



ELECTRICITY GENERATION COMPANY OF BANGLADESH LIMITED

(An Enterprise of Bangladesh Power Development Board)

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Request for Expression of Interest [Firm (National)]

for

Selection of Firm for providing services for Preparation of Route Survey, IEE, ESIA/ESMP and RAP of 230kV Transmission Line of Sonagazi 50 MW Solar Power Plant Construction Project

[Contract package: SD4 (Firm for ESIA and RAP for Transmission line)]

Ref No.: 27.27.3094.6025.01.001.19.03 Date: 13/05/2019

Country: Bangladesh

Name of the Project: Sonagazi 50 MW Solar Power Plant Construction Project

Credit No.: BD 6363

Assignment Title: SD4 (Firm for ESIA and RAP for Transmission line)

1. The Government of the People's Republic of Bangladesh has received financing from the World Bank toward the cost of the Sonagazi 50 MW Solar Power Plant Construction Project, a project of Power Division, Ministry of Power, Energy & Mineral Resources and implemented by Electricity Generation Company of Bangladesh (EGCB) Ltd.(An Enterprise of Bangladesh Power Development Board), and intends to apply part of the proceeds for consulting services.
2. The consulting services ("the Services") are to prepare the client in:
 - (i) Route Survey, IEE, ESIA/ESMP and RAP of 230kV Transmission Line [Purbo Barodholi (Solar Power Plant) - PGCB Mirershorai BEZA Grid substation] ; and
 - (ii) compliance with WB health, safety, environmental and social safeguard standards and reporting.

It is expected that the services will be commenced in June, 2019 and shall be completed in September, 2019.

The detailed Terms of Reference (ToR) for the assignment can be found at the following website:

<https://www.egcb.com.bd/> or can be found at the address given below.

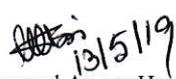
The Project Implementing Unit of EGCB Ltd. now invites eligible consulting firms ("Consultants") to indicate their interest in providing the Services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services. The short-listing criteria are:

- (a) General experience of the Firm(s);
- (b) Experience in similar projects of compatible size, complexity and technical specialty in the required area;
- (c) Financial soundness of the firm;
- (d) Staffing and logistics of the firm; and
- (e) Competent staff resources available for the Services.

Consultants are requested to submit the following supporting documents in support of the above-mentioned criteria:

(a) Registration paper of the firm (s); (b) JV agreement/letter of intent (if applicable); (c) Firm's brochure; (d) Audited financial reports for last three years; (e) service experience record (including nature, total cost, total input in terms of man month, employer, location of service etc.); and (f) full CVs of the professionals available for the Services.

3. The attention of interested Consultants is drawn to Section III, paragraphs, 3.14, 3.16, and 3.17 of the World Bank's "Procurement Regulations for IPF Borrowers" July 2016 ("Procurement Regulations"), setting forth the World Bank's policy on conflict of interest.
4. Consultants may associate with other firms to enhance their qualifications, but should indicate clearly whether the association is in the form of a joint venture and/or a sub-consultancy. In the case of a joint venture, all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected.
5. A consulting firm will be selected in accordance with the Consultant's Qualification Based Selection (CQS) method set out in the World Bank's Procurement Regulations.
6. Further information can be obtained at the address below during office hours (10.00 a.m to 5.00 p.m.).
7. Expression of Interest must be delivered in a written form to the address below (in person, or by mail, or by fax, or by e-mail) by 11/06/2019, 15:00 hr (BST). Hard copy is preferable.
8. The procuring entity reserves the right to accept or reject any or all of the EOI or annul the EOI process at any stage, at its sole discretion without assigning any reason(s) whatsoever and without incurring any liability to the affected applicants(s).


Mohammad Anwar Hossain

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Sonagazi 50 MW Solar Power Plant Construction Project

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Electricity Generation Company of Bangladesh (EGCB) Ltd.

Sonagazi 50 MW Solar Power Plant Construction Project

Under Bangladesh Scaling Up Renewable Energy Project

Terms of Reference

for

Consulting Firm for Preparation of

Route Survey, IEE, ESIA/ESMP and RAP of 230kV Transmission Line

May, 2019

1. INTRODUCTION

1.1. Project Background

Government of Bangladesh (GoB) sets a target to generate 10% (2000 MW) of its total electricity generation from renewable energy source by 2020. But is yet to achieve its potential for renewable energy for electricity generation. The total installed renewable energy generation capacity is currently only 461 MW and the share in grid supply only 1.5 percent. Most of the renewable energy generation is coming from a single 230 MW hydropower plant developed in the 1960s. The remaining is mostly from off-grid solar homes (175 MW), two solar PV plants (31 MW), some (15 MW) from urban rooftop solar, and the rest from biogas and biomass plants. Considering the expected power generation capacity over the next decade in line with the Power System Master Plan 2016 (PSMP-2016) and the corresponding demand scenario, the demand for electricity is expected to outstrip the available and planned generation capacity in Bangladesh. In view of this impending scenario, the Electricity Generation Company of Bangladesh (EGCB) has taken initiatives to set up diversified fuel-based power plants as well as renewable power generation in Bangladesh.

The potential for increased renewable energy generation in Bangladesh is significant. Resource assessments in the Bangladesh Climate Investment Funds Scaling Up Renewable Energy Program (CIF-SREP) investment plan indicate an additional 3,666 MW of renewable energy capacity. To exploit this potential, the Government of Bangladesh has put in place several plans and targets for adding renewable energy capacities, including the 2008 National Renewable Energy Policy (2,000 MW by 2020), the 2016 Renewable Energy Development Targets (2,458 MW by 2021) and the 2016 Power System Master Plan (PSMP 2016) with its emphasis on increasing renewable energy. Bangladesh's Nationally Determined Contribution (NDC) to the Paris Climate Agreement sets a somewhat more conservative objective of adding 1,000 MW of solar PV and 400 MW of wind power generation by 2030. As there is no remarkable initiative in private sector to fulfill this target, public sector needs to take the lead to implement large renewable energy projects as part of corporate social responsibility. In line with the GoB's target of energy generation from renewable sources, Electricity Generation Company of Bangladesh (EGCB) Limited has planned to implement 50 MW Solar based power plant at Sonagazi area of Feni district. GoB has sought the World Bank's assistance under the "Bangladesh Scaling-up Renewable Energy Project (BSREP)¹" to develop a 200 MW solar facility at Sonagazi in Feni District. The facility will be built in several phases and currently a first plant of 50 MW (the "Plant") plus a 230 KV interconnection line are going to be built under an EPC plus three-year O&M supply scheme (the "Project"). The project has been approved by the Government of Bangladesh for implementation under the co-financing from the International Development Association (IDA) of the World Bank Group.

1.2. Description of the Project

The BSREP will increase installed capacity of renewables through piloting and gradually scaling up investments in key market segments. It will mobilize financing through provision of dedicated financing to the private sector, designed to leverage other sources of capital. These outcomes are enabled through technical assistance and institutional capacity building, notably for identification and development of public land sites for competitive tenders to bring in the private sector.

¹ Bangladesh Scaling-up Renewable Energy Project has been approved by the Government of Bangladesh for implementation of its three components by the Infrastructure Development Company Limited (IDCOL), the Sustainable and Renewable Energy Development Authority (SREDA) and the Electricity Generation Company of Bangladesh (EGCB).

The design of the Project therefore considers the strategy of the Government to develop a pilot through a public power generation utility in parallel to development of competitive tenders on public land for private sector IPPs. It also considers the state of the renewable energy project and financing market in Bangladesh, the need to strengthen policy and procedures, the gaps and asymmetries in information and experience, and lessons learned from other countries and operations. Accordingly, the Project consists of three components as described below.

Component 1: Feni Utility-Scale Solar PV (US\$89.17 million total investment cost, including US\$74.15 million IDA credit and US\$15.02 million counterpart funding from Government of Bangladesh and EGCB). Component 1 supports a first-of-a-kind 50 MW pilot phase of a renewable energy park developed by the Electricity Generation Company of Bangladesh (EGCB). The pilot is implemented in the Feni district on a site acquired by EGCB for renewable energy development. The Component will be implemented by EGCB on about 170 acres of a larger 999.65-acre land area it has acquired. Once fully developed, the EGCB Feni park can accommodate up to 200 MW of renewable energy. Subsequent phases of development at the Feni site may explore joint venture and other public-private partnership structures that can mobilize commercial finance.

Component 1 of BSREP will finance the 50 MW pilot solar PV generation plant and the required infrastructure (the Project). The infrastructure includes evacuation lines from the site to the nearest grid sub-station, pooling sub-stations, civil engineering structures for mitigating flooding risks, and roads within the project site.

EGCB will procure through a competitive bidding procedure an engineering, procurement and construction (EPC) and operation and maintenance (O&M) contract for the solar PV plant, including the power evacuation infrastructure. The O&M arrangement will cover the first three years after commissioning; the cost of the O&M will be covered by EGCB. Besides the EPC contract, Component 1 will finance the costs of transmission bay extension at a sub-station, an owner's engineer, safeguards consultants, and international technical and procurement experts to be included in the bid evaluation committee, as well as some goods. EGCB and the Government of Bangladesh will finance the rest of the cost of Component 1, including but not limited to the O&M contract, import duties and taxes on goods and works, vehicles, salaries and allowances, and other operating costs. In the event Government and EGCB budgets for operating costs are exhausted, some operating cost may be financed by the Bank, upon prior consultation and agreement with the Bank.

Component 2: Renewable Energy Financing Facility (REFF) (US\$108.23 million, including US\$81.85 million IDA credit and US\$26.38 million CIF-SREP loan; US\$212 million of counterpart funding to be leveraged). Component 2 establishes a dedicated Renewable Energy Financing Facility (REFF), hosted and managed by the Infrastructure Development Company Limited (IDCOL), to provide financing to private sector projects and public-private partnership (PPP) projects, including joint ventures. The Facility will channel IDA and concessional CIF-SREP resources of US\$108.23 million, including US\$81.85 million IDA credit and US\$26.38 million CIF-SREP loan. It will provide financing for both utility scale renewable energy and rooftop solar PV sub-projects.

The REFF provides financing to private sector developers and PPPs for utility-scale solar PV projects, preferably those of competitively tendered projects on public land sites, notably those identified and developed under Component 3. In addition, recognizing the high land scarcity in Bangladesh, the component supports opening and scaling-up the rooftop solar PV market. In both segments, the Facility supports private sector and PPP first movers to create markets and bring in other financiers. It will offer long term financing to private sector and PPP renewable projects, currently not readily available in Bangladesh. The REFF financing will leverage domestic and international private developers and commercial financiers. In case the REFF funding is evenly deployed to utility-scale solar PV and rooftop solar PV, it is expected to leverage US\$212 million from other

sources of financing. The sub-project investments will provide the co-financiers an opportunity to understand and reduce their risks and gain experience in the due diligence and financing of such projects. The Project will also build the capacity of IDCOL as a development finance institution, and its ability to leverage commercial financing, benefiting the private sector project sponsors and commercial financiers as well.

