

**ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT -  
ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT  
PACKAGE-M (OPGW)**

**ASSAM INTRA-STATE TRANSMISSION SYSTEM ENHANCEMENT  
PROJECT**

*SUBMITTED TO*

**ASIAN INFRASTRUCTURE INVESTMENT BANK**



*SUBMITTED BY*

**ASSAM ELECTRICITY GRID CORPORATION LIMITED**

**PREPARED BY: PT FEEDBACK INFRA CONSORTIUM**



This Environmental and Social Impact Assessment (ESIA) - Environmental and Social Management Plan (ESMP) report is a document of the borrower and made publicly available in accordance with AIIB's Environmental and Social Framework. The views expressed herein do not necessarily represent those of AIIB's Board of Directors, Management, or staff.

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**TABLE OF CONTENTS**

ABBREVIATIONS .....	III
EXECUTIVE SUMMARY.....	5
1 INTRODUCTION .....	10
2 DESCRIPTION OF THE PROJECT AND SUB-PROJECT .....	11
2.1 Description of Project .....	11
2.2 Project component features .....	11
2.3 Detailed Description of Sub-Project.....	11
3 REVIEW OF LEGAL & POLICY FRAMEWORK.....	13
4 DESCRIPTION OF ENVIRONMENTAL & SOCIAL BASELINE CONDITIONS .....	14
4.1 E&S baseline and primary data pertinent to the potential E&S risks of Sub-project activities for replacement of existing old conductors by OPGW.....	14
4.2 District and location wise social profile of proposed subproject locations .....	14
4.3 E&S profile of proposed subproject locations.....	16
5 ANALYSIS OF ALTERNATIVES.....	20
6 ENVIRONMENT & SOCIAL AUDIT .....	21
7 SPECIFIC E&S IMPACTS OF SUBPROJECT.....	25
7.1 A Brief Assessment of Climate Risk and Adaptation at the Design Stage.....	51
7.2 Cumulative Impacts .....	51
8 AUDIT FINDINGS AND PROPOSED REMEDIATION MEASURES .....	52
9 ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN (ESMP) WITH SPECIFIC POTENTIAL ES IMPACTS .....	58
10 ENVIRONMENTAL AND SOCIAL MONITORING PLAN (ESMOP) .....	62
11 BUDGET FOR IMPLEMENTATION OF ESMP SPECIFIC FOR ACTIVITIES COVERED BY THE ESIA ...	71
12 INSTITUTIONAL ARRANGEMENT FOR MONITORING AND REPORTING.....	73
12.1 Monitoring of ESMP compliance.....	73
12.2 Monitoring of ESMoP Compliance .....	73
12.3 Reporting Line .....	74
13 STAKEHOLDER & PUBLIC CONSULTATION AND INFORMATION DISCLOSURE .....	75
13.1 Public Consultation .....	75
13.2 Continuous Consultation and Participation.....	77
13.3 Public Consultation Information Disclosure.....	77
14 COVID-19 PRECAUTION MEASURES TO BE IMPLEMENTED BY PMU/PIU/PMC/EPC .....	79

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT****PACKAGE – M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

15	GRIEVANCE REDRESS MECHANISM .....	81
16	SUMMARY & CONCLUSION .....	89

**List of Tables**

Table -1	Details of the proposed OPGW lines and the land ownership	11
Table -2	Air Quality Monitoring Data of nearby area of proposed subproject locations	14
Table -3	Social profile of proposed subproject districts, circle and blocks	14
Table -4	E&S profile of the proposed substation sites visited	17
Table -5	E&S Audit of substations	21
Table -6	Audit Findings and Proposed Remediation Measures	52
Table -7	Environmental & Social Management Plan (ESMP)	58
Table -8	Environmental and Social Monitoring Plan	62
Table -9	Environmental and Social Monitoring Plan Budget	71
Table -17	Summary of Public Consultation	75

**List of Figures**

Figure -1A	Location of Proposed Substations	12
Figure -2	Illustration of Reporting Line	74

**List of Annexure**

Annexure – I	Details of Public Consultation at Proposed substation sites	91
Annexure – II	Some Site Photographs	97
Annexure – III	Code of Conduct	98

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT****PACKAGE – M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT****ABBREVIATIONS**

AH	Affected Household
AIIB	Asian Infrastructure Investment Bank
AEGCL	Assam Electricity Grid Corporation Limited
AIS	Air Insulated Substation
AISTSEP	Assam Intra-State Transmission System Enhancement Project
AGM	Assistant General Manager
BOQ	Bill of Quantity
CESMP	Contractor’s Environmental and Social Management Plan
CPCB	Central Pollution Control Board, Government of India
DisCom	Distribution Company
DPR	Detailed Project Report
DC or D/C	Double Circuit
EIA	Environmental Impact Assessment
EPC	Engineering, Procurement And Construction Management
E&S	Environment and Social
E&S officer	Environment and Social Officer
E&S Specialist	Environment and Social Specialist
ESIA	Environmental and Social Impact Assessment
ESMPF	Environmental and Social Management and Planning Framework
ESMP	Environmental and Social Management Plan
ESP	Environmental and Social Policy
ESS	Environmental and Social Standard
GoA	Government of Assam
GoI	Government of India
GIS	Gas Insulated Substation
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HTLS	High Temperature Low Sag
IA	Implementing Agency
INR	Indian Rupee
IPP	Indigenous People Plan
MoEF&CC	Ministry of Environment, Forest and Climate Change
NWBL	National Wildlife Board
NGO	Non-Government Organization
OPGW	Optical Power Ground Wire
PAPs	Project Affected Persons
PFA	Power for All
PIU	Project Implementation Unit
PMC	Project Management Consultancy
PMU	Project Management Unit
RP	Resettlement Plan

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT**

**PACKAGE – M (OPGW)**

**ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

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RPF	Resettlement Planning Framework
RoW	Right of Way
RFCLARRA	Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013
SBWL	State Wildlife Board
SC or S/C	Single Circuit
S/S	Substation (s)
ST	Scheduled Tribe
STU	State Transmission Utility
T/L	Transmission Line
T&T	Tower and Transmission

**WEIGHTS AND MEASURES**

Ha. (hectare)	10,000 sq. m = 2.47105 Acre
km (kilometer)	1,000 meters
kV	kilovolt (1,000 volts)
MVA	Megavolt Ampere

**EXECUTIVE SUMMARY**

To support the implementation of Power for All (PFA) plan, Government of Assam (GoA) has requested the Asian Infrastructure Investment Bank (AIIB), through Government of India (GOI), for financial and technical assistance to upgrade and strengthen the power transmission network in the state of Assam. AIIB has considered supporting enhancement of power transmission to improve the reliability of power supply through “Assam Intra-State Transmission System Enhancement Project” (The Project) in two phases.

AEGCL, the State Transmission Utility (STU) of Assam, owns and operates intra-state Transmission system of Assam and is responsible for transmission of electricity to the distribution entity of Assam from the Generating Plants of the State as well as from Central Sector Generating Utilities and the power contracted from other sources. AEGCL is the implementing agency of the project. PT Feedback Infra Limited, Indonesia in Association with Jade Consult Nepal and NIPSA, Spain has been engaged by AEGCL as Project Management Consultant (PMC).

The Project under Phase I includes the construction of 10 new substation in 400kV, 220kV and 132kV voltage level along with the associated (332.945 km) transmission lines (TL), Conversion of one no. of existing AEGCL S/S (132/33kV Gohpur) from AIS to GIS; Augmentation of 14 existing substations (replacement of old transformers with new transformers); Augmentation of 186 km of transmission line (restringing of One Single Circuit (S/C) line and two Double Circuit (D/C) line) by High Temperature Low Sag (HTLS) conductors; Replacement of ground wire to Optical Power Ground Wire (OPGW) for 636 km of transmission lines and substation equipment at substations.

Power transmission projects including the construction of substations have not been listed in the list of environmentally sensitive projects and hence, no environmental clearance is required, as per the Environmental Impact Assessment (EIA) notification of 2006 and its subsequent amendments by the Ministry of Environment, Forest and Climate Change (MoEF&CC). Environmental Clearance is required project associated activity like quarry operation (if any). Clearance from the Assam Forest Department is required only in cases where a project is constructed on forest land or requires cutting of forest trees. Clearance from the National Wildlife Board (NWBL) / State Wildlife Board (SBWL) is required only in cases where a project is constructed on Notified Wildlife area or within the Eco-sensitive Zone of Wildlife area. Clearance from the Wetland authority is required only in cases where a project is constructed on Notified Wetland or within the Eco-sensitive Zone of Wetland.

As the scope of work of Package – M is replacement of existing old ground wire by OPGW and thus environmental clearance for associated activity like quarry operation, forest, wildlife and wetland clearances are not applicable.

As the Project is funded through the AIIB, the Bank’s Environmental and Social Policy (ESP) applies. The Project has been assigned to “Category B” as per the ESP.

**ESS 1** will be applicable to the Project as stringing of OPGW works may cause a limited number of insignificant environmental and social impacts. These impacts are not unprecedented and are limited to the Project area.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT - ENVIRONMENT AND SOCIAL MANGEMENT PLAN REPORT****PACKAGE – M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

**ESS 2** and **ESS 3** are not applicable, as the present scope of work is only replacement of existing ground wire by OPGW.

The detail of the various regulatory frameworks pertaining to the project has already been discussed / considered in ESMPF.

AEGCL's working operation safety manual also serves as its commitment towards fulfilling the E&S responsibilities including occupation health and safety.

A baseline study to assess the environmental and socio-economic conditions of adjoining areas has been conducted on 6<sup>th</sup> to 18<sup>th</sup> June and 14 & 15<sup>th</sup> Sept. 2022 to gather baseline information of the environmental and social profile. The detail of the baseline conditions of sub-project area are provided in main report.

Environmental sensitive sites are away from the existing line where replacement of ground wires by OPGW. Environmental conditions of the sites of existing lines are quite good.

As assessed from the baseline condition, the impacts are manageable as no significant environmental issues have been recorded during site visit. The overall E&S risks associated with the replacement of existing old ground wire by OPGW will be insignificant and are temporary in nature and can be easily mitigated through management plan during implementation, whereas it will contribute to major economic development in the relevant areas. Details of impact and mitigation measures are discussed in the main report. Overall, the environmental impacts associated with the replacement of existing old ground wire by OPGW are insignificant and limited mostly to the RoW of T/L and insignificant in operation period. These can be mitigated to an acceptable level by implementation of recommended measures and by best engineering and environmental practices. ESMP cost to implement the key environmental & social measures and environmental & social monitoring plan which a part of Engineering Procurement Construction (EPC) Contractor's contract as included in Bill Of Quantity (BOQ) item and as part of their good Engineering practice. An amount of **INR 94,96,200** is estimated to be required for implementation of ESMP.

Public consultations were conducted with local habitants (20 participants on 14<sup>th</sup> and 15<sup>th</sup> Sept. 2022) like economically poor communities, women, vulnerable groups and other local community leaders nearby existing lines (where ground wire will be replaced by OPGW) 6<sup>th</sup> to 18<sup>th</sup> June and 14<sup>th</sup> & 15<sup>th</sup> Sept. 2022. The consultation followed strict protocols to prevent the spread of Covid-19 and to reiterate awareness about safe behavior.

The transcript of these discussions will help AEGCL and the EPC contractor to conduct a proper needs assessment to ensure the issues raised by people are addressed appropriately. Consultation will be carried out on an on-going basis throughout the sub-project cycle.

Community welcomed the replacement of existing old ground wire by OPGW. No major environmental issues were raised during the consultation process. A few of the families has shown their interest on unskilled works on temporary basis when the works are initiated.

Local people are waiting eagerly for the implementation, so they could receive better power and hoped for some employment generation.

This draft ESIA - ESMP will be disclosed online on the website of AIIB and AEGCL. Their hardcopies in English are available at the following locations:

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT - ENVIRONMENT AND SOCIAL MANGEMENT PLAN REPORT****PACKAGE – M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

1. PMU: Project Director,  
Address: 1<sup>st</sup> Floor, AEGCL, Bijulee Bhawan,  
Contact No.: 0361-2739520  
Website: www.aegcl.co.in,  
Contact Person: Mr. Lokhnath Choudhury

2. PIU:

Name of the T&T Circle	Name of the Project Districts	Package	Sub-Projects	Focal point / Nominated Official	Contact number (Mobile and WhatsApp)*	Communication Address
Lower Assam	Kokrajhar, Dhubri	M	132KV Gossaigaon to Gauripur , 61.18 km	AGM, Comm., Lower Assam, Dibrugarh	97078-54367(W+C)	O/o The DGM, Lower Assam T&T Circle, Guwahati
			132KV Gossaigaon to Dhaligaon, 64 km			
			132KV Gauripur to Bilasipara, 37.6 km			
			132KV Bilasipara to Kokrajhar, 24.2 km			
			132KV Kokrajhar to Salakati, 10 km			
	Jorhat, Golaghat, North Lakhimpur, Sibasagar, Dibrugarh		220KV Mariani to Samaguri (Circuit-1) (LILO at 220KV Khumtai and 220 KV Jakhlabandha GIS, 169 km	AGM, Comm., Upper Assam, Dibrugarh	99576-37621(W+C)	O/o The DGM, Upper T&T Circle Assam, Dibrugarh
			132KV Majuli to Nalkata (North Lakhimpur), 46 km			
			132KV Dibrugarh to Lakwa (LILo at 132KV Behiating & 132 KV Moran, 77 km			
			220KV Mariani to Namrup, 145 km			



This executive summary in English and Assamese can be found at the following locations:

1. **PMU:** Project Director,  
Address: 1<sup>st</sup> Floor, AEGCL, Bijulee Bhawan,  
Contact No.: 0361-2739520  
Website: www.aegcl.co.in,  
Contact Person: Mr. Lokhnath Choudhury
2. **PIU:** As mentioned in table above.

