received funding from AFD for the implementation of the 330 kV Ghana Transmission Reinforcement Project from Kumasi - Bolgatanga. A Grant has been provided by the Africa-EU Infrastructure Trust Fund of the European Union through the AFD for the engagement of a Project Management Engineering Consultant to oversee the implementation of the Project.




World Bank / IDA financed the front end engineering and preliminary activities for the Project (Feasibility Study); GRIDCo is financing the costs of implementation of the environmental and social mitigation measures needed and part of the operating expenditure of the Project Implementation Unit.

2.5 STATUS OF PROJECT

Project Preparatory Studies

The Feasibility Study, Engineering and line route selection for the 330 kV Aboadze-Preatea-Kumasi-Bolgatanga Transmission system has been undertaken by SNC Lavalin under a contract funded by the World Bank. The final Feasibility Study Report including the line route maps, preliminary tower spotting, designs and technical specifications as well as draft bidding documents have been prepared for the implementation of the Project.

The Environmental and Social Impact Assessment (ESIA) Study of the proposed line route is in progress as per the Environmental Protection Laws of Ghana. The following Reports prepared under the study will be disclosed in Ghana and also on the GRIDCo Website:

-  Environmental and Social Impact Assessment (ESIA)
-  Resettlement Action Plan (RAP) and
-  Environmental and Social Management Plan (ESMP)

The Environmental Permit for the Project would be obtained for the implementation of the Project in accordance with the Ghana Environmental Protection Agency Regulations. GRIDCo is expected to ensure that the Project is implemented in accordance with the provisions of the Environmental Social Impact Assessment (ESIA), the Resettlement Action Plan (RAP), and the Environmental and Social Management Plan (ESMP) and in a manner satisfactory to AFD and the laws of Ghana.

3.0 OBJECTIVE OF THESE TERMS OF REFERENCE

GRIDCo is seeking the services of qualified and experienced International firm specialized in power system development and operations with experience in 330 kV EHV Transmission Systems to be engaged to assist its Project Management Unit (PIU) in the following activities on the contract packages for the implementation of the Project:

- Provide project management services including ensuring appropriate project documentation and filing system as well as Project Implementation Procedures.
- Review engineering studies and detailed designs related to the project
- Review the draft Bidding Documents including Technical Specifications for the various Contract

packages on the Project and advise the Client of any changes or deviations as may be required or recommended.

- Assist in the bidding process, evaluation of bids and award of the various Contracts as required.
- Assist in the contracts' administration and ensure the construction supervision during project execution.
- Participate in the Factory Audit, Inspections and Acceptance Tests as part of the Quality Assurance process for the Project.
- Participate in the commissioning as well as facilitate the smooth takeover of the Projects and ensure that the appropriate warranties for construction, maintenance and operation are in place.
- Monitor the implementation and adherence to the Environmental Management Systems and Plan for the project.
- Additional studies if required

3.1 PERFORMANCE OF SERVICES

The Consultant shall provide project management, engineering and construction supervision services including participation in Factory Acceptance Tests for the relevant Contract Packages on the Project. The Consultant is expected to liaise and coordinate as may be necessary with the Project Management Consultant to be engaged for the 225 kV Bolgatanga-Ouagadougou Interconnection Project which is closely related to this Project. The liaison and coordination is required to ensure that the various transmission lines and substation components/facilities with respect to the 225 kV Bolgatanga-Ouagadougou Interconnection Project and the 330 kV Kumasi - Bolgatanga Transmission line Project are implemented in a timely manner and in accordance with international best practices with the aim to achieve the desired level of performance of the facilities on completion and effective synchronization of the relevant Power Systems as well as seamless integration of relevant components in particular, protection, telecommunication and SCADA.

Term of Services: The Consultancy Services for the Project are expected to commence in September 2013 and is expected to be executed over a period of about thirty six (36) months or completion of the project based on the availability of funds.

Location (see also 8.0): The location of the services to be performed by the Consultant will be primarily at the current main GRIDCo Project Office in Tema/Akuse and at four site offices, or other ones among them, as indicated in the attached map, for some staff/Activities.

It is envisaged that these sites' offices will be at Kumasi, Kintampo, Tamale and Bolgatanga in Ghana for the Consultant's resident and required staff in each location.

An Office shall be provided for the Resident Manager of the Consultant in Akuse. The Client (GRIDCo) will provide guest office(s) for the Consultant in Tema/Akuse prior the commencement of the works (hence, for Activities 1 and 2), as well as for Activities 4 and 5, if needed, and offices at the four locations as mentioned above during the works (hence, for Activity 3), as part of the Works' Contractors contracts and site facilities.

The Consultant shall indicate in his bid how he will organize regarding these respective locations, depending on the optimal organization for the works.

The Consultant shall also participate in factory inspection and equipments testing that shall be performed at the supplier's/manufacture's premises.

Organization: The outline of the structure of the GRIDCo's Project Implementation Unit (PIU) is attached as Appendix 4B.

The Organization of the GRIDCo Project Implementation Unit (PIU) that will be responsible for the coordination of the implementation of the 330 kV Kumasi - Bolgatanga Transmission Line Project as well as the 225 kV Bolgatanga Ouagadougou Interconnection would be headed by a Project Manager responsible for the overall efficient implementation of the Project. The Project Manager would be supported by the Project Coordinator responsible for the coordination of project activities between GRIDCo and the Project Consultants and also with the Funding Agency and also monitor project implementation. The Project Manager will be supported by the Project Coordinator, Project Engineers with requisite qualification and expertise including as well as other supporting procurement, field supervisory, finance and administration staff to effectively carry out the specified work.

The PIU will be also have GRIDCo field support from the Northern and Southern Network Department, Engineering Department, Legal and Finance Departments in the execution of the main reinforcement project and other projects.

4.0 SCOPE OF SERVICES

GRIDCo is implementing the 330 kV Kumasi-Bolgatanga Transmission Project to reinforce the Ghana Transmission Network to ensure the reliability of the Ghana System and guarantee power transfer of at least 100 MW from Ghana to Burkina Faso and Sahelian Countries under the WAPP Priority Program. The 330 kV Kumasi -Bolgatanga Transmission Project shall form part of the WAPP Interzonal transmission hub and seeks to reinforce the Ghana Transmission System as well as increase the reliability of the Ghana-Burkina Faso Interconnection and power supply to the Sahelian Countries.

The Consultant shall provide overall management on all aspects of the work/services. The Consultant shall nominate a Resident Manager (Team Leader) and a Deputy Resident Manager (Deputy Team Leader) to liaise with Client's designated representatives; the Deputy Resident Manager will at least replace the Resident Manager when the latter will be on leave if so, and will also be full time resident due to the length of the line (see below). The Consultant shall also need Consultant's representatives at the four main locations of the project as named above. This would depend on the optimal organization for the works and the Consultant's own organization. All contractual matters shall be channeled through these persons. The Consultant shall also provide the necessary level of independent quality assurance and control of the work.

It is expected that at least the following key staff: Resident Manager, Deputy Resident Manager, Power Systems/Electrical Construction Engineer (see Data Sheet, 3.3. (iv), and see below, 4.11.) will have to be fully resident in Ghana for the whole Activity 3 (Control of the works), and then, the Consultant will have to make proposals regarding the presence in Ghana (i) for these three key staffs for the other Activities (Activities 1, 2 and 4, see below), (ii) as well as for all other key staffs for each of the 5 Activities.

The Resident Manager (Team Leader) and the Deputy Resident Manager (Deputy Team Leader) shall be fluent in English as well as other key staff.

The Consultant shall implement a specific Activity (Activity 5) regarding training of some Client's staffs, beyond the "day-to-day training" that is provided by associating the dedicated Client's staff to the supervision on the field itself; the staff from the Client working with the Consultant in the Project implementation will participate in all aspects of the Consultant's work, as explained below, while the two parties having their own responsibilities; this for example for the bidding evaluation reports and for design reviews (see 4.1., Phase 2).

The Consultancy services shall be provided in accordance with internationally recognised standards, practices and in line with the provisions of the conditions of this Contract. The Consultant shall also perform the services as an independent Engineer in accordance with applicable laws and regulations in Ghana as may be required.

The services required shall include but not limited to the following:

4.1 Pre - Contract Services: Activity 1 and Activity 2

Activity 1 (Pre-Bidding):

- Review the SNC Lavalin Feasibility Study and Bidding Documents (including packaging principles) on the project and advise the client of any necessary or consistent changes or deviations.
- Finalize in accordance the Bidding Documents (including packaging principles), Technical specifications and Drawings and all project preparatory documents deemed necessary for the Kumasi-Bolgatanga Transmission Project
- Assist the Client to secure the No-Objection of the Funding Agency on the Bidding Documents
- Review the Environmental Impact Statement (EIS), Environmental and Social Management Plan (E&SMP) and Resettlement Action Plan (RAP) for the Project and update if necessary.

Activity 2 (Bidding and Contracting):

- Support the Client to launch the Bidding Documents / tendering processes (prequalification method chosen)
- Assist the Client if necessary to provide adequate responses to all requests for clarifications
- Assist and advise during the pre-bid meetings as required
- Prepare amendments to the Bidding Documents and support the Client to issue same
- Participate in Bid Evaluations and prepare the associated evaluation reports in accordance with the Bidding Document requirements and requirements of the Funding Agency including the recommendation for award.
- Assist the Client to secure the No-Objections of the Funding Agency on the Evaluation Reports for the awards of the Contracts

- Assist and advise during contracts' negotiations, signature of the contracts and compliance by the Contractors in the fulfillment of contracts' conditions (advance payment guarantee, performance guarantee/bond, etc) and effectiveness conditions
- Assist the Client to prepare and finalize the Notifications of Awards and notifications to unsuccessful bidders.

4.2 Works Phase (Activity 3): Project Management and Contract Administration

- Assist the Client in the contracts' administration during the project execution including certification of monthly progress of works as required.
- Advise in a timely manner on progress, potential issues, variations or potential variations in technical or cost items, and the like, on the project as well as such additional information as he may from time to time be requested. This shall be done through the monthly reports issued by the Consultant, comments on communications to and from the Contractors and records of (weekly works) meetings for the effective implementation of the Project.
- Keep accurate and systematic records and accounts in respect of the Services in such form and detail as is customary to the Consultant, and shall be sufficient to establish accurately that the costs and expenditures have been duly incurred.
- Prepare a Project Implementation and Completion Report within three months of the completion of the Project.

4.3 Works (Activity 3, continued) : Engineering and Construction Supervision

- (i) The Consultant shall review, comment, certify and recommend for approval by the Client if required by the latter the following among others, in compliance with the requirements of the Project:
 - Contractor's engineering design, specifications and drawings.
 - Supplier's manufacturing procedures and processes.
 - Contractor's construction and erection methodology, procedures, practices and schedules.
- (ii) Ensure the construction supervision of the Project components as may be required.
- (iii) Discuss and resolve technical matters with the Client and Contractor as necessary
- (iv) Monitor contractor's site quality management program
- (v) Assess quality of Contractor's construction and installation work for compliance with the requirements of the Contracts with the utilities including specifications, approved drawings, codes and standards as well as prudent engineering practice.

4.4 Activity 3, continued: Manufacturing/Inspection

- (a) Manufacturer's Quality Management
 - Prepare, certifies and follow approved Factory Inspection Plans of all equipments required under the project in line with international procedures and practices.
 - Verify in conjunction with the PIU Engineers, that the quality management programs of the major equipment of manufacturers are to contract requirements and maintain periodic surveillance of manufacturing process to verify compliance.
- (b) Shop Tests - Participate alone or in conjunction with the PIU Engineers, the shop testing of the major equipments; issue a report on all tests.

4.5 Activity 3, continued: Environmental and Social Monitoring

- Assist the Client in the review of the Contractor's Environmental Management Systems & Plan (EMS&P) and Resettlement Action Plan (RAP) for the Project.
- Monitor the implementation of the RAP including the enumeration of properties within right of way and payment of compensation
- Ensure Contractor's adherence to the (EMS&P)
- Prepare relevant site reports.

4.6 Activity 4: Testing/Commissioning

Testing

- (a) On substantial completion of the Project, assist the Client to perform checkouts and verify completeness and compliance of facilities with contract requirements.
- (b) Together with the PIU, participate in the final testing of the mechanical and electrical systems including the system interlocks and safety features, and issue the report on the tests.

Commissioning

- Review and approve the contractor's procedures for switch on, performance and acceptance testing.
- Coordinate the switch on and testing with the Client's commissioning team.
- Participate in the acceptance (after energisation) testing and review of the result, and issue a report on all tests in respect to the requirements of the contract.
- Ensure if necessary the preparation of a report on any changes made to the installation to meet the requirements of the acceptance tests.

4.7 (Activity 4, continued): Project Completion

Upon Project Completion the Consultant shall undertake the following among others

- (a) O&M Manuals - Review for completeness and adequacy and approve equipment operating and maintenance manuals prior to the issue of the final certificate.
- (b) As-built drawings - Expedite preparation of as-built drawings by the contractor, review and file a permanent record within three months on project completion.
- (c) Certificates - Prepare certificate of substantial completion, take-over and any other final certificates.
- (d) Deficiency List - Follow up on deficiency list in the substantial completion certificate and expedite timely clearing of outstanding items.
- (e) Defects Liability Period - Assist the Client resolve all issues related to Warranty and Final Acceptance of Works.
- (f) Issue Final Acceptance Certificate(s) after Defects Liability Period
- (g) Additional Studies - Assist the Client in the review for completeness of study reports and other documentation prepared at the request of the Client or any such relevant studies as necessary at the request of the Client.

4.8 Activity 5: Specific training

The Consultant shall provide a specific "classroom" training and on the job training and thus implement an effective capacity development program, beyond integrating the Client's PIU personnel in the day-to-day activities of the Consultant (which is part of Activity 3), and train them on the job as necessary on broader issues other than the day-to-day activities for the project.

The objective of the capacity training is to build and reinforce the capacity of the Client in implementing projects of such nature. Other key areas where training of the Clients PIU Personnel should covers the use of project planning software for effective motoring of projects, project scheduling, change management, managing project cost. The Consultant may propose in his proposal other relevant areas of learning for consideration by the Client.