Through the above elements, therefore, Component 2 is addressing barriers related to both the under-developed renewable energy financing market as well as institutional capacity and project development challenges. It will benefit from the implementation experience and lessons learned under Component 1. It is also directly linked to Component 3 as REFF financing will be offered to the bidders in the competitive tenders on public land, supported under Component 3.

Component 3: Technical Assistance (US\$3.64 million total cost, including US\$2.87 million CIF-SREP grant and US\$0.77 million counterpart funding from Government of Bangladesh). This Component is implemented by Sustainable and Renewable Energy Development Authority (SREDA). It will support technical assistance and capacity building activities to improve the enabling environment to scale up renewable energy, and support development of a project pipeline in particular for private sector participation. It will also fund Project management costs, covering the costs of hiring technical consultants and consultants for procurement, financial management and safeguards. SREDA and the Government of Bangladesh will finance the rest of the cost of Component 3, including but not limited to import duties and taxes on goods and works, vehicles, salaries and allowances, and other operating costs. In the event Government budget for operating costs is exhausted, some operating cost may be financed by the Bank, upon prior consultation and agreement with the Bank.

All SREDA activities will be coordinated with the IDCOL technical assistance to ensure complementarity and to avoid overlaps. Include a description of the project; covering geographical location of the plant and the interconnection line, type of planned development activities. Also, include the current status of the project. Provide brief information on any other study already completed/ongoing or proposed) to be added by the EGCB or any other agency, national and international.

1.3. Environmental and Social Impact Assessment

Environment and Social Impact Assessment (ESIA) is a decision support mechanism to ensure that the project design and implementation are environmentally sound and socially sustainable. The Project faces unique challenges that derive from the annual flooding of the site, and because of its proximity to the sea, which may cause increased corrosion of steel and the risk of incoming waves under storm conditions. Under component 1 of this project, EGCB will procure an engineering, procurement and construction (EPC) and operation and maintenance (O&M) contractors for the solar PV plant, including the power evacuation infrastructure. EGCB will also engage an owner's engineer for supervision of the EPC work on its behalf. The project will address environmental and social consequences of the project those are detrimental for human community and their environment and ecology following the guiding instruments adopted for the project including environmental and social management framework and social management plans. These environmental social guidelines have been adopted in compliance with the national legal frameworks and the World Bank operational policies on safeguards, guidelines for environmental and health safety and the corporate requirements on gender, gender-based violence, citizen engagement and climate change. This Terms of Reference (ToR) will provide scope of work and deliverables of a consultant to be engaged by EGCB for preparation of Route Survey, IEE, ESIA/ESMP and RAP for the power transmission line under Component 1.

A detailed Environmental and Social Impact Assessment (ESIA) has been carried out and a Resettlement Action Plan (RAP) prepared for the 50-MW solar power plant. EGCB has also prepared an Environment and Social Management Framework (ESMF) and a Resettlement Policy Framework (RPF) for the transmission route to evacuate the power from the plant. A route survey will be conducted and an ESIA will be carried out for the transmission line based on the ESMF and the RPF to finalize the transmission route and produce IEE, ESIA reports, ESMP and a RAP.

1.4. Objectives of the ESIA

The objective of the consultancy services is to prepare studies that meet the requirements of the environmental and social safeguard policies of the World Bank including other relevant corporate guidelines and the relevant laws and regulations of the Government of Bangladesh, for the construction and operation of the new transmission lines and associated facilities under the Project. The proposed project will be financed by IDA with GoB contribution.

The Consultant shall prepare, on the behalf of Electricity Generation Company of Bangladesh (EGCB) Ltd., Route Survey, Topographic Survey, IEE, ESIA/ESMP, and RAP of the Transmission Line for the project. In specific, the consultant will

- (i) carryout route survey along with alternative routes including initial environmental and social screening;
- (ii) evaluate the potential overall environmental and social impacts of the proposed transmission line and associated activities supported with an alternative analysis;
- (iii) identify and carry out stakeholder's analysis;
- (iv) suggest project specific ESMP (Environmental Management Plan and Social Management Plan) and Resettlement Action Plan (RAP) including costing as well as the standard Environmental Code of Practices (ECPs);
- (v) identify the institutional barriers and capacity building needs for environmental and social management; and
- (vi) agree on the institutional arrangement for the environmental and social management including budget for specific mitigation with monitoring plan (ESMP and RAP).
- (vii) Assess the potential risk of gender-based violence (GBV) and suggest mitigating measures in line with the Good Practice Note: Addressing GBV in Investment Project Financing Involving Major Civil Works.²

2. SCOPE OF WORK

The main deliveries of the consultant are i) Route survey ii) IEE iii) Topographic Survey iv) Environment and Social Impact Assessment/Management Plan v) Resettlement Action Plan v) Technical Report for List of Terminal Equipment of Transmission Line and Reactive Power Compensation at Plant side. Also, the consultant will maintain all liaisons with DOE (Department of Environment) for getting Environmental clearance of

² <https://www.theprif.org/documents/regional/world-bank-good-practice-note-addressing-gender-based-violence-investment>

Transmission line of the project. Details project component are attached as per attached format (Attachment-1)

The scopes of consultant services include the following, but not necessarily be limited to:

2.1. Guiding Principles and Policy Framework

The environmental and social impact assessments of the transmission line will follow applicable national legal and regulatory framework and the World Bank operational policies and guidelines. The World Bank's Operational Policies triggered to the project include Environmental Assessment (OP/BP 4.01), on Natural Habitats (OP/BP 4.04), on Indigenous Peoples (OP 4.10), on Involuntary Resettlement (OP 4.12) and on Safety of Dams (OP 4.37). Applicable national policy, legal and regulatory framework includes (i) Renewable Energy Policy of Bangladesh; (ii) Environment Related Policies in Bangladesh; (iii) National Environmental Policy, 1992; (iv) National Environmental Management Action Plan, 1995; (v) National Conservation Strategy, 1992; (vi) Bangladesh Environmental Conservation Act, 1995 (subsequent amendments in 2000 and 2002); (vii) Environment Conservation Rules (ECR), 1997 (subsequent amendments in 2002, 2003 and 2010); (viii) Acquisition and Requisition of Immovable Property Act 2017; (ix) Right to Information Act; and (x) the Constitution of Bangladesh 1972. The World Bank disclosure policy, environmental health and safety guidelines, and guidance and good practice notes on climate change, labor influx issues, must be addressed in the documents. Gender and gender-based violence must be included in the social assessment, following the Bank's specific guidance notes. Detailed Implementation Arrangements and the layout of a Grievance Redress Mechanism must be included and budgeted.

The potential negative environmental and social risks and impacts of the project are likely to include the loss of vegetation, electrocution of birds and other forms of wildlife, housing and settlement restrictions, public health hazards such as noise, dust, emissions and ground contamination, occupational health and safety, community safety, involuntary resettlement due to land acquisition and loss of livelihoods, and impacts on indigenous peoples' land (if applicable), territories, livelihoods and or culture. The consultant will review, assess and verify to fully identify these risks and unintended impacts, and define appropriate mitigation measures with costing.

2.2. Approach and Methodology

The Consultant will scope key environmental and social issues of proposed transmission line route following the route surveys to determine the key issues and questions that the ESIA and ESMP will assess, and the key issues that might affect the design of alternatives. This will include a preliminary analysis of potential key direct and indirect impacts of the transmission line, as well as environmental and social conditions in the potentially affected areas. The Consultant will use this as a starting point for further refining the scope of the environmental and social studies through a consultative process. The scoping study will include:

- i) Review current relevant policies, legislations, EIA procedures/practices and land acquisition procedure for transmission line of the Government of Bangladesh (GoB) related to the sustainable urban sector development and explain its implication to the proposed project;
- ii) Review the safeguard documents (RAP, ESMP) already prepared for 50 MW Solar based power plant at Sonagazi area of Feni district and the ESMF and RPF prepared for the transmission lines.
- iii) Review the relevant World Bank safeguard policies and explain its implication to the proposed project;

- iv) Provide a Table with list of all necessary clearances, permissions and disclosure requirements of the World Bank and GoB.
- v) Analysis of the technical features of propose transmission line which include list of terminal equipment and reactive power compensation at plant side.
- vi) Analysis of the technical features of the national transmission grid network for projected scope of works including circuit diagrams and latest load flow diagrams with a view to understanding the status of the existing system in regard to load flows, voltage levels and short circuit levels; review the system performance with and without the proposed projects;
- vii) Visit PGCB Mirershorai BEZA Grid substation (under construction), and analyze available drawings and determine technical particulars of relevance for preparing technical specifications of equipment to be procured. Develop methodological framework for this study which include an assessment on the expected positive and negative impacts of the overall environmental and social management in the Transmission Line;
- viii) Develop methodological framework for this study which include an assessment on the expected positive and negative impacts of the overall environmental and social management in the Transmission Line;
- ix) The report will also identify Public consultation frequency location and discussion issues etc. and those issues that would be raised in the public consultation during ESIA preparation stage;
- x) Develop study design (methodology and work program) following this TOR and the given timeframe to capture information, analyze data and prepare reports. The consultant will demonstrate the detailed methodology, sampling design, interview schedules, sources of information and reporting schedule in an inception report upon mobilization;
- xi) Prepare the inception report, present the approach and methodology to EGCB and the World Bank; and
- xii) Revise the inception report based on the recommendations of EGCB and the World Bank.

3. ALTERNATIVE ANALYSIS

- i) Carryout specific alternative analysis i.e., (a) identify and define alternatives; (b) develop and refine alternatives and technical methodologies; (c) analyze and evaluate environmental, social and economic perspectives; and (d) select the locally preferred alternative.
- ii) Describe the key elements (noise and electromagnetic interference, biological diversity, visual aspects / effects, social issues, etc.) in presenting findings and explanations of the alternative analysis.
- iii) Define the project approach to adopt the environmentally and socially sound alternative option.
- iv) Identify the influence area along the preferred alternative of the proposed transmission route. Develop baseline information of the influence area. The information will be mainly on human settlement, land use, livelihoods, crops, physical, biological and socio-cultural environment through primary surveys at representative and sensitive locations, and identification of all macro-level environmental and social issues.

- v) Collect the primary data for air, noise and water at sensitive locations of influence area through authentic laboratory.