### **3. GRC**

#### **Tier 2:**

(i) Chief General Manager (CGM, PP&D), AEGCL

Address: 1<sup>st</sup> Floor, AEGCL, Bijulee Bhawan,

Contact No.: 0361-2739520

Website: www.aegcl.co.in,

Contact Person: Mr. Lokhnath Choudhury

(ii) PMU: Project Director,

Address: 1<sup>st</sup> Floor, AEGCL, Bijulee Bhawan,

Contact No.: 0361-2739520

Website: www.aegcl.co.in,

Contact Person: Mr. Lokhnath Choudhury

**Tier 1:** As mentioned in table above.

The Project provides for the establishment of a Grievance Redress Mechanism (GRM). The GRM is a free system that registers and attempts to resolve concerns or complaints by Project-affected people (PAPs) or construction workers. This process aims to quickly resolve disputes and avoid litigation, thus ensuring the smooth implementation of the project activities.

At all levels of the project Grievance Redress Mechanism, the Grievance Redress Committee members should uphold the objectives of the GRM and strive to achieve them. The primary objectives of GRM are:

- Provide an accessible, transparent, efficient and predictable mechanism for resolution of grievances to all project by:
  - Popularizing the GRM and how it can be accessed for free.
  - Receiving grievances in various possible forms (Written, Verbal, Electronic, Email, Social Media, Telephone, Fax, Suggestion Box)
  - Establishing clear procedures for redress that covers:
    - Registration in the GRM log all grievances (including minor and verbal).
    - Acknowledgement to the complainant, explaining expected duration for resolution.
    - Investigation of the grievance, proposing a solution to the complainant and if acceptable closure of the complaint. OR
    - Escalation of the grievance to Tier II which should be communicated to the complainant.
    - Investigation of the grievance, proposing a solution to the complainant
    - Provision of feedback and closure of the grievance in the GRM Log.
  - Complaint should be made aware that:
    - There is no retribution or intimidation for complainants.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT - ENVIRONMENT AND SOCIAL MANGEMENT PLAN REPORT**

**PACKAGE – M (OPGW)**

**ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

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- Access of the GRM is free for the complainants.
- The GRM does not replace the judicial system.
- Observe for any repeated complaints and inform PMU of such for their systemic resolution.
- Providing an environment that fosters free and honest exchange of information, views, and ideas.

The GRM can be accessed through the following channels:

- Project Sign board
- Display in PIU office/T&T Circle office
- To be upload in the AEGCL web site

The Project-affected People’s Mechanism (PPM) has been established by AIIB to provide an opportunity for the independent and impartial review of submissions from Project-affected people who believe they have been or are likely to be adversely affected by the AIIB’s failure to implement its ESP in situations when their concerns cannot be addressed satisfactorily through the Project-level GRM or the AIIB’s management processes. Information about the PPM is available at: <https://www.aiib.org/en/policies-strategies/operational-policies/policy-on-the-project-affected-mechanism.html>

## **1 INTRODUCTION**

Asian Infrastructure Investment Bank (AIIB) extends financial assistance for “Assam Intra-State Transmission System Enhancement Project” (AISTSEP) to Assam Electricity Grid Corporation Limited (AEGCL), the Implementing Agency (IA), to support the implementation of Power for All (PFA) plan. PT Feedback Infra Limited, Indonesia in Association with Jade Consult Nepal and NIPSA, Spain has been engaged by AEGCL as Project Management Consultant (PMC). The Project under Phase I includes the construction of 10 new substation in 400kV, 220kV and 132kV voltage level along with the associated (332.945 km) transmission lines (TL), Conversion of one no. of existing AEGCL S/S (132/33kV Gohpur) from AIS to GIS; Augmentation of 14 existing substations (replacement of old transformers with new transformers); Augmentation of 186 km of transmission line (restringing of One Single Circuit (S/C) line and two Double Circuit (D/C) line) by High Temperature Low Sag (HTLS) conductors; Replacement of ground wire to Optical Power Ground Wire (OPGW) for 636 km of transmission lines and substation equipment at substations.

The present Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) report focuses on Package – M: replacement of ground wire to OPGW.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT - ENVIRONMENT AND SOCIAL MANGEMENT PLAN REPORT****PACKAGE – M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT****2 DESCRIPTION OF THE PROJECT AND SUB-PROJECT****2.1 Description of Project**

AEGCL, the State Transmission Utility (STU) of Assam, has planned to execute “Assam Intra-State Transmission System Enhancement Project” to materialize the vision of Govt. of India to provide “Power for All” (PFA) and evacuate power from Generating Plants of the State as well as from Central Sector Generating Utilities and other sources as well as strengthen the Grid Infrastructure of the State reducing the transmission losses. AEGCL is responsible for transmission of electricity to the Distribution Company (DisCom) of Assam. The project scope involves construction of substations and associated transmission lines, augmentation, up gradation and installation of equipment of substations.

The subproject focuses on Package – M is replacement of existing old ground wire by OPGW.

**2.2 Project component features**

Details of the subproject components are as under:

- Tower Steel Member Modifications/Reinforcements;
- Fibre optic cables and hardware fittings & fibre optic cables;
- OPGW hardware/fittings and terminations;
- Fibre Optic Distribution Panel;
- Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable vizties/clips/cleats, conduits, ducts, supports, fittings, accessories etc. for extending OPGW from sub-station end tower/gantry to FODP at control/ communication room by splicing fibres of OPGW with FOAC in joint box at tower/gantry and splicing FOAC in FODP at control/ communication room;
- For any additional Hardware and Fittings, tenderer to specify.

**2.3 Detailed Description of Sub-Project**

The subproject focuses on Package – M is replacement of existing old ground wire by OPGW of following lines:

**Table - 1: Details of the proposed OPGW lines and the land ownership**

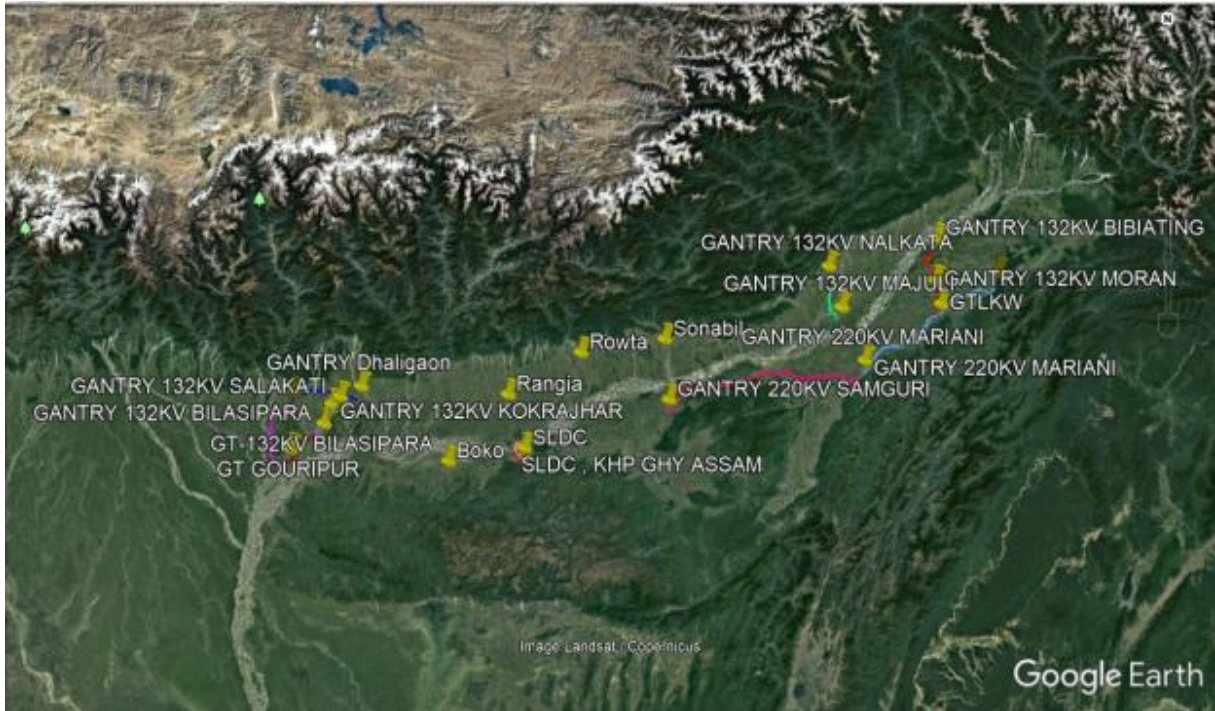
Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land
1.	132kV Gossaigaon (26°28'9.9"N 90°0'36.5"E) to Gauripur (26°5'42.5"N 89°59'8.8"E) -61.18 km	Kokrajhar and Dhubri	AEGCL Existing T/L
2.	132kV Gossaigaon (26°28'9.9"N 90°0'36.5"E) to Dhaligaon (26°30'36.6"N 90°31'31.8"E) – 64 km	Kokrajhar and Bongaigaon	AEGCL Existing T/L
3.	132kV Gauripur (26°05'42.61"N 89°59'08.79"E) to Bilasipara (26°15'48"N 90°14'30"E) – 37.6 km	Dhubri	AEGCL Existing T/L
4.	132kV Bilasipara (26°15'48"N 90°14'30"E) to Kokrajhar (26°23'36.1"N 90°18'4.4"E) -24,2 km	Dhubri and Kokrajhar	AEGCL Existing T/L
5.	132kV Kokrajhar (26°23'36.1"N 90°18'4.4"E) to Salakati (26°26'26.08"N 90°21'56.15"E) - 10 km		AEGCL Existing T/L
6.	220kV Mariani (26°37'46.85"N 94°20'5.72"E) to Samaguri (Circuit-1) (LILO at 220kV Khumtai and 220 kV Jakhalabandha GIS (26°24'18.80"N 92°50'50.39"E) – 169 km	Jorhat, Nagaon and Golaghat	AEGCL Existing T/L
7.	132kV Majuli (26°59'8.1"N 94°10'7.7"E) to Nalkata (27°15'25.6"N 94°4'50.5"E) – 46 km	Majuli and North Lakhimpur	AEGCL Existing T/L
8.	132kV Dibrugarh to Lakwa (26°59'13.27"N 94°55'50.98"E) (LILO at	Dibrugarh and	AEGCL

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT - ENVIRONMENT AND SOCIAL MANGEMENT PLAN REPORT**

**PACKAGE – M (OPGW)**

**ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land
	132kV Behiating (27°25'16.27"N 94°55'8.07"E & 132 kV Moran – 77 km	Sibasagar	Existing T/L
9.	220kV Mariani (26°37'49.97"N 94°20'09.34"E) to Namrup (27°11'0.75"N 95°22'41.48"E) – 145 km		AEGCL Existing T/L



**Figure 1: Location map of the project**

### 3 REVIEW OF LEGAL & POLICY FRAMEWORK

The laws, regulations and policies of Government of India (GoI), Government of Assam (GoA), International conventions and the AIB pertaining to E&S risks and impacts need to be considered for effective management of environmental aspects.

As a sequel to the UN Conference on the Human Environment (1972), Indian Parliament in 1976 amended the Constitution of India by introducing articles 48A and 51A. These articles incorporated environmental concerns into the Directive Principles of state policy and postulated as a fundamental duty of all citizens to preserve and protect the environment.

Power transmission projects including the construction of substations have not been listed in the list of environmentally sensitive projects and hence, no environmental clearance is required, as per the Environmental Impact Assessment (EIA) notification of 2006 and its subsequent amendments by the Ministry of Environment, Forest and Climate Change (MoEF&CC). Environmental Clearance is required project associated activity like quarry operation (if any). Clearance from the Assam Forest Department is required only in cases where a project is constructed on forest land or requires cutting of forest trees. Clearance from the National Wildlife Board (NWBL) / State Wildlife Board (SBWL) is required only in cases where a project is constructed on Notified Wildlife area or within the Eco-sensitive Zone of Wildlife area. Clearance from the Wetland authority is required only in cases where a project is constructed on Notified Wetland or within the Eco-sensitive Zone of Wetland.

As the scope of work of Package – M is replacement of existing old ground wire by OPGW and thus environmental clearance for associated activity like quarry operation, forest, wildlife and wetland clearances are not applicable.

As the Project is funded through the AIB, the Bank's Environmental and Social Policy (ESP) applies. The Project has been assigned to "Category B" as per the ESP.

**ESS 1** will be applicable to the Project as stringing of OPGW works may cause a limited number of insignificant environmental and social impacts. These impacts are not unprecedented and are limited to the Project area.

**ESS 2** and **ESS 3** are not applicable, as the present scope of work is only replacement of existing ground wire by OPGW.

The detail of the various regulatory frameworks pertaining to the project has already been discussed / considered in ESMPPF.

AEGCL's working operation safety manual also serves as its commitment towards fulfilling the E&S responsibilities including occupation health and safety.

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT - ENVIRONMENT AND SOCIAL MANGEMENT PLAN REPORT

## PACKAGE – M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

## 4 DESCRIPTION OF ENVIRONMENTAL &amp; SOCIAL BASELINE CONDITIONS

## 4.1 E&amp;S baseline and primary data pertinent to the potential E&amp;S risks of Sub-project activities for replacement of existing old conductors by OPGW

The monitoring data generated in pre-construction phase for ambient air quality, water quality, soil quality and noise level by EPC contractor before start of construction work is as follows and would be considered as baseline data.