The "classroom" training for Design Engineers and Operating and Maintenance Staff (Technicians) shall cover the following areas for 10 persons for a 10 day period for each group, hence 20 days or 1.0 months are required as total. The courses shall however be administered in phases as will be determined during :

Design Engineers

- Advanced Substation Design and Substation Automation Design and Specification
- Protection and Control Philosophy and Design, Protection Relay Specification
- Power System Reliability Analysis
- Modern Power System Protection: Applications and Performance Analysis and Surge Protection
- Transformer Specification
- Transmission Line Design and Construction

Operating and Maintenance Staff (TECHNICIANS)

- Protection and Control Philosophy
- Substation faults and maintenance
- Transmission Line Faults and maintenance
- Modern Power System Protection: Applications, Performance Analysis, Faults and maintenance.
- Substation Automation, Analysis and Maintenance

The cost of the training shall include the trainers travel expenses if needed (that is if other staff(s) as the key staff for supervision activities), per diem allowances and training material for the participants.

GRIDCo will make available classroom for the training and overhead project and other training material. The Consultant shall ensure that all cost associated with capacity building of the Client's Staff on Site are included in his financial proposal (Activity 5's Lump Sum).

4.9 DETAILED TASKS OF THE CONSULTANT FOR ACTIVITY 3

Preparation of the works

The Consultant will be responsible for the following:

- Ensure that the Contractors and Suppliers involved in the execution of Contract develop the plans and implementation documentation compliant with technical specifications.
- Review and checking of the documentation as well as approval and certifying of the said documents, calculation notes, work methodologies and manufacturing processes (workshop/plant or on the spot inspections), implementation schedules, the general organizational planning and all the documents required for the execution of the assignment, during the preparation of the Contract and throughout the execution of the Assignment.
- Ensure that the documentations prepared are project specific and also ensure that the variations potentially taken into account correspond effectively to those expected by the Employer/Supplier;
- Be able to order any verification that he will deem necessary from the Contractors or Suppliers.
- On the basis of the project execution, the Consultant is in charge of supervising organisation of the construction site activities into elementary tasks and are logically carried out and that each of the tasks is consistent with the techniques used, the planning and the cost estimates derived from the market prices.
- Monitor and ensure that the facilities are consistent with the breakdown of price schedules of the Contracts.
- Endorse documents by affixing his stamp on all the documents or plans developed by the firm at inception and throughout the execution of the works.

He shall:

- Approve Quality Assurance Plan of the firms which shall have incorporated in them among others, operation issues of the construction site (movement on site), health and security aspects.
- Inspect and ensure that Construction Camps are located in compliance with the modalities and particular constraints of the site, communities and local authorities, the Employer and applicable regulations. The Consultant shall take over these installations if this has been envisaged and proceed with formalities or the handover of facilities at the end of the Project and, those which are to remain the property of Contractor shall so remain.
- Ensure that the Contractors have obtained the necessary approval from the water and electricity service providers for the supply of the construction water and power to the project site. He shall ensure that the material provided by the Contractors meet the requirements of specifications and is suitable to be used for the implementation of the works.
- Check that appropriate security measures are complied with during the works: the Contractors shall be responsible for the security of the site and the materials and installations and ensure that the companies provide adequate security of the works carried out within the boundary of the construction site.
- Ensure that, before and during the execution of the works, the Contractors shall determine the location of all service lines (water supplies, the power lines, telecommunication networks and other services) in close collaboration with the Employer and the concerned service providers and take all steps and technical recommendations for their relocation if required.

Technical Supervision of the Works

- In general, he shall supervise, monitor, inspect, verify and certify qualitatively and quantitatively the execution of the works carried out by the Contractors, in order to confirm that the works are undertaken as per the terms and conditions and specifications of the Contracts and in a cost effective, qualitative and timely manner.
- Ensure that installations works are undertaken in accordance with designs and drawings.

-
- Ensure that the Contracts are executed in accordance with the work programmes and updated regularly as required.
 - Verify the implementation and adherence to the procedures of the Quality Assurance Plans for the project, and review the procedures with the approval of the Employer.
 - Monitor and ensure that the Contractors implement any environmental and social mitigation measures in compliance with the provisions of the project Environmental and Social Management Plans
 - Promptly inform the Client of any environmental and/or social constraint that can have an impact on the Project
 - If and when needed, make proposals to address environmental and social potential constraints that could have impacts on the works schedule or implementation, in order to avoid any delays for the works
 - Ensure that the works are qualitatively and quantitatively executed in conformity with the approved drawings and designs and in accordance with the requirements of the contract documents and approvals; he shall ensure that the firms compensate for any the failures or faults observed during the visits and inspections by the Consultant and caused by the Contractor.
 - Ensure that all site investigations required for the control of the works (structures, geotechnics, hydraulics, materials, topography, etc.) are undertaken by the Contractor which are to be submitted for review and approval. The Consultant may at his own discretion request for additional tests if he suspects any defect in the implementation of the works, and will conduct its own required tests. The Consultant may be required to supervise tests to be carried out by the Contractors on site, in laboratory and in the manufacturing plants (FAT), to ensure the conformity of the materials or equipment supplied and installed with the Specifications. He shall submit to the Employer the test certificates of any tests conducted to confirm compliance with technical requirements and verify that all such certificates are valid. The Consultant shall ensure Warranty Certificates issued by the Suppliers are authenticated and valid in accordance with the terms of the Contract.
 - Inspect material stock yards and also review the supply of materials for the works to ensure that proper material planning is done by the Contractors to avoid delays in the installation works.
 - Review and request for the update of the works programmes as necessary for the main works in progress and monitor the work programmes to ensure that the works progress as scheduled.
 - Review all daily, weekly and monthly reports from the Contractors and ensure that the information on the Contractors activities relating to labour strength and availability of material in sufficient quantity, cash flow and other logistics requirements are provided in the reports as well as material installed, and any other important information that may arise on the construction site such as inclement conditions, site incidents of importance.
 - Ensure that works executed which are deemed inconsistent with the contract requirements and technical specifications are demolished or removed and reconstructed or materials supplied which are deemed not to meet technical requirements are replaced in compliance with the technical specifications and requirements of the contracts. The Consultant shall supervise and ensure that the necessary changes and inspections of the execution and implementation of the works are done. The Consultant shall ensure that all demolished works or materials removed as a result of poor and improper installation are removed by the Contractors from the construction site or material stock pile yards.
 - Request for justification and the rationale of the changes proposed for the modification of the works for review to confirm consistency of the proposed modification/changes with technical provisions prior to giving any approval any such amendment of the project.
 - Inform the Client in writing for making recommendations for consideration of the Employer (Gridco) and obtain any approval of the Employer for the implementation of any decisions to be taken by the Employer. The information shall include the impact of any decisions on the contractual completion schedule, taking into account the work progress, challenges encountered and unforeseen events.
 - Carry out inspections on the site to ensure that safety rules and regulations are adhered to and preventive measures to be made or being implemented by the firms on the site of the project are consistent with best practices and, if necessary, assist the Contractors develop the safety policies.
 - Issue and circulate to the Client the regular reports of meetings on sites with the Contractors (usually weekly).

The Consultant shall assist, if required by the Contractors in the preparation of technical and administrative documentation and the other working documents to be included as supporting documentation for processing and payment of the works.

Administrative and financial control of the Construction Activities

The Consultant shall:

- Prepare all relevant instructions to be issued to the Contractors except the notifications to be issued only by the Employer such as order to commence work, price changes, changes in completion time and other deadlines, issue of additional clauses for new prices; and submit them to the Employer prior to issuing to the Contractor.
- Keep records of any work measurements carried out for the purposes of the payment of the work done, as well as all the results of the tests undertaken and in the case of discrepancies in ; on the basis of the contradictory site surveys of the aforementioned quantities of any work done, calculate the corresponding payments;
- Advise the Employer (the Client) on the technical issues and problems arising or encountered or, on matters relating to the application of the contract clauses ; inform the Employer of any delay and formulate recommendations to be implemented to mitigate risks that may arise
- Submit to the Employer periodically any technical modifications, update of works schedule or financial impacts on the contract as result of price changes due to economic changes for approval by the Employer;
- Produce monitoring documents such as :
 - the daily reports or statement of works at the construction site (advance, supply, work completed or not, etc.),
 - the monthly financial statement of works (interests on overdue payments, penalties review of prices, etc.), periodic detailed account based on the projects detailed accounting invoices submitted by the firms,
 - Work measurement performance sheets (including quantities)
 - The regular minutes of meetings on sites with the Contractors (and potentially the PIU), circulated to the Client
- Review and verify any request made by the Contractors for additional payments; prepare update price schedules including the detailed presentation of documentation necessary for the decision making process by the Employer, presentation of an analysis of the firms requests and submit the recommendation to the Employer;
- Develop recommendations for the attention of the Employer during claims or disputes with the Contractor and for as much as the claim or dispute be notified
- Update and provide for the completion cost of the works, as the project progresses
- in general; supply the Employer with any useful information, for monitoring purposes;
- Monitor the works, the Consultant and Employers Representatives shall attend regular projects meetings at the construction site, and undertake random visit to the project site as well as participate in decisions-making as and when required These meetings will allow the Employer to make himself acquainted with the progress of the work and be informed on outstanding and upcoming issues. The observations made during these meetings shall be documented in the construction site logbook which shall include the findings, those of the Consultant as well as those of the other stakeholders involved in the monitoring of the works. In that logbook, all the material orders will also be recorded and any event relating to weather conditions shall also be mentioned. That logbook will become the property of the Employer;
- Produce monthly and quarterly work progress reports as per the following indicative format in Annexe 6 within this Section 5, that the Consultant can adapt according to the evolution of the construction site.

4.10 DETAILED TASKS OF THE CONSULTANT FOR ACTIVITY 4: Services upon completion of the Works and until termination of Defect Liability Period (DLP)

Testing

See above, para 4.6

Commissioning

See above, para 4.6

Acceptance and provisional handover of the Works

The Consultant shall oversee the handover of the works, including the operational acceptance and the hand over of facilities.

The Consultant will issue the corresponding reports and other corresponding minutes of project meetings and get them signed by the Stakeholders.

For this purpose he shall prior to the issue of Completion Certificate:

- Carry out a detailed inspection of the works, in collaboration with the Employer and the Contractors and, draw the list of defects to be remedied by the Consultant before Operational Acceptance Test. The Consultant will be required to review causes of any defects identified by the Employer and must produce a detailed report specifying the nature and the origins of these defects and review suggested proposals to remedy the defects
- Issue the defects list to the Contractors and make sure that all the necessary measures are taken to carry out the defects and put the facility in the desired conditions.
- After the repairs done are considered satisfactory by the Employer and the Consultant, the Consultant and Employer shall certify the execution and the approval of all of the necessary tests/completion of the Work, including the testing on the materials and the resistance tests and, certify that the works are carried out as per the requirements
- Prepare for issue of any relevant Completion/Operational Certificates to the Contractors

At the completion of the works, the Consultant shall also:

- Verify and transmit the as-built drawings « after execution », handed over by the Contractors to the Employer,
- Ensure that the Contractors/Suppliers supply all the manuals, documents, lists of equipments, all the useful information necessary for the maintenance of the installations and the facilities provided.
- ~~The Consultant shall, within a period of thirty (30) days, starting from the date of final commissioning of the facilities, complete his assignment including the monitoring of the as-built drawings, calculations..., demobilize his staff and prepare a final completion report.~~
- The report of final certificate shall be transmitted within thirty (30) days after this Inspection.

Management of the Warranty Period and Final acceptance/takeover

After the 12 months DLP, the Consultant will together with the Employer's Representatives participate in the final review of the performance of the facilities and discharge of the Contractor from warranty obligations

The Consultant shall be responsible for carrying out a detailed review of the performance of the facilities, in collaboration with the Employer and the Contractors, one year after the operational acceptance of the works. He shall establish, on this occasion a list of the potential and residual defects that the Contractor shall remedy prior to the discharge of the performance security. He shall make sure that the repairs works are implemented as required and the facility put in the condition required. The Consultant and Employer shall then issue the final acceptance certificate and a report relating to the performance of the facility.

At the end of the Defects Liability Period, the Consultant shall:

- Prepare the Issue the Final Acceptance Certificates.

Demobilization

~~The Consultant shall, within a period of thirty (30) days, starting from the date of final completion of work, complete his assignment including the monitoring of the as-built drawings, calculations..., demobilize his staff and prepare a final completion report.~~

~~The report of final certificate shall be transmitted within thirty (30) days after this inspection.~~

General and final detailed Accounts

The Consultant shall establish the general and final detailed account on the basis of the draft final detailed account prepared by the firm. He shall notably see to it that the final detailed account is presented in the same format as the price schedules. He shall establish the balance statement of Accounts from the final detailed account and the related last monthly detailed account. The general detailed account must consist of:

- The final detailed account considered
- The balance statement considered
- the recapitulation of the monthly instalments and of the balance, the result of which constitutes the amount of the general detailed account
- the review of the new price required, the checking of the sub-details of the price of the firm
- preparation of the documents, and other formalities and their presentation for signature by the Employer

Final Report on the work monitoring

The Consultant shall hand over, on or before thirty (30) days after the Final Operational Review of the performance of the facilities, a general final report for the execution of the works contract and monitoring operations, which will consist of the elements detailed below, at the minimum, in collaboration with the Employer:

- general presentation of the project (funding source, contractors, conventions, contract, etc.) ;
- the financial statement of the contract (works, control) and the corresponding background (implementation schedule, work stoppage, the material used) ;
- the detailed description of all technical modifications with their justifications as well as a comprehensive presentation of the final project;
- the economic analysis of the costs for the implementation entry by entry, and the cost of facilities based on representative quantity-surveys;
- all the necessary progress pictures to illustrate the different stages of the implementation of the project ;
- a statement indicating to what extent the results obtained meet the requirements of the Specifications, and define the potential reasons of their divergence (the study's deficiencies, inadequate means or standards) ;
- A presentation of the recommendations on the implementation methods and on the modification of some requirements for the future.
- A commentary on the performance of the Contractors responsible for the works.
- A general summary of the results of the geotechnical tests and resistance tests.
- All of the documents constituting the Files of the works executed that the Consultant shall collect and verify, notably the overall and detailed plans.
- An operation and maintenance program along with operating notice of the facilities that shall be handed over to the Employer and to all the authorities capable of being stakeholders to that subsequent operation. This notice shall integrate a detailed hint of modalities and subsequent maintenance procedures of the facilities: visits (types, means, periodicity, costs), works (nature, periodicity, costs), and shall allow the Employer to define at the best future maintenance and restoration programmes of the facilities.