4. ENVIRONMENTAL AND SOCIAL BASELINES AND IMPACTS

4.1. Environmental Baseline

The Consultant will collect, collate and present baseline information on the existing environmental characteristics of, within and around the route alignment. The baseline will:

- i) Present data directly relevant to decisions about route alignment location, design, operation, or mitigation measures, including:
 - Physical environment (such as topography, landforms, geology, soils, climate, air quality, and hydrology)
 - Biological environment (including biodiversity, fauna, flora, animal migration, migratory flyways, endangered species, critical natural habitats, forests, protected and sensitive areas)
- ii) Identify any changes anticipated before the project commences.
- iii) Take into account current and proposed development activities for construction of the transmission line influence area but not directly connected to the project.
- iv) Collate available data from existing sources, and if necessary collect original data.
- v) Include data directly provided and confirmed by relevant data sources, including the county authorities.
- vi) Identify and estimate the extent, quality, accuracy and reliability of available data, key data gaps, and uncertainties associated with predictions, and specifies topics that do not require further attention.
- vii) Organizes and presents data according to three levels of detail: (a) footprint/wayleave, (b) a buffer area of 1 km around the line and associated facilities, and (c) area of influence.
- viii) Present summary data in geographic format using the transmission line alignment sheets.
- ix) Confirm the accuracy of available data by “walking the line”.

4.2. Environmental Impacts

In accordance baseline data, the consultant shall analyse and describe all significant deviations from the environmental baseline that might be caused by the project activities for construction of the transmission line and its associated facilities, including environmental impacts, both positive and negative.

- i) Identify the stages or elements of the various activities of the transmission line those are sensitive on the environmental parameters;
- ii) Assess overall environment impacts of the project – level of significance, extent, irreversible vs. reversible etc.;
- iii) Assess whether the project will create additional liability i.e., the current environmental condition will be improved or worsened as a result of the proposed investments.

- iv) Develop environmental screening and assessment
- v) Describe in detail the process to determine the potential impacts at the site level due to the project interventions through identification, analysis and evaluation on sensitive areas (natural habitats; sites of historic, cultural and conservation importance), settlements and villages/agricultural areas or Important Environmental and Social Features;
- vi) Predict and assess the project's potential positive and negative environmental and social impacts (clearly articulated in respective sub-sections for environmental and social impacts) that might change the baseline conditions, in quantitative terms to the extent possible, during the construction, operation and decommissioning phases.
- vii) Differentiate between short, medium and long-term impacts, estimate the magnitude of impacts, and identify generic both generic environmental and social impacts and site-specific impacts.
- viii) Identify mitigation measures and any residual negative impacts that cannot be mitigated.
- ix) Prepare Environmental Code of Practice (ECoP) for different types of activities related with augmentation and rehabilitation of transmission works.
- x) Describe in details the site-specific environmental management plan along with the estimate of EMP and ECoP;
- xi) Prepare occupational health and safety guidelines relevant to the proposed project.

4.3. Social Baseline

The Consultant will collect, collate and present baseline information on the existing socioeconomic characteristics of, within and around the transmission line area of influence. The baseline will:

- (i) Present data directly relevant to decisions about the location, design, operation, or mitigation measures, including socioeconomic and cultural environment (such as demography, settlements, community structures, vulnerable and marginal groups, gender and GBV status , roles and responsibilities, child rights, child labor, small ethnic communities, sources and distribution of income, employment and labour markets, land use, and cultural heritage). A mapping of NGO's, government and/or private entities providing support for GBV cases in the relevant areas/locations must be provided and linked with the GRM as a referral list.
- (ii) Identify any changes anticipated before the project commences.
- (iii) Identify and take into account current and proposed development activities under public and private initiatives within the project influence area but not directly connected to the project.
- (iv) Collate available data from existing sources including relevant county authorities.
- (v) Identify and estimate the extent, quality, accuracy and reliability of available data, key data gaps, and uncertainties associated with predictions, and specifies topics that do not require further attention.
- (vi) Organizes and presents data according to three levels of detail: (a) footprint/wayleave, (b) a buffer area of 1 km around the line and associated facilities, and (c) area of influence.
- (vii) Confirm the accuracy of available data by "walking the line".

4.4. Social Impacts

The Consultant shall analyse and describe all significant deviations from the socioeconomic baseline that might be caused by the project, including social impacts, both positive and negative. During the analysis, the consultant shall

- i. Consider the socioeconomic factors, such as (list is not exhaustive): (i) Population change and migration; (ii) Forms of social organization and cooperation; (iii) Gender issues and gender-based violence; (iv) Impacts of Labor influx due to construction works, where applicable; (v) Community health and health services; (vi) Physical and social infrastructure; (vii) Changes in economic activities; (viii) Relocation and resettlement; (ix) Removal of structure/sites; and (x) Access restrictions and constraints in land use.
- ii. Predict and assess the potential positive and negative social impacts (clearly articulated in respective sub-sections for social impacts) that might change the baseline conditions, in quantitative terms to the extent possible, during the construction, operation and decommissioning phases.
- iii. Differentiate between short, medium and long-term impacts, estimate the magnitude of impacts, and identify generic both generic social impacts and site-specific impacts.
- iv. Identify mitigation measures and any residual negative impacts that cannot be mitigated.
- v. Explore opportunities for social and community enhancement including potential adjustments in transmission line route avoiding adverse social impacts to communities.
- vi. The identification of impacts will be closely coordinated with the preparation of the RAP and small ethnic community development plan to ensure coherence and comprehensiveness.

4.5 Gender Based Violence (GBV) Mitigation

Gender Based Violence (GBV) affects women and girls across their lifespan and takes many forms, including sexual, physical, and psychological abuse. World Bank financed infrastructure development projects, which inherently involve bringing funds and at times people into new environments, can change the areas where they operate in unexpected ways. To minimize the risk of GBV (and Sexual Exploitation and Abuse), the analysis shall:

- a. Assess the overall GBV risks in the project area based on (i) existing gender country diagnostics/country action plans; (ii) data on partner/non-partner physical violence against women; (c) cultural practices vis-à-vis women (early marriage, physical practices); and (d) information obtained from consultations carried out as part of consultations with stakeholders.
- b. Prepare a mapping of GBV service providers in the project area that indicates the type of services, including formal service providers (i.e., hospitals, NGOs, government offices) and informal (i.e., women's groups, community elders, etc). The mapping should indicate any capacity constraints of informal GBV service providers.
- c. Confirm the GBV risk assessment rating provided by the World Bank for the project and assess the capacity of the implementing agency to supervise GBV mitigation measures.
- d. Identify GBV mitigation measures linked to activities to manage any labour influx.
- e. Community engagement in the area of influence with women's groups, groups that advocate for children and adolescent rights, and other stakeholders (including issues related to GBV and GBV-related concerns about the project following ethical protocols). These consultations

should feed into the identification of potential GBV issues and possible prevention and mitigation strategies. As part of these consultations, those affected by the project should be properly informed of GBV risks and project activities to get their feedback on project design and safeguard issues. Community consultations should never directly ask about experiences of GBV and should follow ethical protocols.

- f. Depending on the project risk rating, prepare a GBV Action Plan and Accountability and Response Framework which provides details on (i) available service providers; (ii) the responsibilities of the Grievance Redress Mechanism to handle complaints and link to service provision; (iii) monitoring arrangements and responsibilities, keeping in mind the recommendations of the Good Practice Note for the different project actors; and, (iv) awareness raising strategy in the local community (stakeholder engagement plan).
2. Identify potential actions or initiatives to support GBV broader prevention in the project area such as: (i) need to broader support to health services or for health provision; (ii) youth engagement; or (iii) behaviour change communication, among others.

5. STAKEHOLDER ANALYSIS, CONSULTATION AND PARTICIPATION

- i) Identify key stakeholders of the proposed project and assess the power relationships as well as influence and interests of stakeholders involved in development of the project;
- ii) Carryout a stakeholder analysis to categorize the most important actors for preparation, design, implementation and monitoring of the proposed project;
- iii) Identify the small ethnic communities/tribal peoples (if any) in the proposed area for the Transmission line, review and assess their identity in view of the characteristics of indigenous peoples as laid down in the World Bank OP 4.10 and decide on presence of indigenous peoples in the transmission line route influence area;
- iv) Inform, consult, and be engaged in dialogue with stakeholders regarding proposed project design, likely impacts of the interventions (both positive and negative), environmental and social enhancement measures, possible measures for environmental mitigation/compensation, implementation and monitoring of mitigation/compensation measures, and specific recommendations regarding vulnerable groups, including significant common property that may require adjustments in project design³;
- v) If tribal peoples identified in the transmission line influence area are assessed to be indigenous, design and conduct free, prior and informed consultation (FPIC) and include FPIC in the Stakeholder Consultation and Participation Plan.
- vi) Examine opportunities and conditions for the participation of the stakeholders including vulnerable groups in the project cycle; and
- vii) Document the consultation process (photographs, signature of participants) and record the discussions including options and suggestions provided by the participants for consideration in the project design, implementation and monitoring.
- viii) Prepare Stakeholder Consultation and Participation Plan with proposed resources and Terms of Reference for the implementation of the plan during project execution, design, implementation, supervision and

³consultation must be carried out at baseline study area.

monitoring including a strategic consultation plan (as under activity 'v') with indigenous peoples, if present.

6. INSTITUTIONAL CAPACITY AND RESPONSIBILITY

- ix) Evaluate the institutional and staff capacity of EGCB and carryout training needs assessment for environmental and social management;
- x) Identify required staffing and consultant needs in EGCB for appropriate environmental and social management in the proposed project,
- xi) Provide the required training for EGCB on environmental and social issues
- xii) Define the roles and responsibilities of officials, staff, consultants and contractors of implement the environmental and social mitigation activities
- xiii) Ensure environmental and social considerations are properly addressed in final civil engineering design and estimation as well as incorporated in the bid document.

7. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Based on the results and analysis of the ESIA, the consultant will prepare a comprehensive Environmental and Social Management Plan (ESMP)⁴ for the transmission line. The ESMP will provide time frames and implementation mechanisms, reporting responsibilities, description and technical details of monitoring measures, assessment of the institutional needs, staffing requirements and cost outlay for implementation. The plan will show how management and mitigation methods are phased with project implementation. The plan will also include measures to prevent health hazards and to ensure safety in the working environment for the employees and the communities adjacent to the project sites and project affected people. The ESMP will propose:

- individual mitigation and monitoring measures during both construction, operation, and decommissioning, assign institutional responsibilities, and estimate the resources required for its implementation.
- measures for preventing, minimizing, mitigating or compensating for the adverse environmental and social impacts and enhancing beneficial impacts, including costs of the measures and monitoring requirements.
- Each ESMP will be prepared according to the following table of content (adapted from World Bank OP 4.01, Annex C, *Environmental management plan (EMP)*.