Table-2: Air Quality Monitoring Data of nearby area of proposed subproject locations

S. No	Pollutant	Methods of Measurement	Time Weighted Average	Prescribed		Concentration in Ambient Air	
				NAAQ (2009)* Standards Limits	World Bank (IFC) Standards	Near 132 kV Gossaigaon GSS, AEGCL	Near 220 kV Nagajanka GSS, Mariani, AEGCL
1	PM 10 µg/m <sup>3</sup>	Gravimetric TOEM Beta attenuation	Annual 24 hours	60 100	53	52	58
2	PM 25 µg/m <sup>3</sup>	Gravimetric TOEM Beta attenuation	Annual 24 hours	40 60	28	28	30

## 4.2 District and location wise social profile of proposed subproject locations

Table -3: Social profile of proposed subproject districts, circle and blocks

Sl. No	Particulars	Social profile of proposed districts of OPGW lines
1.	Population	Kokrajhar District: - 8, 87,142 (male- 452,905, female – 4, 34,237) as per the Census 2011. Gossaigaon Sub-Division – 53,842 (male - 27,487, female – 26,355) Salakati – 4863 (male - 2610, female – 2253)
	Schedule Caste (SC) and Schedule Tribe (ST) Population	Kokrajhar District– SC-29,570, ST-2,78,665 Gossaigaon Sub-Division – SC-2,640, ST-27 Salakati – SC- 278 , ST- 835
	Literacy rate	Kokrajhar District – 65.22% Gossaigaon Sub-Division – 60.94% Salakati – 76.93%
	Sex ratio	Kokrajhar District – 959 Gossaigaon Sub-Division – 959 Salakati - 863
2.	Population	Dhubri District- 1949258 (male- 997848, female-951410) Gauripur Town – 25124 (male- 12923, female- 12201) Bilasipara Sub- Division -218445 (male- 111992, female- 106453)
	Schedule Caste (SC) and Schedule Tribe (ST) Population	Dhubri District- SC- 70395 , ST- 6332 Gauripur Town - SC- 2789, ST- 177 Bilasipara Sub- Division - SC- 3487, ST- 608
	Literacy rate	Duburi District- 58.34% Gauripur Town-87.8% Bilasipara Sub- Division – 54.26%
	Sex ratio	Duburi District- 953 Gauripur Town- 944 Bilasipara Sub- Division - 951
3.	Population	Bongaigaon District- 738804 (male- 375818, female-362986) Dhaligaon Circle – 2470 (male- 1209, female- 1261)
	Schedule Caste (SC) and	Bongaigaon District - SC- 82784 , ST- 18835

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT - ENVIRONMENT AND SOCIAL MANGEMENT PLAN REPORT

## PACKAGE – M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl. No	Particulars	Social profile of proposed districts of OPGW lines
	Schedule Tribe (ST) Population	Dhaligaon - SC- 300, ST- 94
	Literacy rate	Bongaigaon District - 69.74% Dhaligaon -83.47%
	Sex ratio	Bongaigaon District - 966 Dhaligaon - 1043
	Population	Jorhat District- 1092256 (male-556805, female-535451) Mariani Block – 131613 (male-66585, female-65028)
	Schedule Caste (SC) and Schedule Tribe (ST) Population	Jorhat District - SC-88665 , ST- 139971 Mariani Block - SC-2975, ST- 1935
	Literacy rate	Jorhat District – 82.15% Mariani Block -73.35%
	Sex ratio	Jorhat District - 962 Mariani Block - 977
	Population	Nagaon district: 28,23,768 (male – 14,39,112) Samaguri Circle- 330575 (male-167823, female-162752) Jakhalabandha – 4625(male-2339, female-2286)
	Schedule Caste (SC) and Schedule Tribe (ST) Population	Nagaon district: SC-2,66,350, ST-1,15,153 Samaguri Circle - SC-30607 , ST-8336 Jakhalabandha - SC-363, ST- 31
	Literacy rate	Nagaon district: 69.59% Samaguri Circle – 67.83% Jakhalabandha -83.59
	Sex ratio	Nagaon district: 962 Samaguri Circle - 970 Jakhalabandha - 977
	Population	Golaghat district: 10, 66,888 (male – 5, 43,161 female – 5, 23,727) as per the Census 2011. Khumtai Circle: 85,835 (male –43,406 female – 42,429) as per the Census 2011.
	Schedule Caste (SC) and Schedule Tribe (ST) Population	Golaghat district: SC-62,298, ST-1,11,765 Khumtai Circle: ST-14,655; SC-6,260
	Literacy rate	Golaghat district: 77.43% Khumtai Circle: 72.74%
	Sex ratio	Golaghat district: 964 Khumtai Circle: 977
	Population	Nagaon district: 28,23,768 (male – 14,39,112) female – 13,84,656) as per the Census 2011. Kaliabor Circle: 1,97,470 as per the Census 2011 (males – 1,00,013, females – 97,457)
	Schedule Caste (SC) and Schedule Tribe (ST) Population	Nagaon district: SC-2,66,350, ST-1,15,153 Kaliabor circle: ST-5,286; SC-20,505
	Literacy rate	Nagaon district: 69.59% Kaliabor circle: 69.59%
	Sex ratio	Nagaon district: 962 Kaliabor circle: 974
	Population	Majuli District- 167304 (male-85566, female-81738)
	Schedule Caste (SC) and Schedule Tribe (ST) Population	Majuli District - SC-23878 , ST- 77603
	Literacy rate	Majuli District – 78.56%
	Sex ratio	Majuli District - 955
	Population	Lakhimpur district: 10, 42,137 (male –529,674 female –5, 12,643) as per the Census 2011 Nalkata : 1022 as per the Census 2011 (males – 521 females – 501)



**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT - ENVIRONMENT AND SOCIAL MANGEMENT PLAN REPORT****PACKAGE – M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

Sl. No	Particulars	Social profile of proposed districts of OPGW lines
	Schedule Caste (SC) and Schedule Tribe (ST) Population	Lakhimpur district: SC-81,840, ST-2,49,426 Nalkata : ST-11; SC-5
	Literacy rate	Lakhimpur district: 77.2% Nalkata : 92.25%
	Sex ratio	Lakhimpur district: 968 Nalkata : 962
	Population	Dibrugarh District- 1326335 (male-676434, female- 649901) Moran Block- 169759(male-86247, female-83512) Namrup Town- 15719(male-8187, female-7532)
	Schedule Caste (SC) and Schedule Tribe (ST) Population	Dibrugarh District- SC- 58876, ST-102871 Moran Block- SC-2507 , ST-21482 Namrup Town- SC- 570, ST-1182
	Literacy rate	Dibrugarh District- 76.05% Moran Block- 79.16% Namrup Town- 92.88%
	Sex ratio	Dibrugarh District- 961 Moran Block- 968 Namrup Town- 920
	Population	Charaideo District- 458615 (male-234543 , female-224072) Lakwa Block- 35568 (male-18395, female- 17173)
	Schedule Caste (SC) and Schedule Tribe (ST) Population	Charaideo District- SC- 7500 ST- 11705 Lakwa Block - SC- 204, ST-172
	Literacy rate	Charaideo District- 74.1% Lakwa Block- 55.6 %
	Sex ratio	Charaideo District- 954 Lakwa Block- 925

**4.3 E&S profile of proposed subproject locations**

The E&S profiling has been conducted for proposed subproject locations on 6<sup>th</sup> to 18<sup>th</sup> June and 14<sup>th</sup> & 15<sup>th</sup> Sept. 2022 to gather firsthand information of the environmental and social profile. The team for the E&S assessment comprises of Environmental & Social staffs of PMC and EHS officer of EPC contractor. The team was supported by officials from PIU's.

**Selection of Site**

Site visit was carried out at subproject locations to establish the E&S profile along with consultations in subproject locations.

**Adopted Methodology**

The adopted methodology for establishing the E&S data involves collection of data for existing conditions on physical, ecological, economic and social aspects, together with the anticipated environmental and social impacts and proposed mitigation measures. The assessment of physical, biological and social features along the proposed subproject locations also involved data collection from secondary sources and has been done to support the findings of the field survey.

A baseline study was conducted to assess the environmental and socio-economic conditions within the subproject and its adjoining areas. The baseline data generation was supplemented with field observations, survey reports and interaction with the community and project personnel of PIU's. The detail of the baseline conditions of subproject is presented in the Table below.

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT - ENVIRONMENT AND SOCIAL MANGEMENT PLAN REPORT

## PACKAGE – M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Table - 4: E&amp;S profile of the proposed subproject sites visited

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Detail of Proposed Site and E&S Conditions
1.	132kV Gossaigaon to Gauripur	Kokrajhar and Dhubri	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 61.18 km.</li> <li>The proposed OPGW line starts at Gossaigaon (26°28'9.9"N 90°0'36.5"E) and end at Gauripur (26°5'42.5"N 89°59'8.8"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>
2.	132kV Gossaigaon to Dhaligaon	Kokrajhar and Bongaigaon	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 64 km.</li> <li>The proposed OPGW line starts at Gossaigaon (26°28'9.9"N 90°0'36.5"E) and end at Dhaligaon (26°30'36.6"N 90°31'31.8"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>
3.	132kV Gauripur to Bilasipara	Dhubri	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 37.6 km.</li> <li>The proposed OPGW line starts at Gauripur (26°05'42.61"N 89°59'08.79"E) and end at Bilasipara (26°15'48"N 90°14'30"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>
4.	132kV Bilasipara to Kokrajhar	Dhubri and Kokrajhar	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 24.2 km.</li> <li>The proposed OPGW line starts at Bilasipara (26°15'48"N 90°14'30"E) and end at Kokrajhar (26°23'36.1"N 90°18'4.4"E).</li> <li>No protected wildlife area falls in the proposed</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT - ENVIRONMENT AND SOCIAL MANGEMENT PLAN REPORT

## PACKAGE – M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Detail of Proposed Site and E&S Conditions
				<p>OPGW line.</p> <ul style="list-style-type: none"> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>
5.	132kV Kokrajhar to Salakati		AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 10 km.</li> <li>The proposed OPGW line starts at Kokrajhar (26°23'36.1"N 90°18'4.4"E) and end at Salakati (26°26'26.08"N 90°21'56.15"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>
6.	220kV Mariani to Samaguri (Circuit-1) (LILO at 220kV Khumtai and 220 kV Jakhlabandha GIS	Jorhat, Nagaon and Golaghat	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 169 km.</li> <li>The proposed OPGW line starts at Mariani (26°37'46.85"N 94°20'5.72"E) and end at Samaguri (26°24'18.80"N 92°50'50.39"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>
7.	132kV Majuli to Nalkata (North Lakhimpur)	Majuli and North Lakhimpur	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 46 km.</li> <li>The proposed OPGW line starts at Majuli (26°59'8.1"N 94°10'7.7"E) and end at Nalkata (27°15'25.6"N 94°4'50.5"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>
8.	132kV Dibrugarh	Dibrugarh and	AEGCL	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 77 km.</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT - ENVIRONMENT AND SOCIAL MANGEMENT PLAN REPORT

## PACKAGE – M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Detail of Proposed Site and E&S Conditions
	to Lakwa (LILO at 132kV Behiating & 132 kV Moran	Sibasagar	Existing T/L	<ul style="list-style-type: none"> <li>The proposed OPGW line starts at Behiating (27°25'16.27"N 94°55'8.07"E) and end at to Lakwa (26°59'13.27"N 94°55'50.98"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>
9.	220kV Mariani to Namrup		AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 145 km.</li> <li>The proposed OPGW line starts at Mariani (26°37'49.97"N 94°20'09.34"E) and end at Namrup (27°11'0.75"N 95°22'41.48"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>

## **5 ANALYSIS OF ALTERNATIVES**

As the scope of work is replacement of existing old ground wire by OPGW in AEGCL existing T/L and thus analysis of alternative is not applicable.

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

## 6 ENVIRONMENT &amp; SOCIAL AUDIT

The key environmental and social baseline conditions are tabulated as under and the detail of the baseline conditions of subproject is presented in **Chapter – 7: Specific E&S Impacts** of this report.