4.11 ESTIMATED PERSON MONTHS AND KEY STAFF NEEDS

The estimated person months for key staff are provided below: 208.5 (see Data Sheet).

Additionally, a breakdown is provided for each Activity and per Key staff. This breakdown is indicative (unless otherwise specified) but gives an idea on how the Client GRIDCo requests this assignment to be provided.

The estimations in terms of men*months are also given for Activities 1, 2, 4 and 5 while these Activities will be paid each on Lump-Sum basis. This gives however an idea of the scope.

Personnel	Person Months	Indicative breakdown per Activity				
		Activity 1	Activity 2	Activity 3	Activity 4	Activity 5
a. Project Director	6	1	0.5	4	0.5	-
b1. Resident Manager (Team Leader)	31	2	3	24 (*)	2	-
b2. Deputy Resident Manager (Deputy Team Leader)	24	-	-	24 (*)	-	-
c. Power Systems / Electrical Construction Engineer	31.5	2	3	24 (*)	2	0.5 (**)
d. Substations Design Engineer	23	1	2	18	2	-
e. Transmission Line Expert	23	1	2	18	2	-
f. Protection and Control Engineer	12	1	1	8	2	-
g. SCADA and Communication Expert	12	1	2	8	1	-
h. Transformer Expert	16	1	1	12	2	-
i1. Commissioning Engineer - Line	5	-	-	3	2	-
i2. Commissioning Engineer(s) Substations	5	-	-	3	2	-
j. Quality Assurance/ Factory acceptance and Audit Expert	6	-	-	6	-	-
k. Environmental and Social Expert	14	1	1	12	-	-
Total Person Months for key staff	208.5	11	15.5	164	17.5	10

(*)

- For each of these 3 key staff experts, the 24 men*months indicated, that is full time, is not only indicative, it is explicitly required

- Furthermore, these key staffs b1, b2 and c will be permanent staffs in Ghana for Activity 3 (except for annual leave)

(**)

Activity 5 can be provided by other staff with required skills

4.11 KEY STAFF NEEDS

The Consultant shall set up his organisation complying with the project needs and all positions will be held by qualified and skilled staff. The Consultant shall work jointly with the Client's PIU and will also be required to coordinate with the Consultant engaged for the 225 kV Bolgatanga-Ouagadougou project as may be necessary for the co-ordination of the two (2) projects to ensure the smooth implementation and successful interconnection of both projects.

Home Office Staff

The Consultant shall have at his home office (the firm's headquarters) a supporting team with the required knowledge and specialised skills in all fields that are necessary for the Project, for potentially required support to the Team on the field.

Field Office Staff

The Consultant shall provide staff on site for the overall management, procurement/inspection, construction coordination/quality assurance and testing/commissioning of the facilities on the Project as may be required. The Minimum qualifications for key staff of Consultant are indicated in ITC 3.3 (iv).

Title	Number of Years of Professional Experience
a. Project Director	Engineer with at least Fifteen (15) years of experience of which at least five (5) shall have been as Project Director on at least three (3) no. transmission/power system projects and be fluent in English.
b1. Resident Manager (Team Leader)	Engineer with at least Fifteen (15) years of experience of which at least five (5) shall have been as Resident Manager/Engineer on at least two (2) no transmission/power system projects and be fluent in English (reading, speaking, writing).
b2. Deputy Resident Manager (Deputy Team Leader)	Engineer with at least Ten (10) years of experience of which at least five (5) shall have been as Resident or Deputy Manager/Engineer on at least two (2) no transmission/power system projects and be fluent in English (reading, speaking, writing).
c. Power Systems / Electrical Construction Engineer	Engineer with at least Ten (10) years of experience of which at least five (5) shall have been responsible for Electrical Construction activities on at least two (2) no transmission/power system projects and in Site Safety and shall be fluent in English (reading, speaking, writing).
d. Substations Design Engineer	Engineer with at least Ten (10) years of experience of which at least five (5) shall have been a Design Engineer in EHV/HV Substation development on at least two (2) no transmission/power system projects and shall be fluent in English (reading, speaking, writing).
e. Transmission Line Expert	Engineer with at least Ten (10) years experience as a qualified Engineer in the design, design review, testing and/or construction of transmission line structures with particular experience in HV lattice tower design of which at least five (5) shall have been responsible for transmission line design and review on at least two (2) no transmission/power system projects and shall be fluent in English (reading, speaking, writing).
f. Protection and Control Engineer	Engineer with at least Ten (10) years of experience of which at least five (5) shall have had responsibility for Protection and Control Activities in EHV/HV Line and Substation development on at least two (2) no transmission/power system projects and shall be fluent in English (reading, speaking, writing).
g. SCADA and Communication Expert	Engineer with at least Ten (10) years of experience in the design, installation and commissioning of SCADA and Communication Facilities for Power Systems using Power Line Carrier and fiber optic technology of which at least three (3) shall have been responsible for SCADA design and installation works on at least two (2) no transmission/power system projects and shall be fluent in English (reading, speaking, writing).
h. Transformer Expert	Ten (10) years experience in as an Electrical Engineer of which at least five (5) shall have been responsible for EHV transformer designs, review of design documentation, participated in FAT for EHV and HV transformers on at least two similar projects and shall be fluent in English (reading, speaking, writing).
i1. Commissioning Engineer - Line	Engineer with at least Ten (10) years of experience in the site testing and commissioning of EHV/HV Lines and major electro-mechanical equipment of which of which at least five (5) shall have been as Commissioning Engineer on at least two (2) no transmission/power system projects, and shall be fluent in English (reading, speaking, writing).

i2. Commissioning Engineer - Substations	Engineer with at least Ten (10) years of experience in the site testing and commissioning of EHV/HV Substations and major electro-mechanical equipment of which at least five (5) shall have been as Commissioning Engineer on at least two (2) no transmission/power system projects, and shall be fluent in English (reading, speaking, writing).
i. Quality Assurance/ Factory acceptance and Audit Expert	Ten (10) years experience in factory audits, reviewing manufacturing, test and quality control procedures and witnessing in equipment acceptance tests (FAT) as well as the review and approval of quality plans and procedures and testing programmes of which three (3) shall have been as a senior engineer on at least two similar projects, and shall be fluent in English (reading, speaking, writing).
k. Environmental and Social Expert	Ten (10) years experience and practice in Environmental monitoring and management of which at least five (5) shall have had responsibility as Environmental Expert on at least two similar projects and shall be fluent in English and conversant with National and funding agency environmental guidelines.

5.0 TIME SCHEDULE

The consultancy service for the project is expected to commence in November 2013 for an estimated duration of at least forty-six (46) months including a period of twelve (12) months Defects Liability Period and Issue of the Final Acceptance Certificate where time input would be very limited.

The estimated durations and schedules of the various activities (ref 4.0 of this TOR) as of March 2013 (this is not binding for the Client at that time) is as follows with from the commencement of the services which is estimated at November 2013:

Activity No.	Description	Estimated Period	Duration (Calendar Months)
Activity 1	Pre Contract Activities involving review of previous study reports (Engineering and ESIA documentation) and Draft Bidding Documents and finalization of draft Bidding Documents, obtaining funding agency no objections to bidding documents	September - October 2013	2
Activity 2	Assistance with Bidding Process to award of Contracts	November 2013 - April 2014	6
Activity 3	Project Management and Contract Administration, engineering and construction supervision of the Works Contracts.	May 2014 – April 2016	24
Activity 4	Testing, Commissioning and Project Close out activity	May 2016 - June 2016	2
including Defect Liability Period	Defect Liability Period	July 2016 – June 2017	12
Activity 5	Specific Training – performed during Works Phase	Within Activity 3 period	pm
Total	-	-	46

6.0 REPORTS

The Services include the preparation of reports in English and submission, in the copies indicated to the Client in a timely manner of the following.

All of these documents will be produces also in soft copies being able to be sent by e-mails.

- **Inception Report (5 copies + 1 CD Rom/pendrive)**
Inception Report to be issued within four (4) weeks from the date of commencement of services.
- **Weekly (5 copies + 1 CD Rom/pendrive) reports for meetings with Contractors**
- **Monthly Reports (5 copies + 1 CD Rom/pendrive)**

Monthly Reports summarizing the Consultant's activities during the period under review. Monthly reports shall be issued by the 7th calendar day of the end of the month.

- **Works/Factory Inspection Reports (3 copies+ 1 CD Rom/pendrive)**
Works Inspection in Factories reports covering inspection and witnessing of any equipment at the manufacturer's works. Such reports shall be issued within 10 calendar days of the completion of the Factories' inspection.
- **Project Testing and Commissioning Reports (5 copies+ 1 CD Rom/pendrive)**
Project Testing and Commissioning Reports covering the tests witnessed, procedures used, record of equipment settings and initial operational performance, results of the tests, verification that the test results meet contract requirements and recommendations to the Client. Such report shall be issued within 30 days of the completion of the initial acceptance tests.
- **Provisional and Final Works Completion Reports (before Defect Liability Period)**
- **Final Acceptance Certificates (after DLP)**
- **Project Implementation Completion Report (5 copies + 1 CD Rom/pendrive)**
A Project Implementation Completion Report that summarizes the Project history, final cost, documentation and files turned over to the Client and outstanding contractual items that the Client should follow-up. The format of the report should be acceptable to GRIDCo and the AFD and be issued within 90 days of the completion of each project.
- **Special Reports**
 1. Project Implementation and Quality Assurance Manuals (7 copies + 2 **CD Rom/pendrive**).
 2. The Consultant shall be required to submit a report at the Client's request on any technical issues that may have a significant impact on the Project or the Client (minimum 3 copies).
 3. Evaluation Reports - Five (5) copies of each bid evaluation report and 1 **CD Rom/pendrive**
 4. Design reports - Five (5) copies consist of engineering design memoranda, engineering calculations, economic and financial calculations, drawings, etc. In addition to the hard copies, the complete report and annexes shall be furnished in Pendrive/CD 2No. in MS Word, MS Excel, and the drawings in AutoCAD, or similar.

7.0 REPORTS AND DATA AVAILABLE

The under listed reports and data would be made available to the successful Consultant:

- Feasibility Study Report for the 330 kV Kumasi – Bolgatanga Transmission Line Project, by SNC Lavallin
- Environmental and Social (E&S) documentation (when reports available):
 - Scoping report
 - Environmental and Social Impact Assessment (ESIA)
 - Resettlement Plan Framework (RPF)
 - Resettlement Action Plan (RAP), including Property Impact Assessment (PIA) and Environmental Impact Assessment (EIA)
 - (draft) Environmental and Social Management Plan (E&SMP)
 - Environmental Permit (EP)
- Project Agreements with Funding Agencies
- Draft Bidding Documents
- Other documents required by the Consultant on demand that are available

8.0 FACILITIES, SERVICES AND PERSONNEL TO BE PROVIDED BY THE CLIENT

The Client shall facilitate the acquisition of visas and resident and work permits for the team of Consultants personnel. The Client shall if necessary facilitate meeting arrangements for the Consultant with stakeholders.

The Client shall also provide free of Charge to the Consultant the following:

Office Accommodation

The GRIDCo main project office shall be located in Tema/Akuse.

The Client (GRIDCo) will provide guest office(s) for the Consultant in Tema/Akuse prior the commencement of the works (hence, for Activities 1 and 2), as well as for Activities 4 and 5, if needed, and offices at the four

locations Kumasi, Kintampo, Tamale and Bolgatanga during the works (hence, for Activity 3), as part of the Works' Contractors contracts and site facilities.

~~The GRIDCo main project office shall be located in Tema/Akuse and will be made available to the Consultant for all the duration of the assignment and or GRIDCo Guest Offices within the main offices in Akuse/Tema Site. The Consultant shall also be provided with offices within the main GRIDCo offices in Akuse/Tema site.~~

~~Other site offices shall be provided under the Works Contracts at Kumasi, Kintampo, Tamale and Bolgatanga, for Activity 3.~~

An office shall be provided for the Resident Manager in the PIU offices and guest offices for Consultant Personnel on short term visits to the PIU Office. The offices will be of acceptable standard, air conditioned and appropriately equipped with the relevant office equipment. Electrical supply will be 240V, 50Hz.

✓ **Counterpart and Support Personnel**

The Client shall ensure that his Team is adequately staffed to work with the Consultant, each of the parties (Client and the Consultant) having its own responsibilities.

✓ **Office and Field Equipment/Facilities**

The Client shall provide Office and Field Equipment/Facilities for the efficient administration, supervision, communication and record keeping on the project as indicated below.

The Client will also provide the following office equipment at the main and site offices:

Main Office

- i. Scanner A0
- ii. Scanner A3/A4
- iii. Colour printer A3/A4
- iv. Black and White printer A3/A4
- v. Photocopier black and white A3/A4 with truck and sorter
- vi. Computer for drawing-design (CAD) with accessories (Plotter, software, etc.)

Satellite (Site) Offices

- i) A4 Colour Printer
- ii) A3/A4 Black and White Printer

The Consultant is expected to provide Laptops for their own use.

✓ **Vehicles**

- a) All Consultants shall quote for appropriate vehicles for Project business as part of his proposal including vehicle maintenance and running cost for the duration of the Contract. See Section 4.

Upon completion of the Consultant's assignment, all vehicles and equipment purchased under the Contract with the project funds as agreed with the Client will be turned over to the Client at no extra cost and as is.

ANNEXES

ANNEX 1: PROJECT DESCRIPTION

The implementation strategy for the infrastructure development to be provided under the 330 kV Kumasi-Bolgatanga Transmission Line Project for the reinforcement of the existing 330 kV High - Voltage Grid in Ghana to ensure the transfer of stable and reliable electricity consist of the following packages:

- **Supply of 330/161/34.5 kV Auto Transformers for installation at Kintampo, Tamale and Bolgatanga Substations**

The package entails the design, manufacture, testing and delivery of 6No. Autotransformers to the proposed substation sites at Kintampo, Tamale and Bolgatanga.