⁴ "A project's environmental management plan (EMP) consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels. The plan also includes the actions needed to implement these measures..... To prepare a management plan, the borrower and its EA design team (a) identify the set of responses to potentially adverse impacts; (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements...." (from OP 4.01, Annex C)

a. Mitigation Plan

The Consultant will identify feasible and cost-effective measures to avoid the potentially significant adverse environmental and social impacts identified in the project ESIA, or otherwise reduce them to acceptable levels. The Consultant will propose compensatory measures for residual impacts if mitigation measures are not technically feasible, cost-effective, or sufficient, and will explore opportunities for environmental and social enhancement. The plan distinguishes between the construction and operations phases.

The mitigation plan will:

- (i) Identify and summarize all anticipated significant adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement, gender gaps, gender based violence) and define both generic and site specific environmental and social mitigation measures during construction and operation.
- (i) Provide technical details for each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate.
- (ii) Include measures to minimize migratory bird collisions with transmission lines.
- (iii) Include emergency/disaster preparedness plans.
- (iv) Describe with details other plans that will be required during the construction and operation phases (e.g. Contractor ESMP including occupational health and safety, GBV risks management and labour influx plans).
- (v) Estimate any potential environmental and social impacts of these measures.
- (vi) Provide linkage with any other mitigation plans (e.g., for involuntary resettlement, SECDP, or cultural property) required for the project.
- (vii) Include additional data collection to fill identified data gaps.

b. Contractor clauses

The Chapter will cover worksite health and safety, the environmental management of construction sites; labour camps/out of area workers, HIV/AIDS and other Sexually Transmitted Diseases (STDs), child protection, gender equity and sexual harassment, labour rights and the employment of community members.

The Consultant will:

- (i) Define standardized environmental and social clauses that EGCB will include in supply and installation bidding documents and contracts for the construction and supervision consultants, to ensure satisfactory environmental, social, health and safety performance of contractors. The clauses will cover four Issues:
 1. Environment, Health and Safety (EHS) including GBV and Labor Influx management and environmental code of conduct for project staff
 2. Environmental and social monitoring by contractor
 3. Environmental and social liabilities
 4. Grievance mechanism for workers

c. Monitoring Plan

- (i) Defines monitoring objectives and indicators, and specifies the type of monitoring, with linkages to the impacts assessed in the EIA report and the mitigation measures described in the ESMP.

(ii) Provides: (a) a specific description, and technical details, of monitoring measures, including responsibilities (EGCB, contractor, operator), the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and a definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures, and to furnish information on the progress and results of mitigation.

(iii) Includes compliance monitoring of the socioeconomic impact related to the concerns raised by individuals and communities affected by the project.

d. Institutional Arrangements

(i) Describes institutional arrangements, responsibilities, and procedures within EGCB and its contractors to carry out each of the mitigatory and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training).

(ii) Describes the role of DoE in monitoring the implementation of the ESMP and in certifying compliance.

(iii) Includes training of contractors regarding the environmental and social clauses that apply to them.

(iv) Estimates the resources required by EGCB to implement and monitor the ESMP, such as level of effort (LOE), and equipment.

(v) As necessary, proposes capacity building, additional technical support or organizational changes, to ensure the timely and effective implementation of the ESMP.

e. Grievance Redress Mechanism

(i) Describes the GRM procedures for receiving, handling and resolving complaints from affected individuals and communities.

f. Implementation Schedule and Cost Estimates

(i) implementation schedule for mitigation measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans.

(ii) the capital and recurrent cost estimates and sources of funds for implementing the ESMP.

g. Chance Find Procedures

(i) Describe the 'Chance Find' procedures to ensure preventive and mitigation measures are formulated and implemented in the event physical cultural resources are encountered during project implementation.

h. Implementation Schedule and Cost Estimates

(i) an implementation schedule for the mitigation measures in the ESMP that must be carried out as part of the project, showing phasing and coordination with overall project implementation

(ii) the capital and recurrent cost estimates and sources of funds for implementing the ESMP.

8. INVOLUNTARY RESETTLEMENT ASSESSMENT

8.1. Scope of work

Resettlement Action Plan (RAP) will entail a survey on the amount of land that will be affected by the proposed transmission line, the actual number of structures, crops and trees that will be affected by the proposed line,

the actual number of Project Affected Persons (PAP) and the actual number of households that will be economically or physically displaced. The Consultant will also carry out estimated valuation for each category of land to be affected (agricultural, grazing, commercial, etc.), estimated valuation of each category of structures to be affected, and, estimated valuation of each category of crops and trees likely to be affected. Finally, the Consultant will prepare an Entitlements matrix, propose the eligibility criteria and a cut-off date. The Consultant will work close to and under the supervision of the EGCB and satisfactory to the World Bank.

In line with the objectives of OP 4.12 (See Appendix 3 at the end of this ToR) and its related Annex (See Appendix 4), the RAP consultancy will include baseline socio economic data on the project affected persons (PAPs), actual census of the PAPs, nature of impacts on PAPs, categorization of PAPs based on impacts on them, eligibility criteria for compensation, valuation of structures, crops/trees (where applicable) and total land affected, Entitlement Matrix, grievance redress mechanism (GRM) and a report detailing all these variables as well as a determination of the cut-off date.

Note: Should the consultant encounter groups that meet the criteria of OP 4.10 during the RAP preparation process, the OP 4.10 will apply in addition to OP 4.12.

8.2. Specific Tasks under the RAP consultancy

A. Review and analyze applicable policy, legal and regulatory framework, institutional capacity and practices, including:

- Identify and analyse relevant national and international policies, legislation and regulations applicable to land acquisition and involuntary resettlement;
- Analyse the differences between the Bangladesh legal framework and the World Bank's OP 4.12 in relation to involuntary resettlement;
- Analyse the Bangladesh institutional frameworks for land acquisition and resettlement;
- Analyse the country's property assessment/valuation methods.
- Explore, in consultations with project affected communities, possibilities for voluntary land donations and the process to be followed for such donations, in case an activity was to be located on community land.
- Describe, in consultations with project affected communities, the nature/type of compensation for community owned land and the process to be followed to ensure the entire community benefits from such compensation

B. Undertake a detailed socioeconomic and cultural assessment/baseline survey of the potentially affected population. The survey should be undertaken with the involvement of the PAPs and should include:

- A description of the pre-project situation of the project affected persons (PAPs);
- Detailed household survey;
- Size and characteristics of affected population, social and economic patterns; property held and legal basis of ownership;
- A detailed description of the income streams of the PAPs that define their livelihood strategies.

C. Carry out an in-depth census of the PAPs, with their involvement. The census should clearly identify:

- All PAPs who may be physically displaced by the project, also referred to as project displaced persons (PDPs), including their details e.g. names, original National Identity card number, phone and physical contacts (street/estate, village, sub-location, location, District and County) and photograph;
- Vulnerable PAPs by gender and age, who may need special targeting for livelihood restoration or other forms of assistance including their details as well as explanation or description of their vulnerability and the kind of support that might be accorded to them.
- Standard characteristics of displaced households, including a description of production systems, labour, and household organization; and baseline information on livelihoods (including, as relevant, production levels/income streams and income derived from both formal and informal economic activities) and standards of living, including education levels and health status of the displaced population. The detailed census will include the following information as appropriate:

1. Where physical displacement/relocation is anticipated:

- Number of owner households to be affected;
- Number of renter households to be affected;
- Number of informal occupant households to be affected.

2. Where land acquisition is anticipated

- Number of affected households with titles;
- Number of affected households without titles;
- Number of affected households losing more than 50% of their land;
- Number of affected households less than 30% of their land.

3. Where non-land economic displacement is anticipated

- Number of households to be affected;
- Number of individuals to be affected by non-land economic displacement;
- Types/nature of economic displacement.

In all three cases above, and as appropriate

- Total number of vulnerable households affected by the proposed project
- Total Estimated population of the vulnerable and marginal groups present in the project area.

D. Carry out a detailed census of PAPs assets including farm/commercial land, structures, crops, and trees.

(i) Census and valuation of land

- For each PAP, whose land is affected, provide (i) actual acreage of land to be taken by the transmission line way leave; (ii) total acreage of the PAP's land; (iii) a description of the nature of impact on the land and structures, i.e. whether whole or partial; (iv) details of the land affected in terms of type of tenure and land use patterns
- For each PAP, whose land is affected: (i) conduct valuation of the affected strip and compute compensation values; (ii) provide type and methodology of compensation; (iii) preferred method of valuation with justification; and,

- For each PAP, whose land is affected, provide the following information on the status of land ownership documents (i) information on whether the current land occupant is the registered land owner (ii) placed caveats (if any); (iii) disputes involving the land parcel if any, and their status (i.e. whether they are in court or not)
- Provide actual values of the percentage parts of the parcels affected basing the values on 30 – 70% of the total market value of land where 30% is for the parcels with very minimal effect while up to 70% being for the parcels that are severely or totally affected.

Note: (i) The valuation estimates should be based on locational registration areas. (ii) eligibility of affected land must be confirmed by legal documents of ownership (squatters may be compensated for assets, not for land). (ii) Census and valuation of structures

- A detailed census and valuation of all affected structures, by type and nature, e.g. residential, institutional, communal or business structures, and whether made of permanent, semi-permanent or temporary materials, and the plinth area.

(iii) Census and valuation of crops and trees

- A detailed census and valuation of affected crops and trees by type and level of maturity.
- Note: (i) For each affected asset provide details of the true owner, including names, gender and ID as a caption of the picture of the affected assets; (ii) For each of the affected assets, provide type and methodology of compensation preferred with justification. (iv) Prepare the PAPs Categorization/Classification and Compensation Entitlements due to each category of PAPs.
- Classification should be in the form of, e.g. Land, structures, Crops and Trees affected; Permanently displaced Persons (PDPs) and PDPs with structures.
- Provide a description of the eligibility criteria for each entitlement.
- Prepare a livelihoods restoration plan (where appropriate) for each category of vulnerable PAPs.

(v) Provide a cutoff date to prevent “rent seeking”.

(vi) Propose the institutional arrangements for the implementation of the RAP. This should clearly identify all stakeholder institutions at all levels that are responsible for RAP implementation as well as assign implementation roles and responsibilities to each.

(vii) Prepare a Grievance Redress Mechanisms (GRM), developed in consultation with the PAPs and other project stakeholders.

(viii) Propose a capacity building strategy that will ensure effective and smooth implementation of the RAP

(ix) Prepare a detailed budget estimate for the whole resettlement action plan inclusive of costs of structures, land, livelihoods restoration, capacity building and monitoring of the project.

(x) Prepare the RAP Implementation timetable (linked to the technical works of the underlying project)

(xi) Propose a follow-up or monitoring system

(xii) Clearly document the consultation that occurred during RAP preparation including:

- a summary of the views expressed by PAPs and other stakeholders;
- how the views were taken into account in the RAP;
- the alternatives presented to PAPs and their views on the same.