Table - 6: E&amp;S Audit of subproject

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Detail of Proposed Site and E&S Condition	E&S risks noticed
1.	132kV Gossaigaon to Gauripur	Kokrajhar and Dhubri	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 61.18 km.</li> <li>The proposed OPGW line starts at Gossaigaon (26°28'9.9"N 90°0'36.5"E) and end at Gauripur (26°5'42.5"N 89°59'8.8"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be minor disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Insignificant noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>
2.	132kV Gossaigaon to Dhaligaon	Kokrajhar and Bongaigaon	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 64 km.</li> <li>The proposed OPGW line starts at Gossaigaon (26°28'9.9"N 90°0'36.5"E) and end at Dhaligaon (26°30'36.6"N 90°31'31.8"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be minor disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Insignificant noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Detail of Proposed Site and E&S Condition	E&S risks noticed
3.	132kV Gauripur to Bilasipara	Dhubri	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 37.6 km.</li> <li>The proposed OPGW line starts at Gauripur (26°05'42.61"N 89°59'08.79"E) and end at Bilasipara (26°15'48"N 90°14'30"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be minor disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Insignificant noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>
4.	132kV Bilasipara to Kokrajhar	Dhubri and Kokrajhar	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 24.2 km.</li> <li>The proposed OPGW line starts at Bilasipara (26°15'48"N 90°14'30"E) and end at Kokrajhar (26°23'36.1"N 90°18'4.4"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be minor disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Insignificant noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>
5.	132kV Kokrajhar to Salakati		AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 10 km.</li> <li>The proposed OPGW line starts at Kokrajhar (26°23'36.1"N 90°18'4.4"E) and end at Salakati (26°26'26.08"N 90°21'56.15"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> </ul>	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be minor disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Insignificant noise may takes place during</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Detail of Proposed Site and E&S Condition	E&S risks noticed
				<ul style="list-style-type: none"> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>	<ul style="list-style-type: none"> <li>replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>
6.	220kV Mariani to Samaguri (Circuit-1) (LILO at 220kV Khumtai and 220 kV Jakhalabandha GIS	Jorhat, Nagaon and Golaghat	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 169 km.</li> <li>The proposed OPGW line starts at Mariani (26°37'46.85"N 94°20'5.72"E) and end at Samaguri (26°24'18.80"N 92°50'50.39"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be minor disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Insignificant noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>
7.	132kV Majuli to Nalkata (North Lakhimpur)	Majuli and North Lakhimpur	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 46 km.</li> <li>The proposed OPGW line starts at Majuli (26°59'8.1"N 94°10'7.7"E) and end at Nalkata (27°15'25.6"N 94°4'50.5"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be minor disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Insignificant noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>



## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Detail of Proposed Site and E&S Condition	E&S risks noticed
8.	132kV Dibrugarh to Lakwa (LILO at 132kV Behiating & 132 kV Moran	Dibrugarh and Sivasagar	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 77 km.</li> <li>The proposed OPGW line starts at Behiating (27°25'16.27"N 94°55'8.07"E) and end at to Lakwa (26°59'13.27"N 94°55'50.98"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be minor disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Insignificant noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>
9.	220kV Mariani to Namrup		AEGCL Existing T/L	<ul style="list-style-type: none"> <li>The length of the proposed OPGW line is 145 km.</li> <li>The proposed OPGW line starts at Mariani (26°37'49.97"N 94°20'09.34"E) and end at Namrup (27°11'0.75"N 95°22'41.48"E).</li> <li>No protected wildlife area falls in the proposed OPGW line.</li> <li>No Air, Water and Noise pollution observed during site visit.</li> <li>The local inhabitants belong to General/ST/SC/OBC/MOBC Caste.</li> <li>No cultural heritage site nearby proposed OPGW line.</li> </ul>	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be minor disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Insignificant noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

**ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

## 7 SPECIFIC E&S IMPACTS OF SUBPROJECT

Details of specific E&S impacts are given the following section.

### A. Checklist for the following lines are prepared in a lot, as the lines are interconnected to each other (refer Figure - 1)

- 132kV Gossaigaon to Gauripur - 61.18 km
- 132kV Gossaigaon to Dhaligaon - 64 km
- 132kV Gauripur to Bilasipara - 37.6 km
- 132kV Bilasipara to Kokrajhar - 24.2 km
- 132kV Kokrajhar to Salakati - 10 km

### Checklist for identification of Environmental Impacts

Screening Checklist	Yes	No	Remarks
<b>A. Project Sitting: Is the Project area adjacent to or within any of the following environmentally sensitive areas?</b>			
1. Cultural heritage site		No	No cultural heritage site nearby proposed OPGW line.
2. Legally protected Area (core zone or buffer zone)		No	Proposed OPGW line does not passing through any Legally protected Area.
3. Wetland/ Mangrove/ Estuarine	Yes		There are small streams passing through the RoW.
4. Special area for protecting biodiversity		No	
<b>B. Potential Environmental Impacts: Will the Project cause</b>			
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to physical cultural resources?		No	There are no such environmental impacts envisaged due to the replacement of existing old ground wire by OPGW.
2. Disturbance to precious ecology (e.g. sensitive or protected areas)?		No	
3. Alteration of surface water hydrology of water ways resulting in increased sediment in streams affected by increased soil erosion at construction site?		No	Alteration of surface water hydrology will occur.
4. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in Construction?		No	Alteration of surface water hydrology will occur.
5. Increased air pollution due to project construction and operation?		No	No air pollution will occur due to the replacement of existing old ground wire by OPGW.
6. Noise and vibration due to project construction or operation?	Yes		Insignificant noise may occur during the replacement of existing old ground wire by OPGW.
7. Involuntary resettlement of people? (physical displacement and/or economic displacement)		No	
8. Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		No	

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Screening Checklist	Yes	No	Remarks
9. Poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases (such as STI's and HIV/AIDS) from workers to local populations?		No	Contractor will hire local labor to extent possible. Contractor will provide adequate facility to labor camp within existing AEGCL quarter and work site for those hired from outside. Regular health checkup and awareness camp regarding transmission of communicable diseases (such as Covid 19, STI's and HIV/AIDS) will be provided by contractor.
10. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents?		No	
11. Social conflicts if workers from other regions or countries are hired?		No	Contractor will hire local labor to extent possible. To avoid social conflict, contractor will provide adequate facility to the labour to stay within AEGCL quarter for those hired from outside.
12. Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		No	During stringing of OPGW, contractor will use existing AEGCL facility at quarter and purchase water through water tankers if required. Filtration water must be done for drinking purpose.
13. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	Yes		Any intervention in safety will be taken care by implementing proper precautionary measures as per safety procedures. Use of PPEs during stringing and operation of OPGW will also be ensured.
14. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?		No	
15. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		No	
16. Generation of solid waste and/or hazardous waste?	Yes		Waste generated will be disposed as per AEGCL existing facility at quarter.
17. Use of chemicals?		No	
18. Generation of wastewater during construction or operation?		No	Existing AEGCL quarter will be used for stay of labour.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

**Checklist for identification of Social Impacts**

Particulars		Observation
<b>A. Proposed Site Location</b>		
1.	Land requirement for the project (GPS parcel)	Proposed replacement of existing old ground wire by OPGW will be done in existing line.
2.	Landownership of the project area: Govt. / Private lands	RoW is available with AEGCL.
3.	Does the project require acquisition of land or transfer of Govt. land/structures? If yes please mention the area of land, number of affected structures, Households	No, No Legally protected Area nearby proposed
4.	Present usage of the land parcels is for: Agricultural purposes Residential purposes Commercial purposes Other purposes (Indicate)	Agriculture activities observed within the RoW during site visit.
5.	Will the project lead to loss of housing?	No
6.	Will the project lead to loss of agricultural land?	No
7.	Will the project cause damage to private property/assets? (Structures, crops, trees, etc.)	No
8.	Will the project lead to loss of common property resources?	No
9.	Will the project lead to loss of livelihood – directly or indirectly?	No
10.	Does the project require relocation of encroachers/squatters? If yes, please elaborate number, gender and nature, if possible.	No
11.	Does the project require relocation of community facilities/Govt. establishment or any object that are of religious, cultural and historical significance.	No
12.	Is the proposed project site encountering any site of archaeological/historical value? Cultural/Symbolic value?	No
13.	Proposed project onsite/off-site support infrastructures are located in an area where residents are: All Mainstream / All Indigenous peoples/Majority Mainstream or Non-indigenous peoples/ Majority Indigenous peoples.	Majority Mainstream (The local inhabitants belong to General/ ST/SC/OBC/MOBC Caste. However, PAPs of belongs to General/ST (5 PAPs)/OBC Caste)
<b>B. Potential Social Impacts- Will the Project cause</b>		
1.	Involuntary resettlement of people? (physical displacement and/or economic displacement)	No
2.	Impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?	No
3.	Will community facilities require relocation?	No
4.	Poor sanitation and solid waste disposal in construction camps and work sites	No, EPC contractor will use for labour camp, construction camp etc.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

**ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

Particulars		Observation
5.	Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?	No, only skilled labour will be hired by EPC contractor and maintain the adequate measure.
6.	Social conflicts relating to inconveniences in living conditions where construction interferes with preexisting roads	May occur at the time of construction Good relation to be maintaining with community people and aware them regarding the Project.
7.	Will a Resettlement Plan be required?	No
8.	Impact on local economy – Fisheries, local tourism related businesses, market places, etc.?	No
9.	Livelihood- Direct impact due to loss of land and structures?	No
10.	Indirect impact due to loss of commercial grounds, market places, places for hawker stalls, etc.?	No
11.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	Any intervention in safety related to stringing of OPGW will be taken care by implementing proper precautionary measures as per safety procedures. Use of PPEs during stringing and operation of OPGW will also be ensured.
12.	Other social concerns relating to inconveniences in living conditions in the project areas?	May occur at the time of stringing of OPGW. EPC will take the adequate measure if required.
13.	Social concerns relating to local inconveniences associated with project operation, if any? (e.g. increased volume of traffic, greater risk of accidents, GBV/SE communicable disease transmission)	May occur at the time of stringing of OPGW. EPC will inform the vehicle movement etc. to tackle the situation as and when necessary.
14.	Does the project related work affect any objects that are of religious and cultural significance to the IPs?	No
15.	Which are the 3 main economic activities that are conducted by the IP population? Will these be affected by the proposed project development and how?	There will be no affect on Agriculture, Poultry farming and small business of local population by the proposed project development.
16.	Is there a requirement for an in-depth Indigenous people's plan? (IPP)	No
17.	Describe any other impacts that have not been covered in this screening form	No
18.	Describe alternatives, if any, to avoid or minimize displacement from private and public lands	Not Applicable

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

**Project Impact Assessment Checklist**

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)
1.	Encroachment on historical / cultural areas, disfiguration of landscape and increased waste generation?		No	No cultural heritage site nearby proposed OPGW line.
2.	Encroachment on precious ecosystem (e.g. Sensitive or protected areas)?		No	Proposed OPGW line does not passing through any Legally protected Area.
3.	Alteration of surface water hydrology of water ways crossed by roads and resulting in increased sediment in streams affected by increased soil erosion at the construction site?		No	Alteration of surface water hydrology will occur.
4.	Deterioration of surface water quality due to silt Runoff, sanitary wastes from worker-based camps and chemicals used in construction?		No	Alteration of surface water hydrology will occur.
5.	Increased local air pollution due to rock crushing, cutting and filling?		No	No air pollution will occur due to the replacement of existing old ground wire by OPGW.
6.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	Yes		Any intervention in safety will be taken care by implementing proper precautionary measures as per safety procedures. Use of PPEs during stringing and operation of OPGW will also be ensured.
7.	Chemical pollution resulting from chemical clearing of vegetation for construction site?		No	
8.	Noise and vibration due to civil works?	Yes		Insignificant noise may occur during the replacement of existing old ground wire by OPGW.
9.	Dislocation or involuntary resettlement of people?		No	
10.	Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		No	
11.	Social conflicts relating to inconveniences in living conditions where construction interferes with pre-existing roads?		No	Contractor will hire local labor to extent possible. To avoid social conflict, contractor will provide adequate facility to the labour to stay within AEGCL quarter for those hired from outside.
12.	Hazardous driving conditions where construction interferes with pre-existing roads?		No	

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)
13.	Creation of temporary breeding habitats for vectors of disease such as mosquitoes and Rodents?		No	
14.	Dislocation and compulsory resettlement of people living in right-of-way of the power Transmission lines?		No	
15.	Environmental disturbances associated with the maintenance of lines (e.g. routine control of vegetative height under the lines)?		No	
16.	Facilitation of access to protected areas in case corridors traverse protected areas?		No	
17.	Disturbances (e.g. noise and chemical pollutants) if herbicides are used to control vegetative height?		No	
18.	Large population influx during project construction and operation that cause increased burden on social infrastructure and services (Such as water supply and sanitation systems)?		No	During stringing of OPGW, contractor will use existing AEGCL facility at quarter and purchase water through water tankers if required. Filtration water must be done for drinking purpose.
19.	Social conflicts if workers from other regions or countries are hired?		No	Contractor will hire local labor to extent possible. To avoid social conflict, contractor will provide adequate facility to the labour to stay within AEGCL quarter for those hired from outside.
20.	Poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from Workers to local populations?		No	Contractor will hire local labor to extent possible. Contractor will provide adequate facility to labor camp within existing AEGCL quarter and work site for those hired from outside. Regular health checkup and awareness camp regarding transmission of communicable diseases (such as Covid 19, STI's and HIV/AIDS) will be provided by contractor.
21.	Risks to community safety associated with maintenance of lines and related facilities?		No	
22.	Community health hazards due to electromagnetic fields, land subsidence, lowered Groundwater table, and salinization?		No	
23.	Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel		No	

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)
	and other Chemicals during construction and operation?			
24.	Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g. high voltage wires, and transmission towers and lines) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		No	
<b>Involuntary Resettlement Screening</b>				
1.	Will the activity be undertaken in public land or existing right of way (RoW)?	Yes		Not Applicable, as the replacement of existing old ground wire by OPGW is within existing right of way (RoW)
2.	If no1 is yes, are there any non-titled people (squatters) who live at the site or within the public and/RoW? Please provide gender disaggregated number.		No	Not Applicable
3.	Will the activity be undertaken in private land but acquired, and then it has been acquired in the anticipation of the program or in the last three years?		No	Not Applicable
4.	If no 3 is yes, when the private land was acquired, the land acquired legally under Gol law? (unknown =No)		No	Not Applicable
5.	If no 3 is yes, are there any outstanding Complaints about the land acquired?		No	Not Applicable
6.	Will the activity require new private land acquisition or use?		No	Not Applicable
7.	If no 6 is yes, the land will be obtained through negotiated settlement or donation?		No	Not Applicable
8.	If no 6 is yes, will it require compulsory land Acquisition?		No	Not Applicable
9.	If no 6 is yes, then will the activity require permanent or temporary relocation or Displacement of any people (titled or non-titled)?		No	Not Applicable
10.	If no 8 is yes, then will there be any loss of housing / accommodation or severely		No	Not Applicable



## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)	
				Not Known	Remarks
	affected households more than 10% of their productive Asset?				
11.	In all cases, will there be any loss of vegetable gardens or agriculture?		No		In all cases crop may be temporarily damaged. Compensation will be paid as per Government norms.
12.	In all cases, will there be any losses of crops, fruit Trees or private structures?		No		Not Applicable
13.	In all cases, will any small or informal businesses have to be moved or closed temporarily or Permanently?		No		Not Applicable
14.	In all cases, will there be temporary or permanent loss of employment as a result of the renovation?		No		Not Applicable
15.	In all cases, will there be temporary or permanent impact on women or vulnerable groups?		No		Not Applicable
<b>Indigenous Peoples Screening</b>		<b>Yes</b>	<b>No</b>	<b>Not Known</b>	<b>Remarks</b>
16.	Are the subproject areas located in scheduled Tribe area?	Yes			Not Applicable, as the present scope of work is replacement of existing old ground wire by OPGW.
17.	Do the applicants belong to scheduled tribes?		No		Not Applicable
18.	Will the project directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. child-rearing, health, education, arts, and governance)		No		Not Applicable
19.	Will the project affect the livelihood systems of Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)		No		Not Applicable
20.	Commercial development of the cultural resources and knowledge of Indigenous Peoples?		No		Not Applicable
21.	Physical displacement from traditional or Customary lands?		No		Not Applicable
22.	Commercial development of natural resources (such as minerals, hydrocarbons, forests, water, hunting or fishing grounds) within customary lands under use that would impact the livelihoods or the cultural, ceremonial, spiritual uses that define the		No		Not Applicable

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –****PACKAGE: M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)	
	identity and community of Indigenous Peoples?				
23.	Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by Indigenous peoples?		No		Not Applicable
24.	Acquisition of lands that are traditionally owned or customarily used occupied or claimed by indigenous peoples?		No		Not Applicable

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

**B. Checklist for the following lines are prepared in a lot, as the lines are interconnected to each other (refer Figure - 1)**

- 220kV Mariani to Samaguri (Circuit-1) (LILO at 220kV Khumtai and 220 kV Jakhalabandha GIS - 169 km.
- 132kV Dibrugarh to Lakwa (LILO at 132kV Behiating & 132 kV Moran, 77 km.
- 220kV Mariani to Namrup - 145 km.

**Checklist for identification of Environmental Impacts**

Screening Checklist	Yes	No	Remarks
<b>A. Project Sitting: Is the Project area adjacent to or within any of the following environmentally sensitive areas?</b>			
1. Cultural heritage site		No	No cultural heritage site nearby proposed OPGW line.
2. Legally protected Area (core zone or buffer zone)		No	Proposed OPGW line does not passing through any Legally protected Area.
3. Wetland/ Mangrove/ Estuarine	Yes		There are small streams passing through the RoW.
4. Special area for protecting biodiversity		No	
<b>B. Potential Environmental Impacts: Will the Project cause</b>			
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to physical cultural resources?		No	There are no such environmental impacts envisaged due to the replacement of existing old ground wire by OPGW.
2. Disturbance to precious ecology (e.g. sensitive or protected areas)?		No	
3. Alteration of surface water hydrology of water ways resulting in increased sediment in streams affected by increased soil erosion at construction site?		No	Alteration of surface water hydrology will occur.
4. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in Construction?		No	Alteration of surface water hydrology will occur.
5. Increased air pollution due to project construction and operation?		No	No air pollution will occur due to the replacement of existing old ground wire by OPGW.
6. Noise and vibration due to project construction or operation?	Yes		Insignificant noise may occur during the replacement of existing old ground wire by OPGW.
7. Involuntary resettlement of people? (physical displacement and/or economic displacement)		No	
8. Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		No	

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Screening Checklist	Yes	No	Remarks
9. Poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases (such as STI's and HIV/AIDS) from workers to local populations?		No	Contractor will hire local labor to extent possible. Contractor will provide adequate facility to labor camp within existing AEGCL quarter and work site for those hired from outside. Regular health checkup and awareness camp regarding transmission of communicable diseases (such as Covid 19, STI's and HIV/AIDS) will be provided by contractor.
10. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents?		No	
11. Social conflicts if workers from other regions or countries are hired?		No	Contractor will hire local labor to extent possible. To avoid social conflict, contractor will provide adequate facility to the labour to stay within AEGCL quarter for those hired from outside.
12. Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		No	During stringing of OPGW, contractor will use existing AEGCL facility at quarter and purchase water through water tankers if required. Filtration water must be done for drinking purpose.
13. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	Yes		Any intervention in safety will be taken care by implementing proper precautionary measures as per safety procedures. Use of PPEs during stringing and operation of OPGW will also be ensured.
14. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?		No	
15. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		No	
16. Generation of solid waste and/or hazardous waste?	Yes		Waste generated will be disposed as per AEGCL existing facility at quarter.
17. Use of chemicals?		No	
18. Generation of wastewater during construction or operation?		No	Existing AEGCL quarter will be used for stay of labour.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

**Checklist for identification of Social Impacts**

Particulars		Observation
<b>A. Proposed Site Location</b>		
1.	Land requirement for the project (GPS parcel)	Proposed replacement of existing old ground wire by OPGW will be done in existing line.
2.	Landownership of the project area: Govt. / Private lands	RoW is available with AEGCL.
3.	Does the project require acquisition of land or transfer of Govt. land/structures? If yes please mention the area of land, number of affected structures, Households	No, No Legally protected Area nearby proposed
4.	Present usage of the land parcels is for: Agricultural purposes Residential purposes Commercial purposes Other purposes (Indicate)	Agriculture activities observed within the RoW during site visit.
5.	Will the project lead to loss of housing?	No
6.	Will the project lead to loss of agricultural land?	No
7.	Will the project cause damage to private property/assets? (Structures, crops, trees, etc.)	No
8.	Will the project lead to loss of common property resources?	No
9.	Will the project lead to loss of livelihood – directly or indirectly?	No
10.	Does the project require relocation of encroachers/squatters? If yes, please elaborate number, gender and nature, if possible.	No
11.	Does the project require relocation of community facilities/Govt. establishment or any object that are of religious, cultural and historical significance.	No
12.	Is the proposed project site encountering any site of archaeological/historical value? Cultural/Symbolic value?	No
13.	Proposed project onsite/off-site support infrastructures are located in an area where residents are: All Mainstream / All Indigenous peoples/Majority Mainstream or Non-indigenous peoples/ Majority Indigenous peoples.	Majority Mainstream (The local inhabitants belong to General/ ST/SC/OBC/MOBC Caste. However, PAPs of belongs to General/ST (5 PAPs)/OBC Caste)
<b>B. Potential Social Impacts- Will the Project cause</b>		
1.	Involuntary resettlement of people? (physical displacement and/or economic displacement)	No
2.	Impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?	No
3.	Will community facilities require relocation?	No
4.	Poor sanitation and solid waste disposal in	No, EPC contractor will use for labour

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

**ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

Particulars		Observation
	construction camps and work sites	camp, construction camp etc.
5.	Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?	No, only skilled labour will be hired by EPC contractor and maintain the adequate measure.
6.	Social conflicts relating to inconveniences in living conditions where construction interferes with preexisting roads	May occur at the time of construction Good relation to be maintaining with community people and aware them regarding the Project.
7.	Will a Resettlement Plan be required?	No
8.	Impact on local economy – Fisheries, local tourism related businesses, market places, etc.?	No
9.	Livelihood- Direct impact due to loss of land and structures?	No
10.	Indirect impact due to loss of commercial grounds, market places, places for hawker stalls, etc.?	No
11.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	Any intervention in safety related to stringing of OPGW will be taken care by implementing proper precautionary measures as per safety procedures. Use of PPEs during stringing and operation of OPGW will also be ensured.
12.	Other social concerns relating to inconveniences in living conditions in the project areas?	May occur at the time of stringing of OPGW. EPC will take the adequate measure if required.
13.	Social concerns relating to local inconveniences associated with project operation, if any? (e.g. increased volume of traffic, greater risk of accidents, GBV/SE communicable disease transmission)	May occur at the time of stringing of OPGW. EPC will inform the vehicle movement etc. to tackle the situation as and when necessary.
14.	Does the project related work affect any objects that are of religious and cultural significance to the IPs?	No
15.	Which are the 3 main economic activities that are conducted by the IP population? Will these be affected by the proposed project development and how?	There will be no affect on Agriculture, Poultry farming and small business of local population by the proposed project development.
16.	Is there a requirement for an in-depth Indigenous people's plan? (IPP)	No
17.	Describe any other impacts that have not been covered in this screening form	No
18.	Describe alternatives, if any, to avoid or minimize displacement from private and public lands	Not Applicable

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

**Project Impact Assessment Checklist**

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)
1.	Encroachment on historical / cultural areas, disfiguration of landscape and increased waste generation?		No	No cultural heritage site nearby proposed OPGW line.
2.	Encroachment on precious ecosystem (e.g. Sensitive or protected areas)?		No	Proposed OPGW line does not passing through any Legally protected Area.
3.	Alteration of surface water hydrology of water ways crossed by roads and resulting in increased sediment in streams affected by increased soil erosion at the construction site?		No	Alteration of surface water hydrology will occur.
4.	Deterioration of surface water quality due to silt Runoff, sanitary wastes from worker-based camps and chemicals used in construction?		No	Alteration of surface water hydrology will occur.
5.	Increased local air pollution due to rock crushing, cutting and filling?		No	No air pollution will occur due to the replacement of existing old ground wire by OPGW.
6.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	Yes		Any intervention in safety will be taken care by implementing proper precautionary measures as per safety procedures. Use of PPEs during stringing and operation of OPGW will also be ensured.
7.	Chemical pollution resulting from chemical clearing of vegetation for construction site?		No	
8.	Noise and vibration due to civil works?	Yes		Insignificant noise may occur during the replacement of existing old ground wire by OPGW.
9.	Dislocation or involuntary resettlement of people?		No	
10.	Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		No	
11.	Social conflicts relating to inconveniences in living conditions where construction interferes with pre-existing roads?		No	Contractor will hire local labor to extent possible. To avoid social conflict, contractor will provide adequate facility to the labour to stay within AEGCL quarter for those hired from outside.
12.	Hazardous driving conditions where construction interferes with pre-existing roads?		No	

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)
13.	Creation of temporary breeding habitats for vectors of disease such as mosquitoes and Rodents?		No	
14.	Dislocation and compulsory resettlement of people living in right-of-way of the power Transmission lines?		No	
15.	Environmental disturbances associated with the maintenance of lines (e.g. routine control of vegetative height under the lines)?		No	
16.	Facilitation of access to protected areas in case corridors traverse protected areas?		No	
17.	Disturbances (e.g. noise and chemical pollutants) if herbicides are used to control vegetative height?		No	
18.	Large population influx during project construction and operation that cause increased burden on social infrastructure and services (Such as water supply and sanitation systems)?		No	During stringing of OPGW, contractor will use existing AEGCL facility at quarter and purchase water through water tankers if required. Filtration water must be done for drinking purpose.
19.	Social conflicts if workers from other regions or countries are hired?		No	Contractor will hire local labor to extent possible. To avoid social conflict, contractor will provide adequate facility to the labour to stay within AEGCL quarter for those hired from outside.
20.	Poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from Workers to local populations?		No	Contractor will hire local labor to extent possible. Contractor will provide adequate facility to labor camp within existing AEGCL quarter and work site for those hired from outside. Regular health checkup and awareness camp regarding transmission of communicable diseases (such as Covid 19, STI's and HIV/AIDS) will be provided by contractor.
21.	Risks to community safety associated with maintenance of lines and related facilities?		No	
22.	Community health hazards due to electromagnetic fields, land subsidence, lowered Groundwater table, and salinization?		No	
23.	Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel		No	



**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

**ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)
	and other Chemicals during construction and operation?			
24.	Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g. high voltage wires, and transmission towers and lines) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		No	
<b>Involuntary Resettlement Screening</b>				
1.	Will the activity be undertaken in public land or existing right of way (RoW)?	Yes		Not Applicable, as the replacement of existing old ground wire by OPGW is within existing right of way (RoW)
2.	If no1 is yes, are there any non-titled people (squatters) who live at the site or within the public and/RoW? Please provide gender disaggregated number.		No	Not Applicable
3.	Will the activity be undertaken in private land but acquired, and then it has been acquired in the anticipation of the program or in the last three years?		No	Not Applicable
4.	If no 3 is yes, when the private land was acquired, the land acquired legally under Gol law? (unknown =No)		No	Not Applicable
5.	If no 3 is yes, are there any outstanding Complaints about the land acquired?		No	Not Applicable
6.	Will the activity require new private land acquisition or use?		No	Not Applicable
7.	If no 6 is yes, the land will be obtained through negotiated settlement or donation?		No	Not Applicable
8.	If no 6 is yes, will it require compulsory land Acquisition?		No	Not Applicable
9.	If no 6 is yes, then will the activity require permanent or temporary relocation or Displacement of any people (titled or non-titled)?		No	Not Applicable
10.	If no 8 is yes, then will there be any loss of housing / accommodation or severely		No	Not Applicable