- **Transmission Line Works**

The transmission line works involve the construction of 330 kV single circuit twin bundle “TERN” ASCR conductor transmission line from Kumasi to Bolgatanga including design, manufacture, testing and supply of steel towers conductors (“TERN” ASCR), OPGW, alumoweld shieldwires, fog type U120 BP glass insulators and other associated accessories as well as all relevant civil works in three (3) segments as below including any 161 kV interconnection works:

- Construction of 185 km 330 kV Kumasi - Kintampo Transmission Line
- Construction of 190 km 330 kV Kintampo -Tamale Transmission Line
- Construction of 160 km 330 kV Tamale -Bolgatanga Transmission Line

- **Substation Works**

The substation works would include the construction of 3No. 330/161 kV substations on the Kumasi-Bolgatanga transmission system at Kintampo, Tamale and Bolgatanga as well as expansion of the 330 kV Kumasi Substation for the take off of the Kumasi-Kintampo line.

The scope of works will involve the design, manufacture, testing and erection of substation equipment such as circuit breakers, disconnect switches, protection, control and metering facilities as well as associated civil works including Autotransformer installations as per the following packages:

- Expansion of 330 kV Kumasi Substation and Construction of 330 kV Kintampo Substation
- Construction of 330 kV Tamale Substation
- Construction of 330 kV Bolgatanga Substation

- **Telecommunication and SCADA Works**

This will involve the design, manufacture, testing and erection of associated SCADA and Communication equipment to interface with the existing 161 kV Substation at Kumasi and Bolgatanga.

- **Project Management and Engineering Consultancy services**

An Engineering Consulting Firm is to be engaged to assist in the Engineering, Project Supervision and Construction Supervision of the various projects under the reinforcement Project.

- **Supply of Spare Autotransformers**

Supply of one (1) 330/161 kV Auto transformer for Tema

- **Project Implementation Support**

This involves the purchase of various office and field logistics including vehicles and Office/ Field Equipment such as computers, photocopiers, printers, scanner, plotter, LCD projector, Filing cabinets including consumables, etc. under various Contracts for the smooth implementation of the project.

ANNEX 2: PROJECT LOCATIONS AND ACCESS

The site location is shown on the drawing in Fig 1.

The site traverses from the middle to the northern part of Ghana which is characterised by forest and savannah vegetations in the middle and northern respectively.

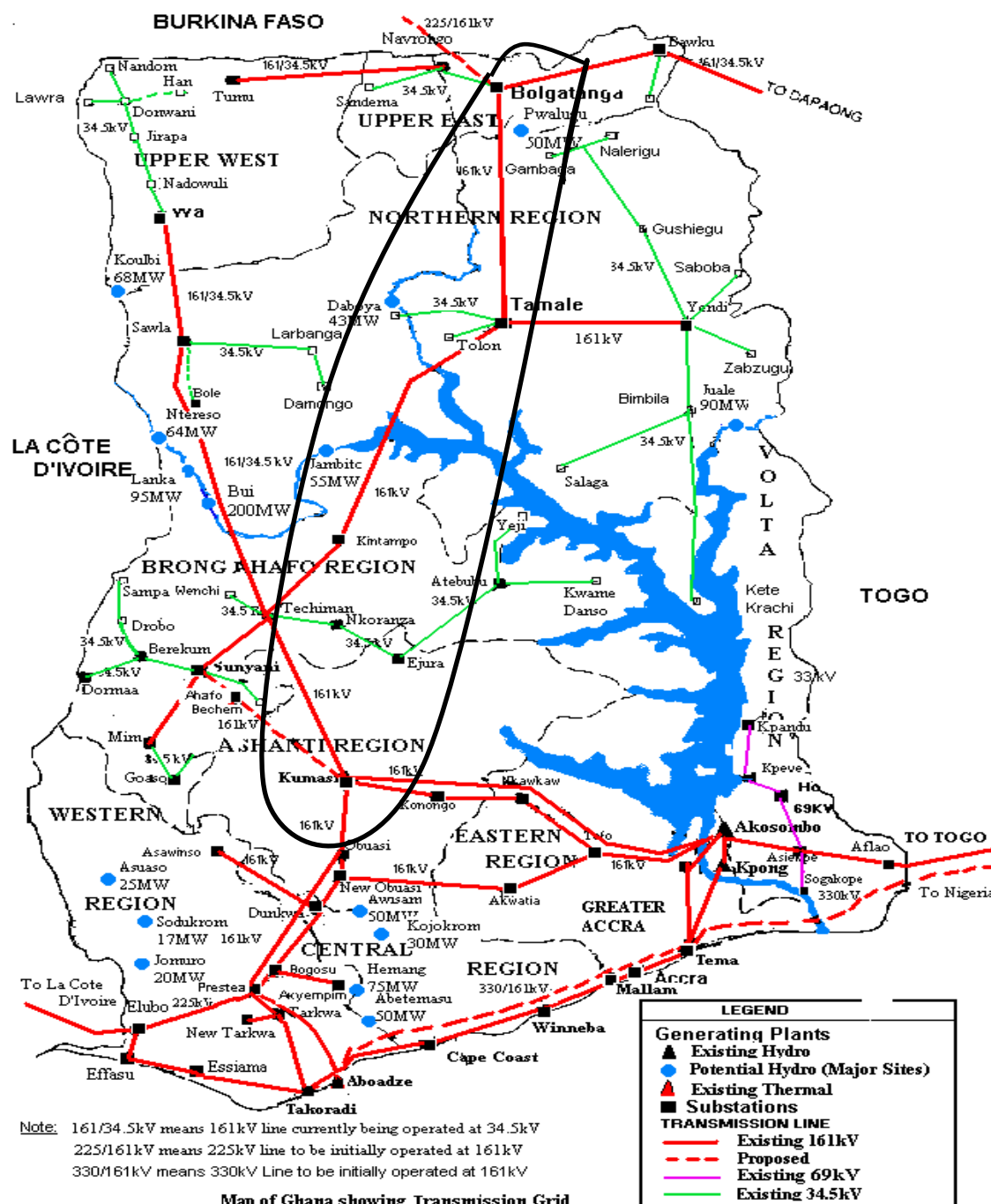
Approximately 90 percent of the connected roads are of first class category, and approximately 10 percent are second class and third class categories. First class category roads are asphalt roads or equivalent. Second category roads have a fast soil, covered with bricks and stones.

The site is accessible all year round by road. The commercial sea ports are at Takoradi and Tema and an international airport in Accra. Local Airports are at Kumasi, Sunyani and Tamale.

Telephone communication access to the public system will be available at the site.

The distances between relevant towns and harbours are shown below:

From/To (km)	Accra	Kumasi	Tema	Takoradi	Tamale	Techiman	Sunyani
Aboadze	213.5	286.5	240	14.5	754.5	412.5	476.5
Cape Coast	145	222	185	84	604	348	353
Winneba	66	338	95	164	670	464	528
Volta S/S Tema	29	301	-	260	687	427	491
Akosombo	100	270	85	301	652	396	401
Akuse	90	261	80	251	475	385	391
Prestea	374	262	295	145	644	388	393
Bolgatanga	815	543	844	229	161	533	589
Sawla	621	551	650	655	219	224	379
Wa	716	489	749	752	314	319	375
Tumu	869	444	902	905	301	472	528
Kintampo	346	172	351	373	199	77	123
Tamale	627	378	647	634	-	260	334

FIG 1: MAP OF GHANA SHOWING PROJECT AREA AND TRANSMISSION GRID

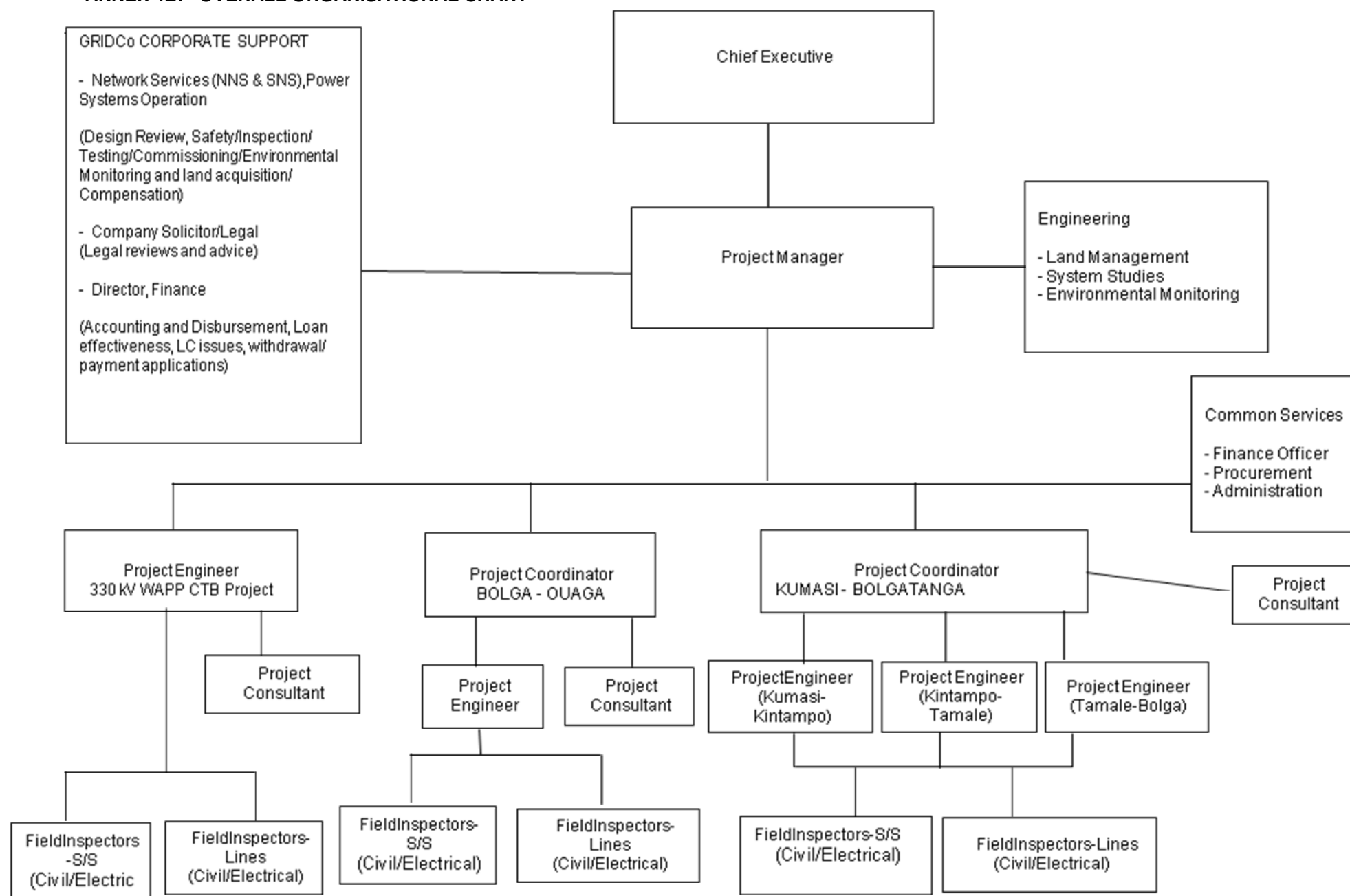
ANNEX 3: INDICATIVE PROJECT IMPLEMENTATION SCHEDULE
(to be inserted)

ANNEX 4A: ORGANISATION OF CLIENT FOR PROJECT IMPLEMENTATION

The Client's Project Implementation Unit shall consist of staff with responsibilities indicated below under the direction of a Project Manager. The duties of a Project Manager include:

Officer	Qualification	Main Responsibility
GENERAL SERVICES		
Finance Officer	Accounting/ Finance Officer with experience in project and Contract accounting/ disbursement using funds from international funding agencies.	Responsible for project budget, cost monitoring and control, disbursement application and ensure compliance with the financial requirements and reporting in the Loan/Subsidiary and Project Agreements including Project Account Auditing
Environmental/ RAP Coordinators	Ecologist or Sociologist / Land Economist with at least 5 years experience in environmental monitoring or resettlement action plan in of transmission line or linear projects.	Responsible for the supervision of all environmental activities in compliance with the requirement of the environmental certificates and the implementation of the Environmental Plans (ESMP, RAP etc) in conformity with international acceptable practices.
Administrative Officer	An Officer with at least 5 years experience in routine administrative activities of Power Projects	Responsible for the management and control of the use of project resources and staff welfare issues
PROJECT MANAGEMENT/CONTRACT ADMINISTRATION		
Project Coordinator	Engineer with at least 10 years experience in project management and administration.	Responsible for day to day monitoring and administration of the relevant Project component and the Contract Packages.
Project Engineers	Engineer with at least 10 years experience in engineering design of transmissions lines and substations.	Shall have functional responsibility for specific Contracts under the direction of the relevant Project Coordinator. Shall be responsible for coordination of the review of all designs, drawings, reports and related documents as well as other Project Management and Monitoring activities for the assigned Contract including Validation and certification of Contractor's performance sheets.
CONSTRUCTION SUPERVISION		
Construction Electrical Engineer	Engineer with at least 5 years experience in Construction of transmissions lines and substations.	Liaise with the Project Coordinator and Engineer on the electrical construction activities. Supervise all Field Technicians and ensure installation is in accordance with approved drawings and the specifications.
Construction Civil Engineer	Engineer with at least 5 years experience in construction of transmissions lines and substations.	Liaise with the Project Coordinator and Engineer on the civil construction activities. Supervise all Field Technicians and ensure civil works are in accordance with approved drawings and the specifications.
Site Engineers/Technicians	Technician/Engineer with knowledge in power construction works.	Shall be responsible for ensuring the Quality Control, Site Safety, Site Activities and Site Progress of Work.

The overall organisation chart is attached as below in Annex 5B:

ANNEX 4B: OVERALL ORGANISATIONAL CHART

ANNEX 4C: JOB FUNCTIONS OF PRINCIPAL OFFICERS**PROJECT MANAGER**

The Project Manager shall be responsible to the Chief Executive.

- He shall be responsible for the overall responsibility for the implementation of the Project and report to the GRIDCo Board and Chief Executive as well as Coordinate all activities required by GRIDCo under the Loan and Project Agreements including procurement of works, goods and services

PROJECT COORDINATOR

The Project Coordinator shall be responsible to the Project Manager.