(xiii) Propose a consultation strategy to be employed during the RAP implementation to ensure the active involvement and participation of PAPs and a process for the engagement of other stakeholders.

E. Resettlement Measures

These include: (i) An Entitlement Matrix prepared in line with both the GoB laws and regulations, and the WB's OP 4.12. The entitlement Matrix should clearly present the categorization/classification of affected assets and eligibility and compensation entitlements, that will assist each category of eligible PAPs to achieve the RAP objectives. Classification should be in the form of, e.g., land only affected; structure only affected; land and structure affected, crops only affected and trees only affected. Permanently displaced persons (PDPs); etc. For PAPs whose livelihoods are land-based, preference should be given to land-based resettlement strategies. Such strategies may include resettlement on public land, or on private land acquired or purchased for resettlement. A sample entitlement matrix is available in the project RPF. Note that:

- Whenever replacement land is offered, PAPs are provided with land for which a combination of productive potential, locational advantages, and other factors is at least equivalent to the advantages of the land taken. If land is not the preferred option of the displaced persons, or the provision of land would adversely affect the sustainability of a park or protected area, or sufficient land is not available at a reasonable price, then non-land-based options built around opportunities for employment or self-employment should be provided in addition to cash compensation for land and other assets lost. The lack of adequate land must be demonstrated and documented to the satisfaction of the World Bank.
- Payment of cash compensation for lost assets may be appropriate where: (a) livelihoods are land-based, but the land taken for the project is a small fraction of the affected asset and the residual is economically viable; or, (b) active markets for land, housing, and labour exist, displaced persons use such markets, and there is sufficient supply of land and housing; or, (c) livelihoods are not land-based. In any of these cases, cash compensation levels should be sufficient to replace the lost land and other assets at full replacement cost in local markets.

(ii) Should the study affirm that there will be involuntary taking of land resulting in: (a) relocation or loss of shelter; (b) loss of assets or access to assets; or (c) loss of income sources or means of livelihood, whether or not the affected persons must move to another location, then in line with the World Bank's policy on involuntary resettlement, OP 4.12, the RAP Consultant will:

- Ensure that the displaced persons and their communities, and any host communities receiving them, are provided timely and relevant information, consulted on resettlement options, and offered opportunities to participate in planning, implementing, and monitoring resettlement.
- Ensure that appropriate and accessible grievance mechanisms are established for these groups in consultation with them.
- Propose measures to ensure that, in new resettlement sites or host communities, infrastructure and public services are provided as necessary to improve, restore, or maintain accessibility and levels of service for the displaced persons and host communities.
- Propose measures to ensure that alternatives or similar resources are provided to compensate for the loss of access to community resources (such as fishing areas, grazing areas, fuel, or fodder).

(iii) Propose measures to ensure that patterns of community organization appropriate to the new circumstances are based on choices made by the displaced persons. To the extent possible, the existing social and cultural institutions of PAPs and any host communities are preserved and PAPs preferences with respect to relocating in pre-existing communities and groups are honoured.

- (iv) For each of the affected assets, provide type and methodology of compensation preferred, with justification.
- (v) Measures or programs for livelihood restoration, including any special measures to be accorded to, in particular, the vulnerable PAPs;
- (vi) Provide a cutoff date (to prevent “rent seeking”);
- (vii) Prepare a Grievance Redress Mechanisms (GRM), developed in consultation with the PAPs and other project stakeholders.
- (viii) Prepare a detailed budget estimate for the whole resettlement action plan inclusive of costs of land, structures, crops/trees, livelihoods restoration, capacity building and monitoring of the project.
- (ix) Prepare the RAP Implementation timetable (linked to the underlying project construction activities)
- (x) Propose a follow-up or monitoring system
- (xi) Propose the RAP evaluation system
- (xii) Clearly document the consultation that occurred during RAP preparation including:
 - a summary of the views expressed
 - how the views were taken into account in the RAP
 - the alternatives presented to PAPs and their views on the same
- (xiii) Propose a consultation strategy to be employed during the RAP implementation to ensure the active involvement and participation of PAPs and a process for the engagement of other stakeholders.
- (xiv) Measures and procedures for grievance redress and for consultations with PAPs;
- (xv) Measures for disclosure of RAP information.

F. Institutional framework governing RAP implementation

- (i) Propose the institutional arrangements – agencies, offices, CSOs - that are likely to have a role in the implementation of the RAP. This should clearly identify all stakeholder institutions at all levels that will be responsible for RAP implementation and assign implementation roles and responsibilities to each;
- (ii) Analyse the capacity of EGCB to effectively implement their assigned roles, and, as appropriate, propose a capacity building strategy ensuring effective and smooth implementation of the RAP by each responsible institution

G. Eligibility and Entitlements

The Consultant will provide a definition of displaced persons or PAPS and criteria for determining their eligibility for compensation and other resettlement assistance, including relevant cut-off dates.

H. Valuation of and compensation for losses

The Consultant will provide:

- (i) The methodology to be used for valuing losses, or damages, for the purpose of determining their current replacement costs; and,
- (ii) A description of the proposed types and levels of compensation consistent with Bangladesh laws and the World Bank’s OP 4.12, as well as measures, for ensuring that these are based on acceptable values (e.g. market rates).

9. SOCIAL ASSESSMENT OF SMALL ETHNIC COMMUNITIES

9.1. Background and Objectives

The main project (BSREP) has triggered the World Bank's Operational Policy on Indigenous Peoples (OP 4.10). This policy is triggered when it is known that small ethnic communities (SEC) present in the project area are likely to resemble indigenous community characteristics. The term indigenous peoples refers exclusively to a distinct social and cultural group possessing the following characteristics in varying degrees:

- a) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
- b) collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories⁷
- c) customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
- d) an indigenous language, often different from the official language of the country or region.

The SECs in Bangladesh include the tribal communities living in the hill districts of Chittagong also dispersed in the plain border or coastal areas. SECs who meet the above criteria will be referred to as indigenous peoples and the World Bank Operational Policy on indigenous peoples (OP 4.10) will apply to the transmission line project.

The objective of World Bank OP 4.10 is to ensure that:

- The development process fully respects the dignity, human rights, economies, cultures and natural resource-based livelihoods of Indigenous Peoples/SECs.
- To avoid adverse impacts of projects, or, when avoidance is not possible, to minimize, mitigate and/or compensate for such impacts.
- To promote sustainable development benefits and opportunities in a manner that is accessible, culturally appropriate, and inclusive.
- To improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultations with affected communities throughout the project's life-cycle.

9.2. Social Assessment of Small Ethnic Communities

If the social screening of proposed transmission line identifies small ethnic communities in the project influence area, the Consultant will prepare site specific Social Assessments (SA) to evaluate the project's potential positive and adverse effects on the SECs in line with the requirements of the World Bank OP 4.10. The findings of the SA will inform project design and the preparation of Small Ethnic Community Development Plan (SECDP).

The SA will be conducted through free, prior and informed consultations with the SECs affected or present in the project influence area— leading to their broad support for the project. The specific tasks of the SA will include:

1. Identifying the project's potential positive and adverse effects on SECs. Critical to the determination of potential adverse impacts is an analysis of the relative vulnerability of, and risks to, the affected SECs, given their distinct circumstances and close ties to land and natural resources, as well as their lack of access to opportunities relative to other social groups in the communities, in which they live.

2. Gathering and analysing baseline information including social, cultural, economic and legal contexts of the project in relation to SECs:

(i) Social: Are SECs integrated into the larger society? Are they separate? If separate, is it voluntary or involuntary isolation? How are they vulnerable or marginalized? Do they have access to social services?)

(ii) Cultural: Do SECs maintain own cultural practices? Is there any conflict with the Government about cultural heritage/practices? Is their culture/language at risk of dying out due to assimilation? Is assimilation acceptable to them?) Do SECs in the T-Line have any tangible and/or intangible cultural heritage (structures, historical sites, sacred sites, artefacts, music, story-telling, poetry) that may be affected (positively or negatively by the project?)

(iii) Economic: population/demographic statics of the SECs in each site; education levels of the SECs; the SECs livelihood strategies? Whether their livelihoods are dependent on land and or other natural resources, and if so, which ones? Whether their livelihoods are changing, and if so, how? Are they moving from rural areas to urban areas? Are they economically vulnerable? What are the practical implications of their vulnerability? Formal and informal employment sectors for the SECs; Opportunities for improved sustainable livelihoods?)

(iv) Legal: What are the international agreements that Bangladesh has signed and ratified that relate to SECs? What does the Constitution of Bangladesh, 1972, say about SECs? What are the national laws and regulations that are applicable to SECs, e.g. do they have any special rights or protections in law? Are the natural resources on which they depend as well as their language and cultures recognized and protected by law?

(v) Institutional: What kind of institutions do the SECs have that are distinct from those of the government? Do they have rights to govern certain institutions, such as a local council, school, hospital, economic development entity? Do they have special control of natural resources, such as forests, fisheries, water or land areas? How is the government/SECs relations?

(vi) Labour Influx: Assess the positive and adverse impacts of labour influx on SECs and the general community affected by the transmission line and for the proposed sub-station extensions.

3. Based on item 2 above, identify key project stakeholders and analyse their roles in the project implementation.

4. Based on 1-3 above, make recommendations to inform the project design and implementation, including mitigation measures for adverse impacts.

5. Make recommendations to inform the preparation of SECDP, including the following as appropriate:

a) Site specific culturally appropriate development measures, and,

b) Measures to avoid, minimize, mitigate, or compensate the adverse effects, and to ensure that the SECs receive culturally appropriate benefits under the project.

6. Clearly document the consultation process with SECs during the SA, including positive and negative views as well as the outcomes from the consultations leading to their broad support for the project

7. In consultation with the SECs, elaborating a culturally appropriate process for free, prior and informed consultations with them at each stage of the project preparation and implementation. (See Note below).

8. Arrangements for the disclosure of the SA.

Note: Meaningful, free, prior and informed consultations with SECs during the social assessment and at every stage of project preparation and implementation should be:

- In an appropriate language

- Culturally appropriate
- Gender and inter-generationally inclusive
- Conducted in good faith
- Voluntary, free of interference and non-manipulative
- Involve advance information to SECs about the activity at hand and provide sufficient time for them to make informed decisions.

9.3. Methodology for undertaking the SA

The consultant shall propose a detailed methodology that clearly articulates the participatory and consultative methodologies – in line with the free, prior and informed consultations process requirements – to be used in undertaking the SA, including study instruments. These will include but not be limited to:

- Literature review, including among others, the review of the World Bank’s Operational Policy (OP 4.10) on Indigenous Peoples/SECs and its related Annex, Annex A (see Appendices 5 and 6); the Bangladesh policies, legislation and regulations on marginalised and minority groups, in particular, the Constitution of Bangladesh, 1972;
- Focused Group Discussions that are gender and intergenerationally inclusive; pay particular attention to the protocols for assessing GBV, FOLLOWING Bang guidelines. Provide a mapping of services in the project locations engaged in addressing GBV cases.
- Proof of the consultation process with SECs, (including consultation dates, venues, list and signatures of attendees and photos of consultation sessions).