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)	
				Not Known	Remarks
	affected households more than 10% of their productive Asset?				
11.	In all cases, will there be any loss of vegetable gardens or agriculture?		No		In all cases crop may be temporarily damaged. Compensation will be paid as per Government norms.
12.	In all cases, will there be any losses of crops, fruit Trees or private structures?		No		Not Applicable
13.	In all cases, will any small or informal businesses have to be moved or closed temporarily or Permanently?		No		Not Applicable
14.	In all cases, will there be temporary or permanent loss of employment as a result of the renovation?		No		Not Applicable
15.	In all cases, will there be temporary or permanent impact on women or vulnerable groups?		No		Not Applicable
<b>Indigenous Peoples Screening</b>		<b>Yes</b>	<b>No</b>	<b>Not Known</b>	<b>Remarks</b>
16.	Are the subproject areas located in scheduled Tribe area?	Yes			Not Applicable, as the present scope of work is replacement of existing old ground wire by OPGW.
17.	Do the applicants belong to scheduled tribes?		No		Not Applicable
18.	Will the project directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. child-rearing, health, education, arts, and governance)		No		Not Applicable
19.	Will the project affect the livelihood systems of Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)		No		Not Applicable
20.	Commercial development of the cultural resources and knowledge of Indigenous Peoples?		No		Not Applicable
21.	Physical displacement from traditional or Customary lands?		No		Not Applicable
22.	Commercial development of natural resources (such as minerals, hydrocarbons, forests, water, hunting or fishing grounds) within customary lands under use that would impact the livelihoods or the cultural, ceremonial, spiritual uses that define the		No		Not Applicable

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)
	identity and community of Indigenous Peoples?			
23.	Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by Indigenous peoples?		No	Not Applicable
24.	Acquisition of lands that are traditionally owned or customarily used occupied or claimed by indigenous peoples?		No	Not Applicable

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

**C. 132kV Majuli to Nalkata (North Lakhimpur) - 46 km**

**Checklist for identification of Environmental Impacts**

Screening Checklist	Yes	No	Remarks
<b>A. Project Sitting: Is the Project area adjacent to or within any of the following environmentally sensitive areas?</b>			
1. Cultural heritage site		No	No cultural heritage site nearby proposed OPGW line.
2. Legally protected Area (core zone or buffer zone)		No	Proposed OPGW line does not passing through any Legally protected Area.
3. Wetland/ Mangrove/ Estuarine	Yes		There are small streams passing through the RoW.
4. Special area for protecting biodiversity		No	
<b>B. Potential Environmental Impacts: Will the Project cause</b>			
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to physical cultural resources?		No	There are no such environmental impacts envisaged due to the replacement of existing old ground wire by OPGW.
2. Disturbance to precious ecology (e.g. sensitive or protected areas)?		No	
3. Alteration of surface water hydrology of water ways resulting in increased sediment in streams affected by increased soil erosion at construction site?		No	Alteration of surface water hydrology will occur.
4. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in Construction?		No	Alteration of surface water hydrology will occur.
5. Increased air pollution due to project construction and operation?		No	No air pollution will occur due to the replacement of existing old ground wire by OPGW.
6. Noise and vibration due to project construction or operation?	Yes		Insignificant noise may occur during the replacement of existing old ground wire by OPGW.
7. Involuntary resettlement of people? (physical displacement and/or economic displacement)		No	
8. Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		No	
9. Poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases (such as STI's and HIV/AIDS) from workers to local populations?		No	Contractor will hire local labor to extent possible. Contractor will provide adequate facility to labor camp within existing AEGCL quarter and work site for those hired from outside.  Regular health checkup and awareness camp regarding transmission of communicable diseases (such as Covid 19,

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Screening Checklist	Yes	No	Remarks
			STI's and HIV/AIDS) will be provided by contractor.
10. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents?		No	
11. Social conflicts if workers from other regions or countries are hired?		No	Contractor will hire local labor to extent possible. To avoid social conflict, contractor will provide adequate facility to the labour to stay within AEGCL quarter for those hired from outside.
12. Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		No	During stringing of OPGW, contractor will use existing AEGCL facility at quarter and purchase water through water tankers if required. Filtration water must be done for drinking purpose.
13. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	Yes		Any intervention in safety will be taken care by implementing proper precautionary measures as per safety procedures. Use of PPEs during stringing and operation of OPGW will also be ensured.
14. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?		No	
15. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		No	
16. Generation of solid waste and/or hazardous waste?	Yes		Waste generated will be disposed as per AEGCL existing facility at quarter.
17. Use of chemicals?		No	
18. Generation of wastewater during construction or operation?		No	Existing AEGCL quarter will be used for stay of labour.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

**Checklist for identification of Social Impacts**

Particulars		Observation
<b>A. Proposed Site Location</b>		
1.	Land requirement for the project (GPS parcel)	Proposed replacement of existing old ground wire by OPGW will be done in existing line.
2.	Landownership of the project area: Govt. / Private lands	RoW is available with AEGCL.
3.	Does the project require acquisition of land or transfer of Govt. land/structures? If yes please mention the area of land, number of affected structures, Households	No, No Legally protected Area nearby proposed
4.	Present usage of the land parcels is for: Agricultural purposes Residential purposes Commercial purposes Other purposes (Indicate)	Agriculture activities observed within the RoW during site visit.
5.	Will the project lead to loss of housing?	No
6.	Will the project lead to loss of agricultural land?	No
7.	Will the project cause damage to private property/assets? (Structures, crops, trees, etc.)	No
8.	Will the project lead to loss of common property resources?	No
9.	Will the project lead to loss of livelihood – directly or indirectly?	No
10.	Does the project require relocation of encroachers/squatters? If yes, please elaborate number, gender and nature, if possible.	No
11.	Does the project require relocation of community facilities/Govt. establishment or any object that are of religious, cultural and historical significance.	No
12.	Is the proposed project site encountering any site of archaeological/historical value? Cultural/Symbolic value?	No
13.	Proposed project onsite/off-site support infrastructures are located in an area where residents are: All Mainstream / All Indigenous peoples/Majority Mainstream or Non-indigenous peoples/ Majority Indigenous peoples.	Majority Mainstream (The local inhabitants belong to General/ ST/SC/OBC/MOBC Caste. However, PAPs of belongs to General/ST (5 PAPs)/OBC Caste)
<b>B. Potential Social Impacts- Will the Project cause</b>		
1.	Involuntary resettlement of people? (physical displacement and/or economic displacement)	No
2.	Impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?	No
3.	Will community facilities require relocation?	No
4.	Poor sanitation and solid waste disposal in construction camps and work sites	No, EPC contractor will use for labour camp, construction camp etc.

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Particulars		Observation
5.	Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?	No, only skilled labour will be hired by EPC contractor and maintain the adequate measure.
6.	Social conflicts relating to inconveniences in living conditions where construction interferes with preexisting roads	May occur at the time of construction Good relation to be maintaining with community people and aware them regarding the Project.
7.	Will a Resettlement Plan be required?	No
8.	Impact on local economy – Fisheries, local tourism related businesses, market places, etc.?	No
9.	Livelihood- Direct impact due to loss of land and structures?	No
10.	Indirect impact due to loss of commercial grounds, market places, places for hawker stalls, etc.?	No
11.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	Any intervention in safety related to stringing of OPGW will be taken care by implementing proper precautionary measures as per safety procedures. Use of PPEs during stringing and operation of OPGW will also be ensured.
12.	Other social concerns relating to inconveniences in living conditions in the project areas?	May occur at the time of stringing of OPGW. EPC will take the adequate measure if required.
13.	Social concerns relating to local inconveniences associated with project operation, if any? (e.g. increased volume of traffic, greater risk of accidents, GBV/SE communicable disease transmission)	May occur at the time of stringing of OPGW. EPC will inform the vehicle movement etc. to tackle the situation as and when necessary.
14.	Does the project related work affect any objects that are of religious and cultural significance to the IPs?	No
15.	Which are the 3 main economic activities that are conducted by the IP population? Will these be affected by the proposed project development and how?	There will be no affect on Agriculture, Poultry farming and small business of local population by the proposed project development.
16.	Is there a requirement for an in-depth Indigenous people's plan? (IPP)	No
17.	Describe any other impacts that have not been covered in this screening form	No
18.	Describe alternatives, if any, to avoid or minimize displacement from private and public lands	Not Applicable

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

**Project Impact Assessment Checklist**

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)
1.	Encroachment on historical / cultural areas, disfiguration of landscape and increased waste generation?		No	No cultural heritage site nearby proposed OPGW line.
2.	Encroachment on precious ecosystem (e.g. Sensitive or protected areas)?		No	Proposed OPGW line does not passing through any Legally protected Area.
3.	Alteration of surface water hydrology of water ways crossed by roads and resulting in increased sediment in streams affected by increased soil erosion at the construction site?		No	Alteration of surface water hydrology will occur.
4.	Deterioration of surface water quality due to silt Runoff, sanitary wastes from worker-based camps and chemicals used in construction?		No	Alteration of surface water hydrology will occur.
5.	Increased local air pollution due to rock crushing, cutting and filling?		No	No air pollution will occur due to the replacement of existing old ground wire by OPGW.
6.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	Yes		Any intervention in safety will be taken care by implementing proper precautionary measures as per safety procedures. Use of PPEs during stringing and operation of OPGW will also be ensured.
7.	Chemical pollution resulting from chemical clearing of vegetation for construction site?		No	
8.	Noise and vibration due to civil works?	Yes		Insignificant noise may occur during the replacement of existing old ground wire by OPGW.
9.	Dislocation or involuntary resettlement of people?		No	
10.	Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		No	
11.	Social conflicts relating to inconveniences in living conditions where construction interferes with pre-existing roads?		No	Contractor will hire local labor to extent possible. To avoid social conflict, contractor will provide adequate facility to the labour to stay within AEGCL quarter for those hired from outside.
12.	Hazardous driving conditions where construction interferes with pre-existing roads?		No	



## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)
13.	Creation of temporary breeding habitats for vectors of disease such as mosquitoes and Rodents?		No	
14.	Dislocation and compulsory resettlement of people living in right-of-way of the power Transmission lines?		No	
15.	Environmental disturbances associated with the maintenance of lines (e.g. routine control of vegetative height under the lines)?		No	
16.	Facilitation of access to protected areas in case corridors traverse protected areas?		No	
17.	Disturbances (e.g. noise and chemical pollutants) if herbicides are used to control vegetative height?		No	
18.	Large population influx during project construction and operation that cause increased burden on social infrastructure and services (Such as water supply and sanitation systems)?		No	During stringing of OPGW, contractor will use existing AEGCL facility at quarter and purchase water through water tankers if required. Filtration water must be done for drinking purpose.
19.	Social conflicts if workers from other regions or countries are hired?		No	Contractor will hire local labor to extent possible. To avoid social conflict, contractor will provide adequate facility to the labour to stay within AEGCL quarter for those hired from outside.
20.	Poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from Workers to local populations?		No	Contractor will hire local labor to extent possible. Contractor will provide adequate facility to labor camp within existing AEGCL quarter and work site for those hired from outside. Regular health checkup and awareness camp regarding transmission of communicable diseases (such as Covid 19, STI's and HIV/AIDS) will be provided by contractor.
21.	Risks to community safety associated with maintenance of lines and related facilities?		No	
22.	Community health hazards due to electromagnetic fields, land subsidence, lowered Groundwater table, and salinization?		No	
23.	Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel		No	

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

**ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)
	and other Chemicals during construction and operation?			
24.	Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g. high voltage wires, and transmission towers and lines) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		No	
<b>Involuntary Resettlement Screening</b>				
1.	Will the activity be undertaken in public land or existing right of way (RoW)?	Yes		Not Applicable, as the replacement of existing old ground wire by OPGW is within existing right of way (RoW)
2.	If no1 is yes, are there any non-titled people (squatters) who live at the site or within the public and/RoW? Please provide gender disaggregated number.		No	Not Applicable
3.	Will the activity be undertaken in private land but acquired, and then it has been acquired in the anticipation of the program or in the last three years?		No	Not Applicable
4.	If no 3 is yes, when the private land was acquired, the land acquired legally under Gol law? (unknown =No)		No	Not Applicable
5.	If no 3 is yes, are there any outstanding Complaints about the land acquired?		No	Not Applicable
6.	Will the activity require new private land acquisition or use?		No	Not Applicable
7.	If no 6 is yes, the land will be obtained through negotiated settlement or donation?		No	Not Applicable
8.	If no 6 is yes, will it require compulsory land Acquisition?		No	Not Applicable
9.	If no 6 is yes, then will the activity require permanent or temporary relocation or Displacement of any people (titled or non-titled)?		No	Not Applicable
10.	If no 8 is yes, then will there be any loss of housing / accommodation or severely		No	Not Applicable

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

**ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)	
				Not Known	Remarks
	affected households more than 10% of their productive Asset?				
11.	In all cases, will there be any loss of vegetable gardens or agriculture?		No		In all cases crop may be temporarily damaged. Compensation will be paid as per Government norms.
12.	In all cases, will there be any losses of crops, fruit Trees or private structures?		No		Not Applicable
13.	In all cases, will any small or informal businesses have to be moved or closed temporarily or Permanently?		No		Not Applicable
14.	In all cases, will there be temporary or permanent loss of employment as a result of the renovation?		No		Not Applicable
15.	In all cases, will there be temporary or permanent impact on women or vulnerable groups?		No		Not Applicable
<b>Indigenous Peoples Screening</b>		<b>Yes</b>	<b>No</b>	<b>Not Known</b>	<b>Remarks</b>
16.	Are the subproject areas located in scheduled Tribe area?	Yes			Not Applicable, as the present scope of work is replacement of existing old ground wire by OPGW.
17.	Do the applicants belong to scheduled tribes?		No		Not Applicable
18.	Will the project directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. child-rearing, health, education, arts, and governance)		No		Not Applicable
19.	Will the project affect the livelihood systems of Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)		No		Not Applicable
20.	Commercial development of the cultural resources and knowledge of Indigenous Peoples?		No		Not Applicable
21.	Physical displacement from traditional or Customary lands?		No		Not Applicable
22.	Commercial development of natural resources (such as minerals, hydrocarbons, forests, water, hunting or fishing grounds) within customary lands under use that would impact the livelihoods or the cultural, ceremonial, spiritual uses that define the		No		Not Applicable

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –  
PACKAGE: M (OPGW)**

**ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

Sl.No.	Potential Environmental Impacts Will the Project cause	Yes	No	Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)
	identity and community of Indigenous Peoples?			
23.	Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by Indigenous peoples?		No	Not Applicable
24.	Acquisition of lands that are traditionally owned or customarily used occupied or claimed by indigenous peoples?		No	Not Applicable

### 7.1 A Brief Assessment of Climate Risk and Adaptation at the Design Stage

As the present scope of work is replacement of existing old ground wire by OPGW and thus Assessment of Climate Risk and Adaptation at the Design Stage is not applicable.