His duties shall include:

- Responsible for management of the assigned project and liaise with various units within the project for the administration of the contract(s)
- Co - ordinate the preparation of all Project Reports and Records
- Update and monitor all records and schedules related to the project
- Coordinate all Technical correspondences on the Project as may be required
- Coordinate all project meetings for assigned project
- Supervise all the Project Engineers to ensure smooth implementation of the various packages under the Project and Liaise with Project Administrator to ensure all service inputs and logistics required for effective management of project

ADMINISTRATIVE OFFICER

The Project Administrative Officer shall be responsible to the Project Manager and liaise with Project Coordinator in the execution of his duties which shall include:

- The provision and control of the use of project resources i.e. vehicles, equipment, materials etc.
- Co – ordinate the preparation of Business Plan and other reports
- Co-ordinate with other Departments within GRIDCo regarding various issues such as personnel & welfare, accommodation, transport, security, protocol, travel & visits etc for effective project management
- Ensure effective and proper a incoming and outgoing mails and ensure timely and proper distribution
- Ensure the proper filing of correspondences, reports and other project documentation
- Undertake general housekeeping duties

PROJECT ENGINEERS

The Project Engineer shall be responsible to the Project Coordinators for the management and monitoring of specific Project packages.

The duties shall include:

- Coordinate the review of all substation and transmission line designs, drawings, reports and related documents
- Coordinate the review of specifications of substation and transmission line equipment.
- Review the quality control and assurance procedures of the Contractor(s)
- Provide advisory services during construction and factory acceptance tests
- Monitoring of Project
- Contract administration of assigned Contracts.
- Responsible for the issue of all certificates (payment, take-over) and variation orders
- Validate progress certificates and certifying same for payments.
- Review of claims and change order proposals from Contract.

FINANCE OFFICER

The Finance Officer shall be responsible to the Project Manager and liaise with the Project Coordinators for the financial management and payment of the various Contracts under the Project.

The duties shall include:

- Prepare Project Budget.
- Monitor and control cost.
- Ensure adequate local cashflow for the project.
- Ensure compliance with the covenants/conditions/protocols in the Loan/Subsidiary and Project Agreements.
- Ensure prompt payment of all certified invoices/certificates.
- Monitor all disbursements
- Ensure that Consultants, Contractor(s) etc are paid in full and on time for work executed.
- Ensure compliance with withdrawal procedures in the Loan and Project Agreements.
- Provision and management of project impress.
- Prepare all project accounts and project financial reports

ENVIRONMENTAL OFFICERS

The Environmental Officers shall support the PIU on the implementation of RAP and ESMP. His duties shall include:

- Manage the environmental monitoring systems under the project and ensure adherence to mitigation guidelines.
- Participate in enumeration of properties within right of way
- Monitor compliance of Environmental Mitigation Plans/Programmes by the Contractor(s).
- Prepare of all Environmental reports
- Ensure the prompt payment of Compensation
- Ensure strict compliance with Health & Safety issues and Coordinate investigations on all types of site accidents
- Liaise with all relevant regulatory bodies and organizations
- Organise activities to motivate and maintain interest of project staff in environmental issues

CIVIL/ELECTRICAL CONSTRUCTION ENGINEERS

The Civil and Electrical Construction Engineers will liaise with the Project Coordinator and their duties shall include:

- Ensure that contractual specification, standards and procedures for civil and electrical-mechanical aspects of the project are complied with by the Contractor
- Provide of technical supervision to site inspectors working on the project
- Participate in the review of civil and electro-mechanical submissions from the Contractor
- Ensure the timely release of construction documents/drawings to the Contractor and site inspectors
- Monitor and ensure that quality of materials and required field tests as indicated in the contract document are carried out
- Monitor and report on progress of works to ensure timely completion of project as per the Contract
- Arrange site measurement of works and vet contractor's' payment certificates
- Co-ordinate and participate in commissioning of project facilities and commissioning/operational acceptance
- Supervision of site inspectors

SITE INSPECTORS/TECHNICIANS

The Site Inspectors/Technicians shall be responsible to the Project Coordinator and Construction Engineers. Their duties shall include:

- Checks quality of construction materials and erection methodology to ensure they are in compliance with in the contract document.
- Monitor and report daily on progress of works.
- Ensure compliance with environmental obligations as indicated in the ESMP / Environmental Permit and Contract as well as site safety of Contractor's Personnel and activities.
- Participate in site measurement of work done for the preparation of progress certificates
- Monitor and report daily on Contractor's equipment and manpower on deployed on site.
- Assists in commissioning of project and operational acceptance
- Reviews "As Built" documentation and mark up with any site changes.

ANNEX 6: SAMPLE OF FORMAT FOR PROGRESS REPORTS

The Consultant shall prepare and submit monthly and quarterly progress reports on the Project as per the following indicative format which the Consultant can adopt as the project progress:

Section 0 – Executive Summary

- Summary of Status of the work for the month
- Assessment of the main issues
- Trend on the compliance with the planning
- Difficulties met and solutions recommended
- General assessment of the construction site by the control mission

Section 1 - General Presentation

- Purpose, presentation, localization
- Presentation of the work contract/ monitoring of contract
 - Title
 - particulars of the potential additional clauses
 - holder
 - initial amount of the contract
 - amount of the potential additional clauses
 - total amount of the contract
 - Date of signature - Date of approval - Date of notification
 - Deadline for the initial contract - Potential extension of the deadline
 - Contractual date of inception - Contractual date of end
 - Funding : repair : reference of credit (s)
 - Labour.
- Data about the contract (to be updated for every report)
 - brief explanation of the purpose of the approved additional clauses
 - list of the service orders and indication of the objects (chronological order)
 - list of the important mails exchanged (indication of the objects).

Section 2 – Evolution of the construction site

Physical Status

- Installation of the construction site: sites
- Means implemented by the firm: managerial staff (list, presence on the construction site, replacements and reasons): material (in the shape of utilization table), material in stocks, etc.
- Progress report for the month: quantity of work completed by assignment of the estimates, locating the elementary interventions.
- Progress report for cumulated works and percentage of progress by assignment, gaps in comparison with the forecasts.
- Status as against the ongoing planning: strength and weakness, problems met in the month; recommended measures: decisions made as against the Project Owner; updated planning.
- Assessment on the evolution of the works and the trends as against the deadline objectives.
- Commented pictures of the characteristics of the works achieved

Financial Execution Status

- Amount of the works of the month (table on the model of estimates)
 - Cumulated amount of the work executed (table on the model of estimates), gaps as against the forecasts
 - Presentation and analysis of the monthly detailed account: comparison to the invoicing schedule; update of the financial schedule.
 - Summary of the detailed accounts issued, including broken down as per the activities
 - Estimation of the remainder or of the overruns, update budget forecast of the project (work and control), compared to the initial budget and, justification of the gaps, for the works contract as well as for that of the Consultant
 - Statement on the payment request from the contracting parties, statement on the disbursements per funding source

Section 3 – Monitoring of the works

- Staffing means: list, function, work station, date of intervention commencement, forecast date of end of intervention, presence during the month, potential replacements and reasons.
- Material facilities.
- Relations of the monitoring mission with its headquarter: dates and purpose of the potential visits of the staff to the headquarter, contacts with the local authorities.
- Briefing of the observations made by the representatives of the Project Owner
- Activities of the month for the monitoring mission.
(Topographical and geotechnical activities, appreciation on the performances of the firm, assessment of the delays and difficulties, assessment of the requests formulated by the contractor, continuation reserved to the proposals of service orders).
- Recalling of the important modifications occurred during the construction site, would-be disputes, the correctives measures taken, assessment of difficulties to occur or firms requests

Section 4-Environmental and social Management Plan (PGES)

- Qualitative and quantitative assessment of the measures taken

Section 5-Training

- Briefing of the training activities organized and realized for the engineers of the Project Owner integrated into the monitoring mission at the request of the Project Owner.

Annexes

- Briefing of meetings of the construction site for the month.
- Service orders for the month.
- Correspondences of the month.
- Synthesis of the laboratories testing carried out during the month and compliance assessment.
- Synthesis of the surveys carried out during the month and compliance assessment.
- Synthesis of the receptions of materials and the works carried out.

Furthermore, the Consultant can write down in his reports, any other element regarding the economy and the evolution of the construction site.

Section 6. Model Form of Contract

CONTENTS

1.1	Definitions	73
1.2	Relation between the Parties.....	74
1.3	Law Governing Contract	74
1.4	Language	74
1.5	Headings	74
1.6	Notices.....	74
1.7	Location	74
1.8	Authority of Member in Charge	75
1.9	Authorized Representatives	75
1.10	Taxes and Duties.....	75
1.11	Corruption.....	75
1.12	Environmental and Social Standards	75
2.1	Effectiveness of Contract	75
2.2	Termination of Contract for Failure to Become Effective	75
2.3	Commencement of Services	75
2.4	Expiration of Contract.....	75
2.5	Entire Agreement.....	76
2.6	Modification	76
2.7	Force Majeure.....	76
2.8	Suspension.....	77
2.9	Termination	77
3.1	General	79
3.2	Conflict of Interests.....	79
3.3	Confidentiality.....	80
3.4	Liability of the Consultants	80
3.5	Insurance to be Taken Out by the Consultants	80
3.6	Accounting, Inspection and Auditing.....	80
3.7	Consultants' Actions Requiring Client's Prior Approval	80
3.8	Reporting Obligations.....	81
3.9	Documents Prepared by the Consultants to be the Property of the Client	81
3.10	Equipment and Materials Furnished by the Client.....	81
4.1	General	81
4.2	Description of Personnel.....	81
4.3	Approval of Personnel.....	82
4.4	Working Hours, Overtime, Leave, etc.....	82
4.5	Removal and/or Replacement of Personnel	82

4.6	Resident Project Manager	83
5.1	Assistance and Exemptions	83
5.2	Access to Land	83
5.3	Change in the Applicable Law.....	83
5.4	Services, Facilities and Property of the Client.....	84
5.5	Payment	84
5.6	Counterpart Personnel.....	84
6.1	Cost Estimates; Ceiling Amount.....	84
6.2	Remuneration and Reimbursable Expenditures.....	85
6.3	Currency of Payment.....	85
6.4	Mode of Billing and Payment.....	85
7.1	Good Faith.....	86
7.2	Operation of the Contract.....	86
8.1	Amicable Settlement	87
8.2	Dispute Settlement	87

CONTRACT FOR CONSULTANTS' SERVICES
Time-Based Payment Contract (for Activity 3)
Lump Sum for Activities 1, 2, 4 and 5

between

[Ghana Grid Company]

and

[name of the Consultants]

Dated: _____

I. Form of Contract

TIME-BASED PAYMENT CONTRACT

This CONTRACT (hereinafter called the “Contract”) is made the *[day]* day of the month of *[month]*, *[year]*, between, on the one hand, *Ghana Grid Company* (hereinafter called the “Client”) and, on the other hand, *[name of consultants]* (hereinafter called the “Consultants”).

[Note: *If the Consultants consist of more than one entity, the above should be partially amended to read as follows: “...(hereinafter called the “Client”) and, on the other hand, a joint venture consisting of the following entities, each of which will be jointly and severally liable to the Client for all the Consultants’ obligations under this Contract, namely, [name of consultants] and [name of consultants] (hereinafter called the “Consultants”).*]¹

WHEREAS

- (a) the Client has requested the Consultants to provide certain consulting services as defined in the General Conditions of Contract attached to this Contract (hereinafter called the “Services”);
- (b) the Consultants, having represented to the Client that they have the required professional skills, and personnel and technical resources, have agreed to provide the Services on the terms and conditions set forth in this Contract;
- (c) the Client has received *[or has applied for]* funds from the French Development Agency (hereinafter called the “Agency”) towards the cost of the Services and intends to apply a portion of these funds to eligible payments under this Contract, it being understood (i) that payments by the Agency will be made only at the request of the Client and upon approval by the Agency, (ii) that such payments will be subject, in all respects, to the terms and conditions of the agreement between the Client and the Agency providing for the funds, and (iii) that no party other than the Client shall derive any rights from the agreement providing for the funds or have any claim to the funds proceeds;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:
 - (a) The General Conditions of Contract;
 - (b) The Special Conditions of Contract;
 - (c) The following Appendices: **[Note:** *If any of these Appendices are not used, the words “Not Used” should be inserted below next to the title of the Appendix and on the sheet attached hereto carrying the title of that Appendix.*]

Appendix A: Description of the Services	
Appendix B: Reporting Requirements	
Appendix C: Key Personnel and Sub-consultants	___ Not used
Appendix D: Medical Certificate	___ Not used
Appendix E: Hours of Work for Key Personnel	___ Not used
Appendix F: Duties of the Client	___ Not used
Appendix G: Cost Estimates in Foreign Currency	___ Not used
Appendix H: Cost Estimates in Local Currency	___ Not used
Appendix I: Form of Guarantee for Advance Payments	___ Not used
2. The mutual rights and obligations of the Client and the Consultants shall be as set forth in the Contract, in particular:

¹ Text in brackets is optional; all notes should be deleted in final text.