9.4. Small Ethnic Community Development Plan (SECDP) if such populations are found to be present in the project area.

In view of the social assessment of small ethnic communities present in the project influence area with characteristics similar to the indigenous peoples, the consultant will prepare a Small Ethnic Community Development Plan (SECDP) to comply with the objectives of World Bank OP 4.10. The purpose of the SECDP is to ensure that SECs receive social and economic benefits under the project that are culturally appropriate, and that measures are put in place to avoid, minimize, mitigate, or compensate any adverse effects on the SECs that may have been found by the SA.

The specific tasks in the preparation of SECDP will include a summary of the findings of the SA, including:

- 1) Summary of the legal and institutional framework applicable to SECs;
- 2) Summary of the baseline information on SECs;
- 3) Summary results of the free, prior and informed consultation and broad community support during the SA and a framework for such consultations during project implementation;
- 4) A time bound and achievable Action Plan of measures for to ensuring culturally appropriate social and economic benefits for SECs, and/or for avoiding, minimizing, mitigating or compensating them for adverse effects. The Plan should be proportional to the specific context of KESIP, its benefits, social impacts and risks, and the circumstances of affected SECs as identified by the SA;
- 5) An accessible and robust grievance redress mechanism (GRM) to be applied during the project implementation. The GRM should take into account the availability of customary dispute

settlement mechanisms among the SECs as well as the Bangladesh judicial recourses for dispute resolution;

- 6) Cost estimates for the action plans) and a financing plan;
- 7) Arrangements for the disclosure of the SECDP;
- 8) An appropriate plan for monitoring, evaluating, and reporting on the implementation of the SECDP. The monitoring and evaluation plan should include arrangements for the free, prior, and informed consultation with the SECs at every stage of the SECDP implementation

9.5. Methodology for preparing the SECDP

The SECDP will be prepared through meaningful consultation with SECs in line with the free prior and consultation process requirements. In this regard, the consultant will ensure that the SECs are actively and meaningfully involved in the identification of sustainable social and economic development measures that are culturally appropriate to them and/or for avoiding, minimizing, mitigating or compensating them for adverse effects (where applicable). In this regard, the consultant shall propose a detailed methodology that clearly articulates the participatory and consultative methodologies – in line with the free, prior and informed – to be used in the preparation of the SECDP. These will include but not be limited to:

- Literature review, including among others, the review of the World Bank’s Operational Policy (OP 4.10) on indigenous Peoples/SECs and its related Annex, Annex B (see Appendix 8, OP 4.10, Annex B); the Bangladesh policies, legislations and regulations on treatment of small ethnic communities, in particular, the Constitution of Bangladesh, 1972;
- Focused Group Discussions that are gender and intergenerationally inclusive;

Proof of the consultation process with SECs, (including consultation dates, venues, list and signatures of attendees and photos of consultation sessions) as well as a clear documentation a presentation of any positive and negative views that may have been expressed and how these have been taken into consideration in the SECDP.

10. REPORT AND DOCUMENTATION

The Consultancy services will be completed in 120 days from the date of signing or letter to proceed, whichever is later. The Consultant has to prepare the following reports/documents and deliver to EGCB following the timeline mentioned against each of them and in a standard acceptable to the EGCB and the World Bank:

- I. **Inception Report:** It should describe on 10-20 pages detailing the work plan, expected problems in the implementation of the study if any, review of the available power sector information, and the power supply situation encountered in the project area and is communicated to EGCB immediately within 21(Twenty One) days after contract signing. (Three copies)
- II. **Draft Route Survey:** The consultant shall submit draft survey report including geotechnical report in hard print format (Three copies) and soft copy / Digital format (Three copies) within 21 (Twenty One) days of contract signing.
- III. **Final Route Survey: The consultant** shall submit Final survey report including geotechnical report in hard print format (Five copies) and soft copy / Digital format (Five copies) within 30 (Thirty) days of contract signing.

- IV. **Draft IEE Report:** The consultant shall submit Draft IEE report in hard print format (Three copies) and soft copy / Digital format (One copy) within 60 (Sixty) days of contract signing.
- V. **Final IEE report:** The Consultant shall submit IEE report in hard print format (Five copies) and soft copy / Digital format (One copy) within 75 (Seventy Five) days of contract signing.
- VI. **Draft ESIA and ESMP Report:** The consultant shall prepare and submit Draft ESIA report and ESMP in hard print format (Three copies) and soft copy / Digital format (One copy) within 60(Sixty) days of contract signing.
- VII. **Final ESIA and ESMP report:** The consultant shall revise the ESIA and ESMP report following the comments from the EGCB, the Department of Environment (DoE) and the World Bank in hard print format (Five copies) and soft copy / Digital format (One copy) within 90(Ninety) days of contract signing.
- VIII. **Draft RAP Report:** The consultant shall submit Draft RAP in hard print format (Three copies) and soft copy / Digital format (One copy) within 90 (Ninety) days of contract signing.
- IX. **Final RAP report:** The Consultant shall revise the RAP following the comments from EGCB and the World Bank and submit the final report in hard print format (Five copies) and soft copy / Digital format (One copy) within 120(One Hundred Twenty) days of contract signing.
- X. **Draft Technical report:** The consultant shall submit draft Technical Report for List of Terminal Equipment of Transmission Line and Reactive Power Compensation at Plant side in hard print format (Three copies) and soft copy / Digital format (Three copies) within 21 (Twenty One) days of contract signing.
- XI. **Final Technical report:** The consultant shall submit Final Technical Report for List of Terminal Equipment of Transmission Line and Reactive Power Compensation at Plant side in hard print format (Five copies) and soft copy / Digital format (Five copies) within 30 (Thirty) days of contract signing.
- XII. **Finally Submit All Report** in Digital format in DVD / USB Memory which qualifies for the final payment after approval of the report by EGCB or no-objection by the World Bank or Clearance by Department of Environment (as applicable).

11. CONSULTANT'S QUALIFICATIONS

The consulting firm or the joint venture applicants shall have worked directly on at least three transmission line projects of similar scope, nature and geographic conditions, including at least one line in South Asia; and conducted an ESIA, ESMP, RAP, and SECDP including gender analysis, gender-based violence and community engagement plan preparation for a power line, linear project or large scale infrastructure project that met the requirements of the World Bank, the IFC or the Asian Development Bank (ADB).

Firms that have adequate experience in either Environmental safeguards or Social safeguards but do not meet overall criteria in both may participate in form of joint ventures to enhance their qualifications. Application of such firms shall be supported by a letter of intent to enter into a joint venture agreement or by an existing agreement.

The Applicants shall provide sufficient and qualified personnel to prepare the environmental and social studies for the project within 16 weeks from signature of the contract (12 weeks for the RAP, SA and SECD).

ECGB estimates that the level of effort required will not exceed 48 person-months, including the final reports. The Consultant will propose a minimum level of effort (LOE) for each of the key staff.

The key staff listed below are intended as a general guide per package. Firms may propose other key personnel it deems necessary for successful completion of this assignment. If all the required skills are not available within the consulting firm, the firms are encouraged to make joint ventures with other firms. The Consultant is free to employ resources i.e. support staff as they see fit to carry out the assignment within stipulated time and meet the requirement of this service.

Sl. No.	Expert Position	Person-months	Education and Qualification
1.	Team Leader/ Environmental and Social Specialist	3	Graduate/ Master's Degree in Environmental / Civil Engineering with total 10 years' Experience. Must have experience as Team Leader/Project Manager in a multidisciplinary Team conducting Route Survey, IEE, ESIA in at least 2 (Two) power sector projects.
2.	Transmission Line Engineer/ GIS Specialist	3	Graduate/ Master's Degree in Electrical/ Civil Engineering with Total 10 years' Experience. Specific experience as a Transmission Line Design Engineer especially in High Voltage transmission system 230 kV and above. He /She have a practical experience in conducting of at least 1 no Projects in power sector /High Voltage Transmission Line with sub-station Projects as Transmission Line Design Engineer. Knowledge and skills in GIS based survey, technical study and mapping will be important requirements.
3.	Senior Environmental Specialist	2.5	Graduate/ Master's Degree in of Environmental Science / Civil Engineering with Total 10 years' Experience with ESIA's/.He /She must have a practical experience in conducting of at least three Projects in power sector Projects.
4.	Senior Social Specialist	2.5	Graduate/ Master's Degree in of social science with Total 10 years' practical experience in design and conduct of social impact assessment, stakeholder identification and analysis, gender analysis with preparation and implementation of RAPs and preparation of social management plans focusing on gender, gender-based violence, communications and community participation. He /She should have a practical experience in conducting of at least three Project in power sector Projects.
5.	Property Valuation Expert	2	The Valuation Expert must be a registered and licensed Valuer with the (i) degree in land economics/valuation/real Estate/any relevant subject, from a recognized University; (ii) 10 years' experience in valuation; (iii) 5 years' experience in valuation for wayleave compensation; and (iv) Experience in the World Bank's OP 4.12 on involuntary resettlement.

Sl. No.	Expert Position	Person-months	Education and Qualification
6.	Junior Environmental Specialist	3	Bachelor degree in Civil Engineering/ Environmental engineering with 5 years total Experience in conducting Route survey, land survey and GIS Mapping. He/She have a practical experience in conducting of at least one no Project in High Voltage transmission system 230 kV and above and good communication skills, acquainted with technical terminology of survey.
7.	Junior Social Specialist	3	Bachelor degree in social science/ urban planning with 5 years total Experience in conducting Route survey, land survey and social screening and impact assessment and consultation. He/She have a practical experience in conducting of at least one Project in High Voltage transmission system 230 kV and above and good communication skills, acquainted with technical terminology of survey.
8.	Land Surveyor	1	The Land Surveyor will have Degree in survey from a recognized university/institution, Valid annual practicing license; Membership in relevant professional bodies; 5 years' experience in survey related to wayleave acquisition; and Experience in the World Bank's OP 4.12 on involuntary resettlement.

Attachment:-1

Scope of Work

Purbo Barodholi (Solar Power Plant)- PGCB Mirershorai BEZA Grid substation 230kV Transmission Line

SN	Name of Plant /Substation	Required Land	Capacity (MVA)	Interconnection Details
1	Sonagazi 50MW Solar Power Plant/ Substation	-	33/230kV (Approx. 100 MVA)	Sonagazi 50MW Solar Power Plant - Mirershorai BEZA Single circuit 230kV line: 13 km (approx.)