### 7.2 Cumulative Impacts

As the present scope of work is replacement of existing old ground wire by OPGW and thus, cumulative is not applicable.

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

## 8 AUDIT FINDINGS AND PROPOSED REMEDIATION MEASURES

Table - 6: Audit Findings and Proposed Remediation Measures

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Audit Findings	Remediation Measures
1.	132kV Gossaigaon to Gauripur	Kokrajhar and Dhubri	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be some disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Minor noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>The speed limits of vehicles during movement on unpaved roads will be restricted.</li> <li>Covering of vehicles carrying construction material, if required.</li> <li>During working hours EPC Contractor will follow all safety protocols and provide required good quality Personnel Protective Equipment (PPEs) to all workers to avoid health hazard.</li> <li>Traction machine will be used to reduce noise during stringing of OPGW.</li> <li>Compensation will be paid for temporary damage (if any) of by EPC contractor.</li> <li>EPC Contractor will establish the labor camp (s) for those hired from outside in the existing AEGCL quarter.</li> <li>Laborers should be informed by the EPC project officials to avoid to keep relation with the local people and do not go inside the nearby residential area without prior permission.</li> </ul>
2.	132kV Gossaigaon to Dhaligaon	Kokrajhar and Bongaigaon	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be some disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Minor noise may takes place during</li> </ul>	<ul style="list-style-type: none"> <li>The speed limits of vehicles during movement on unpaved roads will be restricted.</li> <li>Covering of vehicles carrying construction material, if required.</li> <li>During working hours EPC Contractor will follow all safety protocols and provide required good quality Personnel Protective Equipment (PPEs) to all workers to avoid health hazard.</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Audit Findings	Remediation Measures
				<ul style="list-style-type: none"> <li>replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>Traction machine will be used to reduce noise during stringing of OPGW.</li> <li>Compensation will be paid for temporary damage (if any) of by EPC contractor.</li> <li>EPC Contractor will establish the labor camp (s) for those hired from outside in the existing AEGCL quarter.</li> <li>Laborers should be informed by the EPC project officials to avoid to keep relation with the local people and do not go inside the nearby residential area without prior permission.</li> </ul>
3.	132kV Gauripur to Bilasipara	Dhubri	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be some disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Minor noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>The speed limits of vehicles during movement on unpaved roads will be restricted.</li> <li>Covering of vehicles carrying construction material, if required.</li> <li>During working hours EPC Contractor will follow all safety protocols and provide required good quality Personnel Protective Equipment (PPEs) to all workers to avoid health hazard.</li> <li>Traction machine will be used to reduce noise during stringing of OPGW.</li> <li>Compensation will be paid for temporary damage (if any) of by EPC contractor.</li> <li>EPC Contractor will establish the labor camp (s) for those hired from outside in the existing AEGCL quarter.</li> <li>Laborers should be informed by the EPC project officials to avoid to keep relation with the local people and do not go inside the nearby residential area without prior permission.</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Audit Findings	Remediation Measures
4.	132kV Bilasipara to Kokrajhar	Dhubri and Kokrajhar	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be some disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Minor noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>The speed limits of vehicles during movement on unpaved roads will be restricted.</li> <li>Covering of vehicles carrying construction material, if required.</li> <li>During working hours EPC Contractor will follow all safety protocols and provide required good quality Personnel Protective Equipment (PPEs) to all workers to avoid health hazard.</li> <li>Traction machine will be used to reduce noise during stringing of OPGW.</li> <li>Compensation will be paid for temporary damage (if any) of by EPC contractor.</li> <li>EPC Contractor will establish the labor camp (s) for those hired from outside in the existing AEGCL quarter.</li> <li>Laborers should be informed by the EPC project officials to avoid to keep relation with the local people and do not go inside the nearby residential area without prior permission.</li> </ul>
5.	132kV Kokrajhar to Salakati		AEGCL Existing T/L	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be some disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Minor noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during</li> </ul>	<ul style="list-style-type: none"> <li>The speed limits of vehicles during movement on unpaved roads will be restricted.</li> <li>Covering of vehicles carrying construction material, if required.</li> <li>During working hours EPC Contractor will follow all safety protocols and provide required good quality Personnel Protective Equipment (PPEs) to all workers to avoid health hazard.</li> <li>Traction machine will be used to reduce noise during stringing of OPGW.</li> <li>Compensation will be paid for temporary damage</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Audit Findings	Remediation Measures
				<ul style="list-style-type: none"> <li>replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>(if any) of by EPC contractor.</li> <li>EPC Contractor will establish the labor camp (s) for those hired from outside in the existing AEGCL quarter.</li> <li>Laborers should be informed by the EPC project officials to avoid to keep relation with the local people and do not go inside the nearby residential area without prior permission.</li> </ul>
6.	220kV Mariani to Samaguri (Circuit-1) (LILo at 220kV Khumtai and 220 kV Jakhlabandha GIS	Jorhat, Nagaon and Golaghat	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be some disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Minor noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>The speed limits of vehicles during movement on unpaved roads will be restricted.</li> <li>Covering of vehicles carrying construction material, if required.</li> <li>During working hours EPC Contractor will follow all safety protocols and provide required good quality Personnel Protective Equipment (PPEs) to all workers to avoid health hazard.</li> <li>Traction machine will be used to reduce noise during stringing of OPGW.</li> <li>Compensation will be paid for temporary damage (if any) of by EPC contractor.</li> <li>EPC Contractor will establish the labor camp (s) for those hired from outside in the existing AEGCL quarter.</li> <li>Laborers should be informed by the EPC project officials to avoid to keep relation with the local people and do not go inside the nearby residential area without prior permission.</li> </ul>
7.	132kV Majuli to Nalkata (North Lakhimpur)	Majuli and North Lakhimpur	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the</li> </ul>	<ul style="list-style-type: none"> <li>The speed limits of vehicles during movement on unpaved roads will be restricted.</li> </ul>



## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Audit Findings	Remediation Measures
				<p>transportation of materials.</p> <ul style="list-style-type: none"> <li>• There may be some disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>• Minor noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>• Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>• Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>• Covering of vehicles carrying construction material, if required.</li> <li>• During working hours EPC Contractor will follow all safety protocols and provide required good quality Personnel Protective Equipment (PPEs) to all workers to avoid health hazard.</li> <li>• Traction machine will be used to reduce noise during stringing of OPGW.</li> <li>• Compensation will be paid for temporary damage (if any) of by EPC contractor.</li> <li>• EPC Contractor will establish the labor camp (s) for those hired from outside in the existing AEGCL quarter.</li> <li>• Laborers should be informed by the EPC project officials to avoid to keep relation with the local people and do not go inside the nearby residential area without prior permission.</li> </ul>
8.	132kV Dibrugarh to Lakwa (LILO at 132kV Behiating & 132 kV Moran	Dibrugarh and Sivasagar	AEGCL Existing T/L	<ul style="list-style-type: none"> <li>• Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>• There may be some disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>• Minor noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>• Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>• The speed limits of vehicles during movement on unpaved roads will be restricted.</li> <li>• Covering of vehicles carrying construction material, if required.</li> <li>• During working hours EPC Contractor will follow all safety protocols and provide required good quality Personnel Protective Equipment (PPEs) to all workers to avoid health hazard.</li> <li>• Traction machine will be used to reduce noise during stringing of OPGW.</li> <li>• Compensation will be paid for temporary damage (if any) of by EPC contractor.</li> <li>• EPC Contractor will establish the labor camp (s) for</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Sl. No.	Name of Proposed OPGW line	Location (District)	Status of Land	Audit Findings	Remediation Measures
				<ul style="list-style-type: none"> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>those hired from outside in the existing AEGCL quarter.</li> <li>Laborers should be informed by the EPC project officials to avoid to keep relation with the local people and do not go inside the nearby residential area without prior permission.</li> </ul>
9.	220kV Mariani to Namrup		AEGCL Existing T/L	<ul style="list-style-type: none"> <li>Inconvenience may be caused to local residents and road users from the transportation of materials.</li> <li>There may be some disturbances and safety issues may arise to local residents during replacement of existing old ground wire by OPGW.</li> <li>Minor noise may takes place during replacement of existing old ground wire by OPGW.</li> <li>Temporary crop damage may occur during replacement of existing old ground wire by OPGW.</li> <li>Social conflict with local people and labours hired from outside by contractor may arise during replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>The speed limits of vehicles during movement on unpaved roads will be restricted.</li> <li>Covering of vehicles carrying construction material, if required.</li> <li>During working hours EPC Contractor will follow all safety protocols and provide required good quality Personnel Protective Equipment (PPEs) to all workers to avoid health hazard.</li> <li>Traction machine will be used to reduce noise during stringing of OPGW.</li> <li>Compensation will be paid for temporary damage (if any) of by EPC contractor.</li> <li>EPC Contractor will establish the labor camp (s) for those hired from outside in the existing AEGCL quarter.</li> <li>Laborers should be informed by the EPC project officials to avoid to keep relation with the local people and do not go inside the nearby residential area without prior permission.</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

## 9 ENVIRONMENTAL &amp; SOCIAL MANAGEMENT PLAN (ESMP) WITH SPECIFIC POTENTIAL ES IMPACTS

Table – 7: Environmental &amp; Social Management Plan (ESMP)

Aspect/Project activity	Location (with GPS Coordinates)/type of impact	Impacts	Mitigation Measures
<b>PRE-CONSTRUCTION PHASE</b>			
<b>A. Physical Environment</b>			
Location and design	Transmission line alignment	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>
Interference with drainage patterns/ Irrigation channels/ rivers	Transmission line alignment	<ul style="list-style-type: none"> <li>Loss of drainage pattern /agricultural production.</li> </ul>	<ul style="list-style-type: none"> <li>Stringing of OPGW will be done mostly in non-monsoon season and will avoid crop season.</li> </ul>
<b>B. Ambient Environment</b>			
Location and design	Transmission line alignment	<ul style="list-style-type: none"> <li>Exposure to noise level from the transmission line causing nuisance to neighboring properties.</li> </ul>	<ul style="list-style-type: none"> <li>Ambient noise levels monitoring at the subproject area and distance from nearby dwellings for establish baseline in the project area has been done.</li> </ul>
Location of land for transmission towers	Transmission line alignment	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement existing old ground wire by OPGW.</li> </ul>
<b>C. Ecological Environment</b>			
Encroachment into precious ecological areas	Transmission line alignment	<ul style="list-style-type: none"> <li>Loss of precious ecological values/ damage to precious species.</li> </ul>	<ul style="list-style-type: none"> <li>Avoid disturbance/damage to the precious ecological values/ to precious species during replacement of existing old ground wire by OPGW.</li> </ul>
Cutting of Trees	Transmission line alignment	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>
Exposure to electro-magnetic (EM) interference	Transmission line alignment	<ul style="list-style-type: none"> <li>As the scope of work is replacement of existing old ground wire by OPGW, there may be insignificant EM interference during stringing of OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>Proper precautionary safety measures related EM interference will be taken care during stringing of OPGW.</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Aspect/Project activity	Location (with GPS Coordinates)/type of impact	Impacts	Mitigation Measures
<b>D. Social Environment</b>			
Involuntary resettlement or land acquisition	Transmission line alignment	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>
Encroachment into farm land	Transmission line alignment	<ul style="list-style-type: none"> <li>Loss of agricultural productivity</li> </ul>	<ul style="list-style-type: none"> <li>Work will be started on the site with client approval and prior consultation with land owners.</li> </ul>
Interference with drainage patterns/ Irrigation channels/ rivers	Transmission line alignment	<ul style="list-style-type: none"> <li>Loss of drainage pattern /agricultural production.</li> </ul>	<ul style="list-style-type: none"> <li>Stringing of OPGW will be done mostly in non-monsoon season and will avoid crop season.</li> </ul>
Cutting of Trees	Transmission line alignment	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>
<b>CONSTRUCTION PHASE</b>			
<b>A. Physical Environment</b>			
Site clearance	Transmission line alignment	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>
Disturbance to public utility services- Water supply, sanitation	Transmission line alignment	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>
Uncontrolled erosion/silt runoff	Transmission line alignment	<ul style="list-style-type: none"> <li>Soil loss, downstream siltation.</li> </ul>	<ul style="list-style-type: none"> <li>Uses of existing roads to possible extend for the transportation of material site.</li> </ul>
<b>B. Ambient Environment</b>			
Equipment layout and installation	Transmission line alignment	<ul style="list-style-type: none"> <li>Noise and vibrations from the construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>Proper maintenance of vehicles and machinery to be used at project site.</li> <li>Following minimize ground disturbance construction techniques for the project.</li> </ul>
Surplus earth work/soil	Transmission line alignment	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>
Construction of Transmission towers	Transmission line alignment	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable, as the scope of work is replacement of existing old ground wire by OPGW.</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Aspect/Project activity	Location (with GPS Coordinates)/type of impact	Impacts	Mitigation Measures
Provision of facilities for construction workers	Construction labour camp	<ul style="list-style-type: none"> <li>Contamination of receptors (land, water, air). Health Impact on labour due to lack of basic amenities.</li> </ul>	<ul style="list-style-type: none"> <li>Existing AEGCL staff quarters nearby the line will be used as project office and labour camps.</li> </ul>
Construction works and machine operations	Transmission line alignment	<ul style="list-style-type: none"> <li>Noise, vibration and operator safety, efficient operation.</li> <li>Noise, vibration, equipment wears and tear.</li> <li>Injury and sickness of workers and members of the public.</li> <li>Incidents/accidents; GBV/SE;</li> <li>Electrocution and other accident may occur due to lack of proper awareness of the Workers.</li> <li>COVID-19 Response</li> <li>Lack of proper knowledge/training, unhygienic living conditions, occupational hazards may cause spread of diseases in camps; Potential conflict between migrant workforce and local may took place.</li> <li>Road safety</li> </ul>	<ul style="list-style-type: none"> <li>Scheduled maintenance of construction equipment and machines.</li> <li>Follow noise control regulations and national and international standards during construction phase.</li> <li>Installation of adequate signage and barriers around charged components.</li> <li>Implementation of approved health and safety plan and provide workers.</li> <li>Provide required PPE to workers, working on noisy machine</li> <li>Training to workers on health and safety requirements including on COVID-19, AIDS and sexually transmitted diseases (STD).</li> <li>Preparation of Covid-19 Response &amp; Management Plan following guidelines of Gol, World Health Organization, International Labour Organization etc.</li> <li>Reporting and recording of incidents and accidents at project site.</li> <li>Traffic Management guidelines will be followed.</li> <li>Instruction to drivers of construction vehicles to strictly follow road regulations;</li> <li>Installation of adequate and clearly visible warning signs (such as danger, detour, cross here, works in progress, people at work, etc.) at designated sites.</li> </ul>
Storage of chemicals and materials	Transmission line alignment	<ul style="list-style-type: none"> <li>Contamination of receptors (land, water, air).</li> </ul>	<ul style="list-style-type: none"> <li>Storage of fuel and other hazardous materials on paved surface with spill control and limited access.</li> <li>Record of spill control during the project with details of type and quantities of chemical spilled.</li> </ul>
<b>C. Ecological Environment</b>			
Wood/vegetation	Transmission line construction site	<ul style="list-style-type: none"> <li>Loss of vegetation and</li> </ul>	<ul style="list-style-type: none"> <li>Trimming /cutting of trees will be done as per</li> </ul>