- (a) the Consultants shall carry out the Services in accordance with the provisions of the Contract; and
- (b) the Client shall make payments to the Consultants in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of *[name of client]*

[Authorized Representative]

For and on behalf of *[name of consultants]*

[Authorized Representative]

[Note: *If the Consultants consist of more than one entity, all these entities should appear as signatories, e.g., in the following manner.*]

For and on behalf of each of the Members of the Consultants

[name of member]

[Authorized Representative]

[name of member]

[Authorized Representative]

II. General Conditions of Contract

1. General Provisions

1.1 Definitions

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

- (a) “Applicable Law” means the laws and any other instruments having the force of law in the Client’s country, as they may be issued and in force from time to time;
- (b) “Agency” means the French Development Agency;
- (c) “Contract” means the Contract signed by the Parties, to which these General Conditions of Contract (GC) are attached, together with all the documents listed in Clause 1 of such signed Contract;
- (d) “Effective Date” means the date on which this Contract comes into force and effect pursuant to Clause GC 2.1;
- (e) “Foreign Currency” means any currency other than the currency of the Client’s country;
- (f) “GC” means these General Conditions of Contract;
- (g) “Local Currency” means the currency of the Client’s country;
- (h) “Member,” in case the Consultants consist of a joint venture of more than one entity, means any of these entities; and “Members” means all these entities;
- (i) “Party” means the Client or the Consultants, as the case may be, and “Parties” means both of them;
- (j) “Personnel” means persons hired by the Consultants or by any Sub-consultant as employees and assigned to the performance of the Services or any part thereof; “Foreign Personnel” means such persons who at the time of being so hired had their domicile outside the Client’s country; “Local Personnel” means such persons who at the time of being so hired had their domicile inside the Client’s country; and “Key Personnel” means the Personnel referred to in Clause GC 4.2(a);
- (k) “SC” means the Special Conditions of Contract by which the GC may be amended or supplemented;
- (l) “Services” means the work to be performed by the Consultants pursuant to this Contract, as described in Appendix A hereto;
- (m) “Sub-consultant” means any person or entity to whom/which the Consultants subcontract any part of the Services in accordance with the provisions of Clause GC 3.7;
- (n) “Third Party” means any person or entity other than the Client, the Consultants or a Sub-consultant;

- (o) “corrupt practice” is (i) the promising, offering, or giving to a Public Official or (ii) a Public Official soliciting, or accepting, directly or indirectly, of anything of value for himself or another person or entity, to induce the Public Official to do, or not to do, an action in his official duties; and
 - (p) “collusive practice” is a concerted action, agreement, explicit or implicit understanding or coalition, including directly or indirectly through a firm established in a foreign country, designed to achieve or which may achieve a hindrance, restriction or bias to competition for a contract, in particular when such practice aim to (i) restrict access to the contract or free competition, (ii) hinder the setting of prices under the rules of free competition by artificially promoting their increase or decrease, (iii) restrict or control production, market access, investment or technical progress, or (iv) share market opportunities or access to procurement sources.
- 1.2 Relation between the Parties Nothing contained herein shall be construed as establishing a relation of master and servant or of principal and agent as between the Client and the Consultants. The Consultants, subject to this Contract, have complete charge of Personnel and Sub-consultants, if any, performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.
- 1.3 Law Governing Contract This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.
- 1.4 Language This Contract has been executed in the language specified in the SC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.
- 1.5 Headings The headings shall not limit, alter or affect the meaning of this Contract.
- 1.6 Notices
 - 1.6.1 Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram or facsimile to such Party at the address specified in the SC.
 - 1.6.2 Notice will be deemed to be effective as specified in the SC.
 - 1.6.3 A Party may change its address for notice hereunder by giving the other Party notice of such change pursuant to the provisions listed in the SC with respect to Clause GC 1.6.2.
- 1.7 Location The Services shall be performed at such locations as are specified in Appendix A hereto and, where the location of a particular task is not so specified, at such locations, whether in the Client’s country or elsewhere, as the Client may approve.

- 1.8 Authority of Member in Charge In case the Consultants consist of a joint venture of more than one entity, the Members hereby authorize the entity specified in the SC to act on their behalf in exercising all the Consultants' rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments from the Client.
- 1.9 Authorized Representatives Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Client or the Consultants may be taken or executed by the officials specified in the SC.
- 1.10 Taxes and Duties Unless otherwise specified in the SC, the Consultants, Sub-consultants and Personnel shall pay such taxes, duties, fees and other impositions as may be levied under the Applicable Law.
- 1.11 Corruption The Consultants declare that:
- a) they did not engage in any action to influence the Project implementation process to the detriment of the Client, in particular no collusive practice took place nor will take place, and
 - b) the selection proceedings, contract negotiations, award, and execution have not and will not be subject to any corrupt practice as defined in the United Nations Convention to combat corruption dated 31 October 2003.
- 1.12 Environmental and Social Standards and The Consultants undertake to:
- (i) comply and procure that their Sub-consultants, if any, comply with international environmental and labour standards consistent with applicable law and regulations in the country of implementation of the Project, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties;
 - (ii) adopt any environmental and social risk mitigations measures as defined in the environmental and social management plan or the notice of environmental and social impact issued by the Client.

2. Commencement, Completion, Modification and Termination of Contract

- 2.1 Effectiveness of Contract This Contract shall come into force and effect on the date (the "Effective Date") of the Client's notice to the Consultants instructing the Consultants to begin carrying out the Services. This notice shall confirm that the effectiveness conditions, if any, listed in the SC have been met.
- 2.2 Termination of Contract for Failure to Become Effective If this Contract has not become effective within such time period after the date of the Contract signed by the Parties as shall be specified in the SC, either Party may, by not less than four (4) weeks' written notice to the other Party, declare this Contract to be null and void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party with respect hereto.
- 2.3 Commencement of Services The Consultants shall begin carrying out the Services at the end of such time period after the Effective Date as shall be specified in the SC.
- 2.4 Expiration of Contract Unless terminated earlier pursuant to Clause GC 2.9 hereof, this Contract shall terminate at the end of such time period after the Effective Date as shall be specified in the SC.

2.5 Entire Agreement This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.

2.6 Modification Modification of the terms and conditions of this Contract, including any modification of the scope of the Services, may only be made by written agreement between the Parties and shall not be effective until the consent of the Agency, as the case may be, has been obtained. Pursuant to Clause GC 7.2 hereof, however, each Party shall give due consideration to any proposals for modification made by the other Party.

2.7 Force Majeure

2.7.1 Definition

- (a) For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party, and which makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies.
- (b) Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party's Sub-consultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected to both (A) take into account at the time of the conclusion of this Contract and (B) avoid or overcome in the carrying out of its obligations hereunder.
- (c) Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

2.7.2 No Breach of Contract

The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract.

2.7.3 Measures to be Taken

- (a) A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfill its obligations hereunder with a minimum of delay.
- (b) A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any event not later than fourteen (14) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give notice of the restoration of normal conditions as soon as possible.
- (c) The Parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

2.7.4 Extension of Time

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

2.7.5 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultants shall be entitled to continue to be paid under the terms of this Contract as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Services after the end of such period.

2.7.6 Consultation

Not later than thirty (30) days after the Consultants, as the result of an event of Force Majeure, have become unable to perform a material portion of the Services, the Parties shall consult with each other with a view to agreeing on appropriate measures to be taken in the circumstances.

2.8 Suspension

The Client may, by written notice of suspension to the Consultants, suspend all payments to the Consultants hereunder if the Consultants fail to perform any of their obligations under this Contract, including the carrying out of the Services, provided that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultants to remedy such failure within a period not exceeding thirty (30) days after receipt by the Consultants of such notice of suspension.

2.9 Termination**2.9.1 By the Client**

The Client may, by not less than thirty (30) days' written notice of termination to the Consultants (except in the event listed in paragraph (f) below, for which there shall be a written notice of not less than sixty (60) days), such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (g) of this Clause GC 2.9.1, terminate this Contract:

- (a) if the Consultants fail to remedy a failure in the performance of their obligations hereunder, as specified in a notice of suspension pursuant to Clause 2.8 hereinabove, within thirty (30) days of receipt of such notice of suspension or within such further period as the Client may have subsequently approved in writing;
- (b) if the Consultants become (or, if the Consultants consist of more than one entity, if any of their Members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;
- (c) if the Consultants fail to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause GC 8 hereof;
- (d) if the Consultants submit to the Client a statement which has a material effect on the rights, obligations or interests of the Client and which the Consultants know to be false;
- (e) if, as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days; or
- (f) if the Client, in its sole discretion decides to terminate this Contract.
- (g) if the Consultant has engaged in corrupt or fraudulent practices in competing for or in executing the Contract. For the purpose of this clause:

“corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the selection process or in contract execution.

“fraudulent practice” means a misrepresentation of facts in order to influence a selection process or the execution of a contract to the detriment of the Client, and includes collusive practice among consultants (prior to or after submission of proposals) designed to establish prices at artificial non-competitive levels and to deprive the Client of the benefits of free and open competition.

2.9.2 By the Consultants

The Consultants may, by not less than thirty (30) days’ written notice to the Client, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (d) below, terminate this Contract:

- (a) if the Client fails to pay any money due to the Consultants pursuant to this Contract and not subject to dispute pursuant to Clause GC 8 hereof within forty-five (45) days after receiving written notice from the Consultants that such payment is overdue;
- (b) if the Client is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Consultants may have subsequently approved in writing) following the receipt by the Client of the Consultants’ notice specifying such breach;
- (c) if, as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days; or
- (d) if the Client fails to comply with any final decision reached as a result of arbitration pursuant to Clause GC 8 hereof.

2.9.3 Cessation of Rights and Obligations

Upon termination of this Contract pursuant to Clauses GC 2.2 or GC 2.9 hereof, or upon expiration of this Contract pursuant to Clause GC 2.4 hereof, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Clause GC 3.3 hereof, (iii) the Consultants’ obligation to permit inspection, copying and auditing of their accounts and records set forth in Clause GC 3.6(ii) hereof, and (iv) any right which a Party may have under the Applicable Law.

2.9.4 Cessation of Services

Upon termination of this Contract by notice of either Party to the other pursuant to Clauses GC 2.9.1 or GC 2.9.2 hereof, the Consultants shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultants and equipment and materials furnished by the Client, the Consultants shall proceed as provided, respectively, by Clauses GC 3.9 or GC 3.10 hereof.

2.9.5 Payment upon Termination

Upon termination of this Contract pursuant to Clauses GC 2.9.1 or GC 2.9.2 hereof, the Client shall make the following payments to the Consultants:

- (a) remuneration pursuant to Clause GC 6 hereof for Services satisfactorily performed prior to the effective date of termination;

- (b) reimbursable expenditures pursuant to Clause GC 6 hereof for expenditures actually incurred prior to the effective date of termination; and
- (c) except in the case of termination pursuant to paragraphs (a) through (d) and (g) of Clause GC 2.9.1 hereof, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract including the cost of the return travel of the Personnel and their eligible dependents.

**2.9.6 Disputes
about Events
of
Termination**

If either Party disputes whether an event specified in paragraphs (a) through (e) of Clause GC 2.9.1 or in Clause GC 2.9.2 hereof has occurred, such Party may, within forty-five (45) days after receipt of notice of termination from the other Party, refer the matter to arbitration pursuant to Clause GC 8 hereof, and this Contract shall not be terminated on account of such event except in accordance with the terms of any resulting arbitral award.

3. Obligations of the Consultants

3.1 General

**3.1.1 Standard of
Performance**

The Consultants shall perform the Services and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe and effective equipment, machinery, materials and methods. The Consultants shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with Sub-consultants or Third Parties.

**3.1.2 Law Governing
Services**

The Consultants shall perform the Services in accordance with the Applicable Law and shall take all practicable steps to ensure that any Sub-consultants, as well as the Personnel of the Consultants and any Sub-consultants, comply with the Applicable Law. The Client shall notify the Consultants in writing of relevant local customs, and the Consultants shall, after such notification, respect such customs.

3.2 Conflict of Interests

**3.2.1 Consultants
Not to Benefit
from
Commissions,
Discounts, etc.**

The remuneration of the Consultants pursuant to Clause GC 6 hereof shall constitute the Consultants' sole remuneration in connection with this Contract or the Services and, subject to Clause GC 3.2.2 hereof, the Consultants shall not accept for their own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations hereunder, and the Consultants shall use their best efforts to ensure that any Sub-consultants, as well as the Personnel and agents of either of them, similarly shall not receive any such additional remuneration.

If the Consultants, as part of the Services, have the responsibility of advising the Client on the procurement of goods, works or services, the Consultants shall comply with any procurement requirements applicable to the Client, and shall at all times exercise such responsibility in the best interest of the Client. Any discounts or commissions obtained by the Consultants in the exercise of such procurement responsibility shall be for the account of the Client.

The Consultants agree that, during the term of this Contract and after its

- 3.2.2 Consultants and Affiliates Not to Engage in Certain Activities termination, the Consultants and any entity affiliated with the Consultants, as well as any Sub-consultant and any entity affiliated with such Sub-consultant, shall be disqualified from providing goods, works or services (other than the Services and any continuation thereof) for any project resulting from or closely related to the Services.
- 3.2.3 Prohibition of Conflicting Activities The Consultants shall not engage, and shall cause their Personnel as well as their Sub-consultants and their Personnel not to engage, either directly or indirectly, in any of the following activities:
- (a) during the term of this Contract, any business or professional activities in the Client's country which would conflict with the activities assigned to them under this Contract; and
 - (b) after the termination of this Contract, such other activities as may be specified in the SC.
- 3.3 Confidentiality The Consultants, their Sub-consultants and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Services, this Contract or the Client's business or operations without the prior written consent of the Client.
- 3.4 Liability of the Consultants Subject to additional provisions, if any, set forth in the SC, the Consultants' liability under this Contract shall be as provided by the Applicable Law.
- 3.5 Insurance to be Taken Out by the Consultants The Consultants (i) shall take out and maintain, and shall cause any Sub-consultants to take out and maintain, at their (or the Sub-consultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverages, as shall be specified in the SC, and (ii) at the Client's request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums therefor have been paid.
- 3.6 Accounting, Inspection and Auditing The Consultants (i) shall keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify all relevant time changes and costs, and the bases thereof (including such bases as may be specifically referred to in the SC), and (ii) shall permit the Client or its designated representative periodically, and up to one year from the expiration or termination of this Contract, to inspect the same and make copies thereof as well as to have them audited by auditors appointed by the Client and (iii) shall permit the Agency to inspect the Consultant's accounts and records relating to the performance of the Consultant and to have them audited by auditors approved by the Agency, if so required by the Agency.
- 3.7 Consultants' Actions Requiring Client's Prior Approval The Consultants shall obtain the Client's prior approval in writing before taking any of the following actions:
- (a) appointing such members of the Personnel as are listed in Appendix C merely by title but not by name;
 - (b) entering into a subcontract for the performance of any part of the Services, it being understood (i) that the selection of the Sub-consultant and the terms and conditions of the subcontract shall have been approved in writing by the Client prior to the execution of the

subcontract, and (ii) that the Consultants shall remain fully liable for the performance of the Services by the Sub-consultant and its Personnel pursuant to this Contract;

(c) any other action that may be specified in the SC.

- 3.8 Reporting Obligations The Consultants shall submit to the Client the reports and documents specified in Appendix B hereto, in the form, in the numbers and within the time periods set forth in the said Appendix.
- 3.9 Documents Prepared by the Consultants to be the Property of the Client All plans, drawings, specifications, designs, reports, other documents and software prepared by the Consultants for the Client under this Contract shall become and remain the property of the Client, and the Consultants shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof. The Consultants may retain a copy of such documents and software. Restrictions about the future use of these documents and software, if any, shall be specified in the SC.
- 3.10 Equipment and Materials Furnished by the Client Equipment and materials made available to the Consultants by the Client, or purchased by the Consultants with funds provided by the Client, shall be the property of the Client and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultants shall make available to the Client an inventory of such equipment and materials and shall dispose of such equipment and materials in accordance with the Client's instructions. While in possession of such equipment and materials, the Consultants, unless otherwise instructed by the Client in writing, shall insure them at the expense of the Client in an amount equal to their full replacement value.