Attachment -2

Route Survey for Overhead Transmission line

1.1 FIXING OF ROUTE ALIGNMENT:

- 1.1.1 The alignment of the line route is carried out by survey using any methods or combination of methods like Electronic Total Station, DGPS and High precision Laser Distometer Etc. to achieve the required accuracy showing the correct shape of land, adjacent roads, boundaries, drains, overhead lines, railway track, highways, rivers/water bodies trees and all structures including foundations/power lines.
- 1.1.2 Equipment's required for the work such as total stations and all accessories to complete the work within the specified time are to be arranged by the consulting firm.
- 1.1.3 At least three route profile
- 1.1.4 The following positions are fixed during this survey
 - 1.1.4.1 Fixing of angle tower positions / Bending position of Underground cable
 - 1.1.4.2 Finalizing of crossing points of major EHV lines (11 kV and above) & for underground cable details of the lines/ Crossing point for sewerage system, water or gas distribution system, telephone wire, fiber optics ,any electrical underground cable
 - 1.1.4.3 Finalizing of crossing points of Railway Tracks & details of such points.
 - 1.1.4.4 Finalizing of crossing points of major rivers & details of such points.
- 1.1.5 Measurements of the angles of deviation at all angle / section points are made. Resurvey of parts of the line route is done wherever it is possible to reduce the number of angle points and/ or the magnitude of the angles of deviation.
- 1.1.6 For the purpose of guidance, the angles of deviation of the different types of towers are as below:

Tower type	Used as	Angle of deviation
'A' Suspension	tower up to	2 degrees
'B' Small angle	tower upto	15 degrees
'C' Medium angle	tower upto	30 degrees
'D' Large angle & dead end	tower upto	60 degrees & dead end

- 1.1.7 The length of the line route is also measured. This is done with the use of survey chains or with the theodolite

- 1.1.8 When using survey chains for measuring the length of the line route, the chain should be kept horizontal in uneven or undulating land so that horizontal distances are measured and not the distances along the contours of the land.
- 1.1.9 A span is the part of the line between any two adjacent towers. A section is the portion of the line route with a single span or with a number of consecutive spans between two tension points with "B", "C", or "D" type towers, as applicable
- 1.1.10 The number of consecutive spans between two angle / section points shall not exceed 15(fifteen) in plain terrain and 10 (ten) spans in hilly terrain.
- 1.1.11 The length of any section of the line, i.e., between two angle / section points, shall not exceed 5 km in plain terrain and 3 km in hilly terrain. In case longer sections are available, then cut points / section points shall be provided by using "B" type tower.
- 1.1.12 If the terrain & line route permit, attempts can be made so that the section lengths are, as far as possible, in multiples of the basic span of the towers for the relevant voltage class.
- 1.1.13 The basic spans, which are the design spans for towers, as adopted for the various voltage levels are as below:

As per prevailing design of Power Grid Company of Bangladesh (PGCB) Ltd. Considering the wind zone.
- 1.1.14 Geotechnical investigation of at least 3(three) location on the transmission route to determine soil condition for construction of Tower.

1.2 CROSSING OF POWER LINES:

- 1.2.1 The crossing of existing power lines shall be at an angle as close to 90 degrees as possible.
- 1.2.2 The crossing of the new line over an existing power line is preferably done in the middle of the span between towers of existing power line where there is maximum sag of the conductor. When the line to be constructed is crossing another important EHV line for which shut down may be difficult, suspension towers in combination with angle / dead end towers, with extensions as required, may be used.
- 1.2.3 The crossing of the new line below an existing power line shall be done at locations where adequate ground clearance for the new line and the specified clearance from the existing power line are available. Such crossing shall preferably be in the mid span between towers /structures of the new power line, where there is maximum sag of the conductor, and near one of the towers of the crossing span of the existing line for taking advantage of the higher height of the conductors. These measures reduce the requirement of increasing the height of the existing line for obtaining the requisite clearance.

1.3 CROSSING OF THE TELECOMMUNICATION LINES:

- 1.3.1 The crossing of such lines should preferably be at 90 degrees, but an angle less than 60 degrees is not permissible

1.4 CROSSING OF RAILWAY TRACKS:

- 1.4.1 The angle of crossing should preferably be 90 degrees, but an angle of upto 60 degrees may be permitted in special cases.
- 1.4.2 The crossing span shall be restricted to 300 meters or to 80% of the basic span of the towers of the relevant voltage class, whichever is less. Angle towers are to be provided on both sides.
- 1.4.3 The minimum distance of the towers of the crossing span from the center of the nearest railway track shall be equal to the height of the tower in meters above normal ground level plus 6 meters.
- 1.4.4 The crossing span over already electrified railway track shall be located at the middle of overhead equipment span supported by two adjacent traction masts/ structures. The distance between any of the crossing conductors of the line and the nearest traction mast or structure under the most adverse conditions shall not be less than 6 meters.
- 1.4.5 As far as possible, higher levels of land on both sides of the railway track are preferred at crossings so that there is minimum requirement for increase in the height of the towers. One tower of the crossing span is located nearer to the Railway track for taking advantage of the higher height of the conductor on the tower.
- 1.4.6 The above paras give only the salient requirements prescribed in the Regulations for Power Line Crossings of Railway Tracks issued by the Railway Board. The latest issue of the above Regulations may be referred to for further details.

1.5 CROSSING OF ROADS:

- 1.5.1 Transmission line crossings across National Highways and major roads shall preferably be at right angles or as near to 90 degrees as possible.
- 1.5.2 For crossing of National Highways and major roads in case of lines up to 230 kV, it is advisable to provide at least one angle / section tower in the crossing span for the purpose of ease during stringing. For 400 kV lines, angle / section towers are to be provided on both sides in such cases.

1.5.3 The towers supporting the crossing span shall be located outside the National Highway land.

1.6 RIGHT OF WAY:

1.6.1 The width of the right of way should be kept as per the provisions of the applicable part /section of the Power Grid Company of Bangladesh Ltd (PGCB) Practice for Design, Installation and Maintenance of Overhead Power Lines.

1.6.2 For lines up to 230 kV, recommends the following right of way widths taking into consideration the theoretical requirement of right of way and transport requirements of maintenance:

Transmission Voltage Recommended	Width of Right of Way
132 kV	28 meters (14m either side of the centre line)
230 kV	40 meters (20m either side of the centre line)

1.6.3 For 400 kV lines, the following right of way width, as per PGCB practice, shall be maintained taking into consideration the theoretical requirement of right of way and transport requirements of maintenance:

Transmission Voltage Recommended	Width of Right of Way
400 kV	46 metres (23m either side of the centre line)

1.7 MAINTAINING STATUTORY CLEARANCES:

1.7.1 The horizontal clearance, on the basis of maximum deflection due to wind pressure, which should be maintained from buildings / parts of buildings, shall not be less than the values given below.

Transmission Voltage	Minimum Horizontal Clearance
132 kV	5 meters
230 kV	7 meters
400	8 meters

1.8 RIGHT OF WAY:

1.8.1 While carrying out preliminary survey in forest areas, permission of the local forest Authorities should be obtained for trimming / lopping of tree branches which obstruct the line of sight of the survey instrument. This is a mandatory requirement and any such above activity without permission can result in criminal proceedings.

- 1.8.2 While carrying out preliminary survey the proposal for crossing of forest area is to be submitted in the prescribed forms / formats to the Forest Department for obtaining the requisite clearance.

1.9 MEASUREMENT OF EARTH RESISTIVITY:

- 1.9.1 Measurements of earth resistivity shall be done along the route of the transmission line.

1.10 PLOTTING OF THE ROUTE ON THE MAP:

- 1.10.1 The line as surveyed is plotted on the G. T. sheet maps indicating all the angle points.
- 1.10.2 Prepare Total Station (TS) and GPS at a grid of 10m x 10 m (along the transmission line) with reference to nearby established BM (3-D pillar) Pillar of Survey of Bangladesh (SoB).
- 1.10.3 The survey will cover X,Y, Z (RL) values of each and every Ground Control Point (GCP), structures and any other significant physical features exists above the surface, backlines of water bodies detail Route etc.
- 1.10.4 The data from Route survey shall be available in (x.y.z) format in 10m x 10 m grids for use in a sophisticated digital terrain model (DTM) along the right of way with 100 Meter width.
- 1.10.5 Prepare detail cartographical mapping (on GIS platform) of surveyed data, elevation models (DTM and DEM) with existing land uses, water bodies. The scale to be adopted for preparing the map shall be 1:1000 or as directed by the Engineer-in-Charge and the survey map is to be prepared in one or more number of sheets as require
- 1.10.6 For underground cable mark all obstacle with it route profile.
- 1.10.7 Provide Elevation Profile and updated Flood level data along the Route.
- 1.10.8 The scale to be adopted for preparing the map shall be 1:1000 or as directed by the Engineer-in-Charge and the survey map is to be prepared in one or more number of sheets as required.

1.11 APPROVAL OF THE LINE ROUTE:

- 1.11.1 In case there are major deviations in the route as surveyed and the deviations are likely to affect the induced voltages in the telecommunication / railway signal calculated earlier, this route of the line is sent to the Engineer-In-charge for review and intimating acceptability.
- 1.11.2 In the above mentioned circumstances, this route of the line as surveyed is resubmitted to the Engineer In charge for according approval.

Attachment:-3

Initial Environmental Examination (IEE)

INTRODUCTION

1.1 BACKGROUND

1.2 OBJECTIVES AND SCOPE OF THE INITIAL ENVIRONMENTAL EXAMINATION (IEE)

1.3 METHODOLOGY ADOPTED FOR STUDY

1.4 REPORT STRUCTURE

POLICY AND LEGAL ADMINISTRATIVE FRAME WORK.

2.1 Overview

2.2 National Legislation

2.2.1 Environment Conservation Act 1995

2.2.2 Environment Conservation Rules,1997(amendments in 2002 and 2003)

2.2.3 Environment Court Act 2010

2.2.4 The Electricity Act 2010 (Amendment 2012)

2.2.5 Acquisition and Requisition of Immovable Property Ordinance,1981

2.2.6 Bangladesh water Act 2010

2.2.7 The Projection and conservation of Fish Act,1950 and Rule 1985

2.2.8 Noise Pollution Control Act 2012

2.2.9 Bangladesh Labour Act 2006 and rules 2015

2.3 Relevant national polices

2.3.1 Environmental Policy 1992

2.3.2 National Environmental Management Action Plan1995

2.3.3 National Energy Policy 2005

2.4 Implication of legal aspects on the project

2.4.1 Administrative Procedure of obtaining Location/Environmental clearance

2.4.2 Organization related to Enforcement for Environmental standard

DESCRIPTION OF THE -PROJECT

3.1 THE PROJECT Details

- 3.2 TYPE OF Project Details
- 3.3 NEED FOR THE SUB-PROJECT
- 3.4 LOCATION
- 3.5 SIZE AND THE MAGNITUDE OF THE OPERATION
- 3.6 IMPLEMENTATION PLAN

DESCRIPTION OF THE ENVIRONMENT

4.1 PHYSICAL ENVIRONMENT

- 4.1.1 Geomorphology and Topography..
- 4.1.2 Climate
- 4.1.3 Geology and Soil
- 4.1.4 Land Use
- 4.1.5 Soil Erosion, Land Instability and Watershed Conditions
- 4.1.6 Water, Air and Noise quality

4.2 BIOLOGICAL ENVIRONMENT

- 4.2.1 Flora
- 4.2.2 Fauna
- 4.2.3 Freshwater Aquatic System
- 4.2.4 Flora and fauna of Conservation significance
- 4.2.5 Biodiversity Conservation

4.3 SOCIO-ECONOMY AND CULTURAL ENVIRONMENT

- 4.3.1 Demographic Characteristics
- 4.3.2 Quality of Life Values
- 4.3.3 Livelihood
- 4.3.4 Culture and Cultural Sites.

5. ANALYSIS OF ALTERNATIVES BOTH FOR TRANSMISSIONLINES AND SUBSTAIONS

- 5.1 NO PROJECT OPTION
- 5.2 LOCATION OPTIONS
- 5.3 DESIGN ALTERNATIVES

6. IDENTIFICATIONS AND ANALYSIS OF KEY ENVIRONMENTAL ISSUES

- 6.1.1 Environmental Sensitivity Investigation
- 6.1.2 Environmental Asset within the project area
- 6.1.3 Environmental Hot Spots
- 6.1.4 Likely Adverse Impacts
- 6.1.5 Likely Beneficial Impacts
- 6.1.6 Community Recommendations

7. POTENTIAL ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

7.1 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES NEEDED DURING THE DESIGN/PRECONSTRUCTION PHASE

- 7.1.1 Final Route/Site Selection
- 7.1.2 Equipment Selection
- 7.1.3 Resettlement and Rehabilitation Issues
- 7.1.4 Vegetation Clearance

7.2 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES NEEDED DURING THE CONSTRUCTION PHASE

- 7.2.1 Impact on Physical Resources
- 7.2.2 Impact on Environmental Resources
- 7.2.3 Impact on Ecological Resources
- 7.2.4 Impact on Human Environment

7.3. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES NEEDED DURING OPERATIONS

- 7.3.1 Electro-magnetic Field and Electric Shocks

8. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

- 8.1 METHODS OF PUBLIC CONSULTATION
- 8.2 FINDINGS OF PUBLIC CONSULTATIONS

9. GRIEVANCE REDRESS MECHANISM

- 9.1 DURING CONSTRUCTION
- 9.2 DURING OPERATION

10. Environmental Management Plan and Monitoring Indicators

10.1 Construction Materials

10.2 Planning and Design, Standard and Quantification of Works

10.3 Site Specific Environmental Management Action Plan

i) Pre-Construction Phase

At pre-construction phase, impacts from siting the substations and routing the alignment, e.g. land acquisition and impacts on fishery, and any design adopted to avoid environmental and social impacts should be discussed.

ii) Construction Phase

At construction phase, site-specific analysis and assessment of impacts should be presented, including but not limited to:

- Noise;
- Air pollution;
- Water pollution;
- Construction waste and disposal;
- Impacts of construction camps;
- Ecological impacts (agricultural and biological);
- Impacts on soil: top soil conservation and spoil;
- Social impacts, including workers health and safety and labor influx; community health and safety; cultural resources, traffic congestion, and other public utilities, etc.

iii) Operation Phase

At the operation phase, both positive and negative impacts should be discussed, including but not limited to:

- Benefits for community and economic development;
- Noise of substations;
- Impacts of electronic magnetic radiation (briefly discussion);
- So

10.4 Site Specific Monitoring Indicators and Detailed Monitoring Plan

10.5 INSTITUTIONAL STRUCTURE AND STAKEHOLDER'S ROLES AND RESPONSIBILITY

10.6 REPORTING

10.7 CRITICAL ENVIRONMENTAL REVIEW CRITERIA

10.7.1 Loss of irreplaceable resources

10.7.2 Accelerated use of resources for short-term gains

10.7.3 Endangering of species

10.7.4 Promoting undesirable rural-to urban migration

10.7.5 Increase in affluent/poor income gap

10.8 ENVIRONMENTAL MANAGEMENT PLAN BUDGET

10.9 FINDINGS AND RECOMMENDATIONS

10. CONCLUSION

Attachment:-4

Resettlement Action Plan (RAP)

Executive Summary

Abbreviation

1. Description of the Project
 - 1.1 The Project
 - 1.2 Project Objectives
 - 1.3 Project Components
 - 1.4 Objectives & Purpose of Resettlement Plan
 - 1.4.1 Objective of the Resettlement Plan
 - 1.4.2 Methodology for Preparing the Resettlement Plan
2. Land Acquisition and Resettlement Impacts
 - 2.1 Minimizing Land Acquisition and Displacement
 - 2.2 Tree Affected
 - 2.3 Significance of Impact
 - 2.4 Special Measures for Vulnerable Groups
- 3 Census & Socioeconomic Survey
 - 3.1 Methodology for Census and Socioeconomic Survey
 - 3.2 Profile of Affected Households
 - 3.2.1 Population
 - 3.2.2 Ethnicity, Religion and Gender
 - 3.2.3 Age, Marital Status and Occupation
 - 3.2.4 Occupation
 - 3.2.5 Education
 - 3.2.6 Income and Poverty Dimensions
 - 3.2.7 Gender Impacts and Mitigation Measures
 - 3.2.8 Electricity supply
 - 3.2.9 Water and Sanitation
 - 3.2.10 Use of toilets
- 4 Consultation, Participation and Disclosure
 - 4.1 Project Stakeholders
 - 4.2 Stakeholders Meeting
 - 4.3 Disclosure of the RAP
- 5 Grievance Redress Mechanisms

- 6 Legal and Policy Framework
 - 6.1 Purposes and Objectives of Land Acquisition and Resettlement
 - 6.2 Legal Framework for Land Acquisition
 - 6.3 Policy on Involuntary Resettlement
 - 6.4 Types of Losses and Impact Category
 - 6.5 Principles, Legal and Policy Commitments
- 7 Entitlements Assistance and Benefit
 - 7.1 Eligibility Criteria
 - 7.2 Compensation and Entitlement Policy
 - 7.3 Compensation and Resettlement Assurances
- 8 Relocation, Resettlement and Income Restoration
 - 8.1 Scope of Displacement and Relocation
 - 8.2 Replacement of Agricultural Land
 - 8.3 Income and Livelihood Restoration Strategy
 - 8.4 Employment in Construction
- 9 Implementation Arrangements
 - 9.1 Bangladesh Power Development Board
 - 9.2 Institutional Capacity Strengthening
 - 9.3 Other Agencies Involved in the Process
 - 9.3.1 Deputy Commissioner
 - 9.3.2 Project Supervision Consultants
 - 9.3.3 Implementing Agency
 - 9.3.4 Ministry of Power, Energy and Mineral Resources
 - 9.3.5 Property Assessment and Valuation Committee (PAVC)
 - 9.4 Grievance Redress Committee
 - 9.5 Resettlement Advisory Committees (RACs)
 - 9.6 Women Groups in Resettlement Process
- 10 Resettlement and Compensation Costs and Budget
 - 10.1 Budgeting and Financial Planning
 - 10.2 Assessment of Unit Value for Compensation
 - 10.3 Approval of the Resettlement Budget
 - 10.4 Management of Compensation and Flow of Awards
- 11 RAP Implementation Schedule

11.1 Implementing Schedule

12 Monitoring and Evaluation

12.1 Supervision, Monitoring and Evaluation

12.2 Internal Monitoring

12.3 External Monitoring and Evaluation

12.3.1 Compliance Monitoring

12.3.2 Social Impact Evaluation

Annex 1 TOR for RAP Implementing Agency

Annex 2 RAP Implementation Monitoring Format

Attachment:-5

Topographic Survey

TECHNICAL SPECIFICATIONS

The work shall consist of the following:

1. A detailed Topographic survey has to be conducted using any methods or combination of methods like Electronic Total Station, DGPS, High precision Laser Distometer Etc. to achieve the required accuracy showing the correct shape of land, adjacent roads, boundaries, drains, overhead lines, all structures including foundations, pipes and cable trenched etc.
2. The data from topographic survey shall be available in (x.y.x) format in 3 m intervals for use in a sophisticated digital terrain model (DTM)
3. Survey shall be conducted systematically and sequentially from one end covering details of all features such as structures, buildings, utilities, existing roads, electric and telephone installations (both overhead and underground), post & pipe lines open drains, artificial/natural ponds, culverts, canals, fencing, tress (with type & girth). Oil and gas lines, boundary lines, wells, slushy areas, survey stones etc falling within the extent of survey
4. The features covered during survey shall be well defined by proper descriptions.
5. The details of tress with reference number, type, girth, etc. shall be furnished in excel format in soft copy. The girths of tress are to be measured at 1'm above ground level.
6. The survey output shall be accurate and shall be compatible for developing a digital terrain model of the ground using latest software and the DTM so developed should give a true replica of the ground.
7. All physical features such as buildings, monuments, burial grounds, places of worship posts, pipelines and their supports and clearance from ground level, existing roads and railway lines open nallahs, waterways, bridges, culverts, canals, OH lines and their clearance above ground level, fences, tress, cultivation, boundary lines, wells slushy areas, survey stones, etc. are to be located legibly and accurately in the map.
8. Transferring and establishment of necessary bench marks from nearby available bench marks shall be under the scope of the contractor.
9. The scale to be adopted for preparing the map shall be 1:1000 or as directed by the Engineer-in-Charge and the survey map is to be prepared in one or more number of sheets as required.
10. Equipment's required for the work such as total stations and all accessories to complete the work within the specified time are to be arranged by the contractor.
11. The entire manpower required, both technical and non-technical for carrying out the field work and preparation of drawings are to arranged by the contractor.
12. The field work and the plotting work are to be carried out strictly in accordance with the instructions of the Engineer-in-charge.
13. All stationery required for the work is to be arranged by the contractor.

4.0 REPORT SUBMISSION

Six full sets in hard copy and one soft copy of the draft maps/drawings, showing contour details as specified shall be submitted for comments. Final drawings and documents after incorporating comments, if any shall be submitted in five sets in hard copies along with a soft copy. The drawings shall be made in standard sizes such as A3.

Duration of the Assignment: 4(four) months