4. Consultants' Personnel and Sub-consultants

- 4.1 General The Consultants shall employ and provide such qualified and experienced Personnel and Sub-consultants as are required to carry out the Services.
- 4.2 Description of Personnel of (a) The title, agreed job description, minimum qualification and estimated period of engagement in the carrying out of the Services of each of the Consultants' Key Personnel are described in Appendix C. If any of the Key Personnel has already been approved by the Client, his/her name is listed as well.
- (b) If required to comply with the provisions of Clause GC 3.1.1 hereof, adjustments with respect to the estimated periods of engagement of Key Personnel set forth in Appendix C may be made by the Consultants by written notice to the Client, provided (i) that such adjustments shall not alter the originally estimated period of engagement of any individual by more than 10% or one week, whichever is larger, and (ii) that the aggregate of such adjustments shall not cause payments under this Contract to exceed the ceilings set forth in Clause GC 6.1(b) of this Contract. Any other such adjustments shall only be made with the Client's written approval.
- (c) If additional work is required beyond the scope of the Services specified in Appendix A, the estimated periods of engagement of Key Personnel set forth in Appendix C may be increased by agreement in writing between the Client and the Consultants,

provided that any such increase shall not, except as otherwise agreed in writing, cause payments under this Contract to exceed the ceilings set forth in Clause GC 6.1(b) of this Contract.

- 4.3 Approval of Personnel Personnel of The Key Personnel and Sub-consultants listed by title as well as by name in Appendix C are hereby approved by the Client. In respect of other Key Personnel which the Consultants propose to use in the carrying out of the Services, the Consultants shall submit to the Client for review and approval a copy of their biographical data and (in the case of Key Personnel to be used within the country of the Client) a copy of a satisfactory medical certificate in the form attached hereto as Appendix D. If the Client does not object in writing (stating the reasons for the objection) within twenty-one (21) calendar days from the date of receipt of such biographical data and (if applicable) such certificate, such Key Personnel shall be deemed to have been approved by the Client.
- 4.4 Working Hours, Overtime, Leave, etc. (a) Working hours and holidays for Key Personnel are set forth in Appendix E hereto. To account for travel time, foreign Personnel carrying out Services inside the Client's country shall be deemed to have commenced (or finished) work in respect of the Services such number of days before their arrival in (or after their departure from) the Client's country as is specified in Appendix E hereto.
- (b) The Key Personnel shall not be entitled to be paid for overtime nor to take paid sick leave or vacation leave except as specified in Appendix E hereto, and except as specified in such Appendix, the Consultants' remuneration shall be deemed to cover these items. All leave to be allowed to the Personnel is included in the staff-months of service set forth in Appendix C. Any taking of leave by Personnel shall be subject to the prior approval by the Consultants who shall ensure that absence for leave purposes will not delay the progress and adequate supervision of the Services.
- 4.5 Removal and/or Replacement of Personnel (a) Except as the Client may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Consultants, it becomes necessary to replace any of the Personnel, the Consultants shall forthwith provide as a replacement a person of equivalent or better qualifications.
- (b) If the Client (i) finds that any of the Personnel has committed serious misconduct or has been charged with having committed a criminal action, or (ii) has reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Consultants shall, at the Client's written request specifying the grounds therefor, forthwith provide as a replacement a person with qualifications and experience acceptable to the Client.
- (c) Any of the Personnel provided as a replacement under Clauses (a) and (b) above, the rate of remuneration applicable to such person as well as any reimbursable expenditures (including expenditures due to the number of eligible dependents) the Consultants may wish to claim as a result of such replacement, shall be subject to the prior written approval by the Client. Except as the Client may otherwise agree, (i) the Consultants shall bear all additional travel and other costs arising out of or incidental to any removal and/or replacement, and (ii) the remuneration to be paid for any of the Personnel provided as a replacement shall not exceed the remuneration which would have been payable to the Personnel replaced.

4.6 Resident Manager Project If required by the SC, the Consultants shall ensure that at all times during the Consultants' performance of the Services in the Client's country a resident project manager, acceptable to the Client, shall take charge of the performance of such Services.

5. Obligations of the Client

5.1 Assistance and Exemptions Unless otherwise specified in the SC, the Client shall use its best efforts to ensure that the Government shall:

- (a) provide the Consultants, Sub-consultants and Personnel with work permits and such other documents as shall be necessary to enable the Consultants, Sub-consultants or Personnel to perform the Services;
- (b) arrange for the Personnel and, if appropriate, their eligible dependents to be provided promptly with all necessary entry and exit visas, residence permits, exchange permits and any other documents required for their stay in the Client's country;
- (c) facilitate prompt clearance through customs of any property required for the Services and of the personal effects of the Personnel and their eligible dependents;
- (d) issue to officials, agents and representatives of the Government all such instructions as may be necessary or appropriate for the prompt and effective implementation of the Services;
- (e) exempt the Consultants and the Personnel and any Sub-consultants employed by the Consultants for the Services from any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity according to the Applicable Law;
- (f) grant to the Consultants, any Sub-consultant and the Personnel of either of them the privilege, pursuant to the Applicable Law, of bringing into the Client's country reasonable amounts of foreign currency for the purposes of the Services or for the personal use of the Personnel and their dependents and of withdrawing any such amounts as may be earned therein by the Personnel in the execution of the Services; and
- (g) provide to the Consultants, Sub-consultants and Personnel any such other assistance as may be specified in the SC.

5.2 Access to Land The Client warrants that the Consultants shall have, free of charge, unimpeded access to all land in the Client's country in respect of which access is required for the performance of the Services. The Client will be responsible for any damage to such land or any property thereon resulting from such access and will indemnify the Consultants and each of the Personnel in respect of liability for any such damage, unless such damage is caused by the default or negligence of the Consultants or any Sub-consultant or the Personnel of either of them.

5.3 Change in Applicable Law the If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost incurred by the Consultants in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultants under this Contract shall be increased or decreased

accordingly by agreement between the Parties hereto, and corresponding adjustments shall be made to the ceiling amounts specified in Clause GC 6.1(b).

5.4 Services, Facilities and Property of the Client The Client shall make available to the Consultants and the Personnel, for the purposes of the Services and free of any charge, the services, facilities and property described in Appendix F at the times and in the manner specified in said Appendix F, provided that if such services, facilities and property shall not be made available to the Consultants as and when so specified, the Parties shall agree on (i) any time extension that it may be appropriate to grant to the Consultants for the performance of the Services, (ii) the manner in which the Consultants shall procure any such services, facilities and property from other sources, and (iii) the additional payments, if any, to be made to the Consultants as a result thereof pursuant to Clause GC 6.1(c) hereinafter.

5.5 Payment In consideration of the Services performed by the Consultants under this Contract, the Client shall make to the Consultants such payments and in such manner as is provided by Clause GC 6 of this Contract.

5.6 Counterpart Personnel (a) If so provided in Appendix F hereto, the Client shall make available to the Consultants, as and when provided in such Appendix F, and free of charge, such counterpart personnel to be selected by the Client, with the Consultants' advice, as shall be specified in such Appendix F. Counterpart personnel shall work under the exclusive direction of the Consultants. If any member of the counterpart personnel fails to perform adequately any work assigned to such member by the Consultants which is consistent with the position occupied by such member, the Consultants may request the replacement of such member, and the Client shall not unreasonably refuse to act upon such request.

(b) If counterpart personnel are not provided by the Client to the Consultants as and when specified in Appendix F, the Client and the Consultants shall agree on (i) how the affected part of the Services shall be carried out, and (ii) the additional payments, if any, to be made by the Client to the Consultants as a result thereof pursuant to Clause GC 6.1(c) hereof.

6. Payments to the Consultants

6.1 Cost Estimates; Ceiling Amount (a) An estimate of the cost of the Services payable in foreign currency is set forth in Appendix G. An estimate of the cost of the Services payable in local currency is set forth in Appendix H.

(b) Except as may be otherwise agreed under Clause GC 2.6 and subject to Clause GC 6.1(c), payments under this Contract shall not exceed the ceilings in foreign currency and in local currency specified in the SC. The Consultants shall notify the Client as soon as cumulative charges incurred for the Services have reached 80% of either of these ceilings.

(c) Notwithstanding Clause GC 6.1(b) hereof, if pursuant to any of the Clauses GC 5.3, 5.4 or 5.6 hereof, the Parties shall agree that additional payments in local and/or foreign currency, as the case may be, shall be made to the Consultants in order to cover any necessary additional expenditures not envisaged in the cost estimates referred to in Clause GC 6.1(a) above, the ceiling or

ceilings, as the case may be, set forth in Clause GC 6.1(b) above shall be increased by the amount or amounts, as the case may be, of any such additional payments.

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| 6.2 Remuneration and Reimbursable Expenditures | <p>(a) Subject to the ceilings specified in Clause GC 6.1(b) hereof, the Client shall pay to the Consultants (i) remuneration as set forth in Clause GC 6.2(b), and (ii) reimbursable expenditures as set forth in Clause GC 6.2(c). If specified in the SC, said remuneration shall be subject to price adjustment as specified in the SC.</p> <p>(b) Remuneration for the Personnel shall be determined on the basis of time actually spent by such Personnel in the performance of the Services after the date determined in accordance with Clause GC 2.3 and Clause SC 2.3 (or such other date as the Parties shall agree in writing) (including time for necessary travel via the most direct route) at the rates referred to, and subject to such additional provisions as are set forth, in the SC.</p> <p>(c) Reimbursable expenditures actually and reasonably incurred by the Consultants in the performance of the Services, as specified in Clause SC 6.3(b).</p> |
| 6.3 Currency of Payment | <p>(a) Foreign currency payments shall be made in the currency or currencies specified as foreign currency or currencies in the SC, and local currency payments shall be made in the currency of the Client's country.</p> <p>(b) The SC shall specify which items of remuneration and reimbursable expenditures shall be paid, respectively, in foreign and in local currency.</p> |
| 6.4 Mode of Billing and Payment | <p>Billings and payments in respect of the Services shall be made as follows:</p> <p>(a) The Client shall cause to be paid to the Consultants an advance payment as specified in the SC, and as otherwise set forth below. The advance payment will be due after provision by the Consultants to the Client of a bank guarantee by a bank acceptable to the Client in an amount (or amounts) and in a currency (or currencies) specified in the SC, such bank guarantee (i) to remain effective until the advance payment has been fully set off as provided in the SC, and (ii) to be in the form set forth in Appendix I hereto or in such other form as the Client shall have approved in writing.</p> <p>(b) As soon as practicable and not later than fifteen (15) days after the end of each calendar month during the period of the Services, the Consultants shall submit to the Client, in duplicate, itemized statements, accompanied by copies of receipted invoices, vouchers and other appropriate supporting materials, of the amounts payable pursuant to Clauses GC 6.3 and 6.4 for such month. Separate monthly statements shall be submitted in respect of amounts payable in foreign currency and in local currency. Each such separate monthly statement shall distinguish that portion of the total eligible costs which pertains to remuneration from that portion which pertains to reimbursable expenditures.</p> <p>(c) The Client shall cause the payment of the Consultants' monthly statements within sixty (60) days after the receipt by the Client of</p> |

such statements with supporting documents. Only such portion of a monthly statement that is not satisfactorily supported may be withheld from payment. Should any discrepancy be found to exist between actual payment and costs authorized to be incurred by the Consultants, the Client may add or subtract the difference from any subsequent payments. Interest at the annual rate specified in the SC shall become payable as from the above due date on any amount due by, but not paid on, such due date.

- (d) The final payment under this Clause shall be made only after the final report and a final statement, identified as such, shall have been submitted by the Consultants and approved as satisfactory by the Client. The Services shall be deemed completed and finally accepted by the Client and the final report and final statement shall be deemed approved by the Client as satisfactory ninety (90) calendar days after receipt of the final report and final statement by the Client unless the Client, within such ninety (90)-day period, gives written notice to the Consultants specifying in detail deficiencies in the Services, the final report or final statement. The Consultants shall thereupon promptly make any necessary corrections, and upon completion of such corrections, the foregoing process shall be repeated. Any amount which the Client has paid or caused to be paid in accordance with this Clause in excess of the amounts actually payable in accordance with the provisions of this Contract shall be reimbursed by the Consultants to the Client within thirty (30) days after receipt by the Consultants of notice thereof. Any such claim by the Client for reimbursement must be made within twelve (12) calendar months after receipt by the Client of a final report and a final statement approved by the Client in accordance with the above.
- (e) All payments under this Contract shall be made to the accounts of the Consultants specified in the SC.

7. Fairness and Good Faith

7.1 Good Faith

The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.

7.2 Operation of the Contract

The Parties recognize that it is impractical in this Contract to provide for every contingency which may arise during the life of the Contract, and the Parties hereby agree that it is their intention that this Contract shall operate fairly as between them, and without detriment to the interest of either of them, and that, if during the term of this Contract either Party believes that this Contract is operating unfairly, the Parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but no failure to agree on any action pursuant to this Clause shall give rise to a dispute subject to arbitration in accordance with Clause GC 8 hereof.

8. Settlement of Disputes

- 8.1 Amicable Settlement If either Party objects to any action or inaction of the other Party, the objecting Party may file a written Notice of Dispute to the other Party providing in detail the basis of the dispute. The Party receiving the Notice of Dispute will consider it and respond in writing within 14 days after receipt. If that Party fails to respond within 14 days, or the dispute cannot be amicably settled within 14 days following the response of that Party, Clause GC 8.2 shall apply.
- 8.2 Dispute Settlement Any dispute between the Parties as to matters arising pursuant to this Contract that cannot be settled amicably according to Clause GC 8.1 may be submitted by either Party for settlement in accordance with the provisions specified in the SC.

III. Special Conditions of Contract

Number of GC Clause ²	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
1.4	The language is English
1.6.1	<p>The addresses are:</p> <p>The Chief Executive Ghana Grid Company (GRIDCo) P. O. Box CS 7979 Tema , Ghana</p> <p>Attn: Charles Darku</p> <p>Telephone: (+233) 0303 310 310 /(+233) 0303 304 818 Facsimile: (+233) 0303 303 327/(+233) 0302 67 61 80 E-mail: ceo@gridcogh.com; pcboip@gridcogh.com</p> <p>Consultant: _____</p>
1.6.2	<p>Notice will be deemed to be effective as follows:</p> <p>(a) in the case of personal delivery or registered mail, on delivery;</p> <p>(b) in the case of Fax, twenty – four (24) hours following confirmed transmission;</p> <p>(c) in the case of electronic email, twenty – four (24) hours following confirmed transmission;</p>
1.9	<p>The Authorized Representatives are:</p> <p>For the Client: Project Manager 330 kV WAPP Project Ghana Grid Company P. O. Box CS 7979, Tema, Ghana Telephone: +233-03430-21289 Facsimile: +233-03430-21290 E-mail:pcboip@gridcogh.com</p> <p>For Consultant;.....</p>
1.10	<p>The Client warrants that the Consultant, the Sub-Consultants and the Personnel shall be exempt from (or that the Client shall pay on behalf of the Consultant, the Sub-Consultants and the Personnel, or shall reimburse the Consultant, the Sub-Consultants and the Personnel for) any indirect taxes, duties, fees, levies and other impositions imposed, under the Applicable Law, on the Consultant, the Sub-Consultants and the Personnel in respect of:</p> <p>(a) any payments whatsoever made to the Consultant, Sub-Consultants and the Personnel (other than nationals or permanent residents of the Government's country), in connection with the carrying out of the</p>

Services;

- (b) any equipment, materials and supplies brought into the Government's country by the Consultant or Sub-Consultants for the purpose of carrying out the Services and which, after having been brought into such territories, will be subsequently withdrawn there from by them;
- (c) any equipment imported for the purpose of carrying out the Services and paid for out of funds provided by the Client and which is treated as property of the Client; provided that:
 - (1) the Consultant, Sub-Consultants and Personnel, and their eligible dependents, shall follow the usual customs procedures of the Government's country in importing property into the Government's country; and
 - (2) if the Consultant, Sub-Consultants or Personnel, or their eligible dependents, do not withdraw but dispose of any property in the Government's country upon which customs duties and taxes have been exempted, the Consultant, Sub-Consultants or Personnel, as the case may be, (i) shall bear such customs duties and taxes in conformity with the regulations of the Government's country, or (ii) shall reimburse them to the Client if they were paid by the Client at the time the property in question was brought into the Government's country.

2.1

The effectiveness conditions are the following:

- 1. Approval of the Contract by the Agency
- 2. Effectiveness of Agency's funding and
- 3. Receipt by Consultants of advance payment and by Client of advance payment guarantee

2.2

The time period shall be six (6) months or such other time period as the parties may agree in writing.

2.3

The time period shall be Two (2) weeks or such other time period as the parties may agree in writing.

2.4

The time period shall be forty - five (45) months or such other time period as the parties may agree in writing.

3.4

Limitation of the Consultants' Liability towards the Client

- (a) Except in case of gross negligence or willful misconduct on the part of the Consultants or on the part of any person or firm acting on behalf of the Consultants in carrying out the Services, the Consultants, with respect to damage caused by the Consultants to the Client's property, shall not be liable to the Client:
 - (i) for any indirect or consequential loss or damage; and
 - (ii) for any direct loss or damage that exceeds 5 times the total payments for professional fees and reimbursable expenditures made or expected to be made to the Consultants hereunder.
- (b) This limitation of liability shall not affect the Consultants' liability, if any, for damage to Third Parties caused by the Consultants or any person

or firm acting on behalf of the Consultants in carrying out the Services.

3.5

The risks and the coverages shall be as follows:

- (a) Third Party motor vehicle liability insurance in respect of motor vehicles operated in the Client's country by the Consultants or their Personnel or any Sub-consultants or their Personnel, with a minimum coverage in accordance with the current law in Ghana;
- (b) Third Party liability insurance, with a minimum coverage of US\$ 2,500,000.00;
- (c) professional liability insurance, with a minimum coverage of value equal to the Contract Price;
- (d) employer's liability and workers' compensation insurance in respect of the Personnel of the Consultants and of any Sub-consultant, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate; and
- (e) insurance against loss of or damage to (i) equipment purchased in whole or in part with funds provided under this Contract, (ii) the Consultants' property used in the performance of the Services, and (iii) any documents prepared by the Consultants in the performance of the Services.

3.7(c)

The other actions are:

- (i) taking any action under the contract designating the Consultants as "Engineer," for which action, pursuant to such contract, the written approval of the Client as "Employer" is required."
- (iii) Order any works involving delay or any extra payment by the Employer or to make any variation of or in a Works Contract

3.9

The Consultants shall not use these documents for purposes unrelated to this Contract without the prior written approval of the Client.

4.6

The person designated as resident project manager in Appendix C shall serve in that capacity, as specified in Clause GC 4.6.

6.1(b)

The ceiling in foreign currency is: 110% of estimated price

The ceiling in local currency is: 110% of estimated price

6.2(a)

Payments for remuneration made in accordance with Clause GC 6.2(a) in [foreign and/or] [local] currency shall be adjusted as follows:

- (i) Remuneration paid in foreign currency pursuant to the rates set forth in Appendix G shall be adjusted every 12 months (and, the first time, with effect for the remuneration earned in the 13th calendar month after the date of the Contract) by applying the following formula:

$$R_f = R_{fo} \times \left[0.1 + 0.9 \frac{I_f}{I_{fo}} \right]$$

where R_f is the adjusted remuneration, R_{fo} is the remuneration payable on the basis of the rates set forth in Appendix G for remuneration payable in foreign currency, I_f is the official index for salaries in the country of the foreign currency for the first month for which the adjustment is supposed to have effect, and I_{fo} is the official index for salaries in the country of the foreign currency for the month of the date of the Contract.

- (ii) Remuneration paid in local currency pursuant to the rates set forth in Appendix H shall be adjusted every *[number]* months (and, for the first time, with effect for the remuneration earned in the *[number]*th calendar month after the date of the Contract) by applying the following formula:

$$R_l = R_{lo} \times \frac{I_l}{I_{lo}}$$

where R_l is the adjusted remuneration, R_{lo} is the remuneration payable on the basis of the rates set forth in Appendix H for remuneration payable in local currency, I_l is the official index for salaries in the Client's country for the first month for which the adjustment is to have effect and, I_{lo} is the official index for salaries in the Client's country for the month of the date of the Contract." (Index from the Ghana Statistical Services)

- 6.2(b)(i)**
- (1) It is understood (i) that the remuneration rates shall cover (A) such salaries and allowances as the Consultants shall have agreed to pay to the Personnel as well as factors for social charges and overhead, (B) the cost of backstopping by home office staff not included in the Personnel listed in Appendix C, and (C) the Consultants' fee, (ii) that bonuses or other means of profit-sharing shall not be allowed as an element of overhead, and (iii) that any rates specified for persons not yet appointed shall be provisional and shall be subject to revision, with the written approval of the Client, once the applicable salaries and allowances are known.
 - (2) Remuneration for periods of less than one month shall be calculated on an hourly basis for actual time spent in the Consultants' home office and directly attributable to the Services (one hour being equivalent to 1/240th of a month) and on a calendar-day basis for time spent away from home office (one day being equivalent to 1/30th of a month).
- 6.2(b)(ii)** The rates for foreign Personnel are set forth in Appendix G.
- 6.3(a)** The foreign currency [currencies] shall be the:
- United States Dollars/or Euro
- 6.3(b)** Remuneration for foreign Personnel shall be paid in foreign currency.
- 6.4(a)** The following provisions shall apply to the advance payment and the advance payment guarantee:
- (1) An advance payment of 10% of the Contract Price shall be made within Sixty (60) days after the award of Contract. The advance payment will be set off by the Client in equal installments against the statements for the first twelve (12) months of the Services until the

advance payment has been fully set off.

- (2) The bank guarantee shall be in the amount and in the currency of the foreign currency portion of the advance payment.

6.4(c) The interest rate is: 0.5% per month for foreign currency payments and 1.0% for local currency payment

6.4(e) The accounts identification and number are:

for foreign currency: *[insert account identification and number]*

for local currency: *[insert account identification and number]*

IBAN and BIC references shall be provided together with the first request for payment.

8.2 Disputes shall be settled by arbitration in accordance with the following provisions:

1. Selection of Arbitrators. Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three arbitrators, in accordance with the following provisions:
 - (a) Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to the Fédération Internationale des Ingénieurs-Conseils (FIDIC) of Lausanne, Switzerland for a list of not fewer than five nominees and, on receipt of such list, the Parties shall alternately strike names therefrom, and the last remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, the Fédération Internationale des Ingénieurs-Conseils (FIDIC) of Lausanne, Switzerland shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute.
 - (b) Where the Parties do not agree that the dispute concerns a technical matter, the Client and the Consultants shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the latter of the two arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by the Secretary General of the International Centre for Settlement of Investment Disputes, Washington, D.C.
 - (c) If, in a dispute subject to Clause SC 8.2 1.(b), one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has named an arbitrator may apply to the the Secretary General of the International Centre for Settlement of Investment Disputes,

Washington, D.C. to appoint a sole arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the sole arbitrator for that dispute.

2. Rules of Procedure. Except as stated herein, arbitration proceedings shall be conducted in accordance with the rules of procedure for arbitration of the United Nations Commission on International Trade Law (UNCITRAL) as in force on the date of this Contract.
3. Substitute Arbitrators. If for any reason an arbitrator is unable to perform his function, a substitute shall be appointed in the same manner as the original arbitrator.
4. Nationality and Qualifications of Arbitrators. The sole arbitrator or the third arbitrator appointed pursuant to paragraphs (a) through (c) of Clause SC 8.2 1 hereof shall be an internationally recognized legal or technical expert with extensive experience in relation to the matter in dispute and shall not be a national of the Consultants' home country or of the Client. For the purposes of this Clause, "home country" means any of:
 - (a) the country of incorporation of the Consultants; or
 - (b) the country in which the Consultants' [or any of their Members'] principal place of business is located; or
 - (c) the country of nationality of a majority of the Consultants' [or of any Members'] shareholders; or
 - (d) the country of nationality of the Sub-consultant concerned, where the dispute involves a subcontract.
5. Miscellaneous. In any arbitration proceeding hereunder:
 - (a) proceedings shall, unless otherwise agreed by the Parties, be held in [location];
 - (b) the English language shall be the official language for all purposes; and
 - (c) the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.

IV. Appendices

Appendix A-Description of the Services

Give detailed descriptions of the Services to be provided, dates for completion of various tasks, place of performance for different tasks, specific tasks to be approved by Client, etc.

Appendix B-Reporting Requirements

List format, frequency, and contents of reports; persons to receive them; dates of submission; etc. If no reports are to be submitted, state here "Not applicable."

Appendix C- Key Personnel and Sub-consultants

- List under:*
- C-1 *Titles [and names, if already available], detailed job descriptions and minimum qualifications of Key foreign Personnel to be assigned to work in the Client's country, and staff-months for each.*
 - C-2 *Same information as C-1 for Key local Personnel.*
 - C-4 *Same as C-1 for Key Personnel to be assigned to work outside the Client's country.*
 - C-4 *List of approved Sub-consultants (if already available); same information with respect to their Personnel as in C-1 through C-3.*

Appendix D- Medical Certificate: N/A

Appendix E- Hours of Work for Key Personnel

List here the hours of work for Key Personnel; travel time to and from the country of the Client for foreign Personnel (Clause GC 4.4(a)); entitlement, if any, to overtime pay, sick leave pay, vacation leave pay, etc.

Appendix F- Duties of the Client

- List under:*
- F-1 *Services, facilities and property to be made available to the Consultants by the Client.*
 - F-2 *Counterpart personnel to be made available to the Consultants by the Client.*

Appendix G - Cost Estimates in Foreign Currency

List hereunder cost estimates in foreign currency:

1.
 - (a) *Monthly rates for foreign Personnel (Key Personnel and other Personnel)*
 - (b) *Monthly rates for local Personnel (Key Personnel and other Personnel).*
Note: *This should be added if local Personnel is also being paid in foreign currency.*
2. *Reimbursable expenditures*
 - (a) *Per diem allowances.*
 - (b) *Air transport for foreign Personnel.*
 - (c) *Air transport for dependents resident in Ghana.*
 - (d) *Transport of personal effects.*
 - (e) *International communications.*
 - (f) *Printing of documents specified in Appendices A and B hereof.*

- (g) *Acquisition of specified equipment and materials to be imported by the Consultants and to be paid for by the Client (including transportation to the Client's country).*
- (h) *Other foreign currency expenditures, like use of computers, foreign training of Client's staff, various tests, etc.*

Appendix H- Cost Estimates in Local Currency

List hereunder cost estimates in local currency:

1. *Monthly rates for local Personnel (Key Personnel and other Personnel)*
2. *Reimbursable expenditures as follows:*
 - (a) *Per diem rates for subsistence allowance for foreign short-term Personnel, plus estimated totals.*
 - (b) *Living allowances for long-term foreign Personnel, plus estimated totals.*
 - (c) *Cost of local transportation.*
 - (d) *Cost of other local services, rentals, utilities, etc.*

Appendix I- Form of Bank Guarantee for Advance Payments

Note: *See Clause GC 6.4(a) and Clause SC 6.4(a). The Client should insert here an acceptable form of a bank guarantee. An example is set forth below.*

Bank Guarantee for Advance Payment

_____ [Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: _____ [Name and Address of Client]

Date: _____

ADVANCE PAYMENT GUARANTEE No.: _____

We have been informed that _____ [name of Consulting Firm] (hereinafter called "the Consultants") has entered into Contract No. _____ [reference number of the contract] dated _____ with you, for the provision of _____ [brief description of Services] (hereinafter called "the Contract"). Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum of _____ [amount in figures] (_____) [amount in words] is to be made against an advance payment guarantee.

At the request of the Consultants, we _____ [name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of _____ [amount in figures] (_____) [amount in words] upon receipt by us of your first demand in writing indicating the obligations which the Consultants failed to fulfill under the Contract.

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Consultants on their account number _____ at _____ [name and address of Bank].

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Consultants as indicated in copies of certified monthly statements which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of the monthly payment certificate indicating that the Consultants have made full repayment of the amount of the advance payment, or on the ___ day of _____, 2____, 2____, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[Signature]