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Aspect/Project activity	Location (with GPS Coordinates)/type of impact	Impacts	Mitigation Measures
harvesting, cut and fill operations		deforestation <ul style="list-style-type: none"> <li>• Effect on fauna (including avifauna)</li> </ul>	requirement. <ul style="list-style-type: none"> <li>• Construction workers should be provided with gas cylinders for cooking</li> <li>• Prohibition of use of wood burning in the project area during their employment.</li> <li>• Preventing work force from disturbing the flora, fauna including hunting of animals and fishing in water bodies.</li> <li>• Provision of penalty on work force involved in illegal poaching and hunting.</li> <li>• Awareness program regarding conservation of flora, fauna including ground vegetation to all workers.</li> </ul>
<b>D. Social Environment</b>			
Construction works at project site and material transportation	Transmission line alignment site and labour camp	<ul style="list-style-type: none"> <li>• Community disturbance and health and safety</li> <li>• Community health and safety due to air pollution and increase in noise level</li> <li>• Human and Animal interference in Transmission line area</li> <li>• Potential conflict between migrant workforce and local may took place</li> <li>• Chances of finding archaeological /cultural artifacts</li> <li>• Loss of agricultural productivity</li> <li>• Road safety</li> </ul>	<ul style="list-style-type: none"> <li>• Avoiding storage of construction materials beside the road, around water bodies, residential or CPR.</li> <li>• Construction materials will be covered with tarpaulin, if required.</li> <li>• Water sprinkling to minimize the dust.</li> <li>• Proper maintenance of construction machinery.</li> <li>• Reinstated of agriculture land following completion of construction.</li> <li>• Compensation for loss of agriculture production, if any.</li> <li>• Traffic Management guidelines will be followed.</li> <li>• Training session to the workforce to avoid conflict with local people during project work.</li> <li>• Instruction to the workers not to remove such articles (if found any) and immediately inform to the Supervisor of the EPC and further to Environmental Specialist of PMU.</li> </ul>

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

## 10 ENVIRONMENTAL AND SOCIAL MONITORING PLAN (ESMOP)

Table - 8: Environmental and Social Monitoring Plan

Environmental component	Project stage	Parameters to be monitored	Location	Frequency <sup>1</sup>	Standards	Implementation	Supervision	Compliance Action
1. Air Quality	A. Pre-Construction Stage	PM10, PM2.5, along with Meteorological data-temperature Humidity, wind speed, wind direction.	Inside the substation boundary	One time	National Air quality standards of CPCB	EPC by CPCB approved laboratory	AEGCL - PMU/ AEGCL Field officials & PMC	Complied, baseline monitoring for this stage conducted through approved laboratory.
	B. Construction Stage	PM10, PM2.5, along with Meteorological data-temperature Humidity, wind speed, wind direction.	Same location as selected during pre-construction period	Twice a year	National Air quality standards of CPCB	EPC by CPCB approved laboratory	AEGCL - PMU/ AEGCL Field Officials & PMC	The monitoring at adequate locations through approved laboratory.
	C. Operation Stage	PM10, PM2.5, along with Meteorological data-temperature Humidity, wind speed, wind direction.	Same location as selected during pre-construction period	One time	National Air quality standards of CPCB	EPC by CPCB approved laboratory	AEGCL - PMU/ AEGCL Field Officials & PMC	Will comply for defect liability Period only. AEGCL will comply for operation stage.
2. Water Quality	A. Pre-Construction Stage	As per IS: 10500 (PH, Colour, TSS, Conductivity, Odour, Nitrate, Fluoride, Sulphates, Chloride, DO, BOD, T. coliform, E. coliform, Dissolved Iron, total pesticides, Floating materials- wood, plastic, rubber etc. Oil and grease, TDS Turbidity, Total hardness, (as	Nearest downstream spring/hand pump along the Project site	One time	National water quality standards of CPCB	EPC by CPCB approved laboratory	AEGCL - PMU/ AEGCL Field Officials & PMC	Complied, baseline monitoring for this stage conducted through approved laboratory.

<sup>1</sup> Here the frequency means the frequency for the monitoring report.

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Environmental component	Project stage	Parameters to be monitored	Location	Frequency <sup>1</sup>	Standards	Implementation	Supervision	Compliance Action
		CaCO <sub>3</sub> ), corrosivity, Taste).						
	B. Construction Stage	As per IS:10500 {pH, Colour, TSS, Conductivity, Odour, Nitrate, Fluoride, Sulphates, Chloride, DO, BOD, T. coliform, E. coliform, Dissolved Iron, total pesticides, Floating materials- wood, plastic, rubber etc. Oil and grease, TDS, Turbidity, Total hardness, (as CaCO <sub>3</sub> ), corrosivity, Taste}.	Nearest downstream spring/hand pump along the Project site	Twice a year	National water quality standards of CPCB	EPC by CPCB approved laboratory	AEGCL - PMU/ AEGCL Field officials & PMC	The monitoring at adequate locations through approved laboratory.
	C. Operation Stage	As per IS: 10500 (PH, Colour, TSS, Conductivity, Odour, Nitrate, Fluoride, Sulphates, Chloride, DO, BOD, T. coliform, E. coliform, Dissolved Iron, total pesticides, Floating materials- wood, plastic, rubber etc. Oil and grease, TDS, Turbidity, Total hardness, (as CaCO <sub>3</sub> ), corrosivity, Taste).	Nearest downstream spring/hand pump along the Project site	One Time	National water quality standards of CPCB	EPC by CPCB approved laboratory	AEGCL - PMU/ AEGCL Field officials & PMC	Will comply for defect liability Period only. AEGCL will comply for operation stage.
3.Noise/ Vibration	A. Pre-Construction Stage	Noise level (dB level) On hourly basis for 24 hours	Inside the substation Boundary	One Time	CPCB standards for Noise and vibrations	EPC by CPCB approved laboratory	AEGCL- PMU/ AEGCL Field officials & PMC	Complied, baseline monitoring for this stage conducted through approved laboratory.
	B. Construction Stage	Noise level (dB level) On hourly basis for 24 hours	Same location as selected during pre-construction	Twice a year	CPCB standards for Noise and vibrations	EPC by CPCB approved laboratory	AEGCL- PMU/ AEGCL Field officials& PMC	The monitoring at adequate locations through



## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Environmental component	Project stage	Parameters to be monitored	Location	Frequency <sup>1</sup>	Standards	Implementation	Supervision	Compliance Action
			period					approved laboratory.
	C. Operation Stage	Noise level (dB level) On hourly basis for 24 hours	Same location as selected during pre-construction period	One Time	CPCB standards for Noise and vibrations	EPC by CPCB approved laboratory	AEGCL- PMU/ AEGCL Field officials & PMC	Will comply for defect liability Period only. AEGCL will comply for operation stage.
4. Soil	A. Pre-Construction Stage	PH, Sulphate (SO3), Chloride, ORP, water Soluble salts EC, Organic Matter, Moisture Content.	Inside the substation Boundary	One time	Technical specifications	EPC by CPCB approved laboratory	AEGCL- PMU/ AEGCL Field officials & PMC	Complied, baseline monitoring for this stage conducted through approved laboratory.
	B. Construction Stage	PH, Sulphate (SO3), Chloride, ORP, water Soluble salts EC, Organic Matter, Moisture Content.	Same location as selected during pre-construction period	Twice a year	Technical specifications	EPC by CPCB approved laboratory	AEGCL- PMU/ AEGCL Field officials & PMC	The monitoring at adequate locations through approved laboratory.
	C. Operation Stage	PH, Sulphate (SO3), Chloride, ORP, water Soluble salts EC, Organic Matter, Moisture Content.	Same location as selected during pre-construction period	One Time	Technical specifications	EPC by CPCB approved laboratory	AEGCL- PMU/ AEGCL Field officials & PMC	Will comply for defect liability Period only. AEGCL will comply for operation stage.
5. EMF	A. Pre-Construction	Design specification	-	Once during final design approval	National Electrical Safety	Contractor (designing), PMC	AEGCL- PMU/ AEGCL Field	Not Applicable

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Environmental component	Project stage	Parameters to be monitored	Location	Frequency <sup>1</sup>	Standards	Implementation	Supervision	Compliance Action
	Stage				Code, American National Standard Institute, C2	and PMU (design review)	officials& PMC	
	B. Construction Stage	Adherence to Design specification during construction work.	Transmission line routes	Continuous activity	National Electrical Safety Code, American National Standard Institute, C2	Contractor	AEGCL- PMU/ AEGCL Field officials& PMC	Will comply
	C. Operation Stage	Maintenance of conductor to ground, phase to phase and circuit to circuit clearances.	Transmission line routes	Continuous activity	National Electrical Safety Code, American National Standard Institute, C2	AEGCL – Field Staff	AEGCL- PMU/ AEGCL Field officials& PMC	Will comply for defect liability Period only. AEGCL will comply for operation stage.
6. Carcass	A. Pre-Construction Stage	Visual inspection for ROW of Transmission Line during detailed route survey.	Transmission line routes	Continuous activity	Identification of carcass (animals/birds)	Surveyor	AEGCL- PMU/ AEGCL Field officials& PMC	Not Applicable
	B. Construction Stage	Visual Inspection for transmission line route during construction activity.	Transmission line routes	Continuous activity	to be reported to concerned forest/wildlife authority for identification of species. Record to be maintained for number of carcasses	Contractor	AEGCL- PMU/ AEGCL Field officials& PMC	Will comply
	C. Operation Stage	Visual Inspection for transmission line route during maintenance activity.	Transmission line routes	Continuous activity		AEGCL – Field Staff	AEGCL- PMU/ AEGCL Field officials& PMC	Will comply for defect liability Period only. AEGCL will comply for operation stage.
7. Traffic	A. Pre-Construction Stage	Number & type of vehicles being used to access path for conducting detailed route survey.	Transmission Line Route	Continuous activity	Record maintenance for being used for survey and increased traffic	Surveyor	AEGCL- PMU/ AEGCL Field officials& PMC	Not Applicable

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Environmental component	Project stage	Parameters to be monitored	Location	Frequency <sup>1</sup>	Standards	Implementation	Supervision	Compliance Action
					load in localities			
	B. Construction Stage	Number & type of vehicle being used for material transportation by EPC contractor.	Transmission line routes	Continuous activity	Maintenance of Logbook for in-out time of vehicle on site (substation and transmission line routes).	Contractor	AEGCL- PMU/ AEGCL Field officials & PMC	Will comply
	C. Operation Stage	Number & Type of vehicles being used for maintenance activity.	Transmission line routes	Continuous activity	Maintenance of Logbook for in-out time of vehicle on site (transmission line routes)	AEGCL – O&M staff	AEGCL- PMU/ AEGCL Field officials & PMC	Will comply for defect liability Period only. AEGCL will comply for operation stage.
8. Tree cutting	A. Pre-Construction Stage	Enumeration of trees during detailed survey of transmission route.	Transmission line routes	Once during detailed survey	Documentary evidence to be maintained by surveyor for counting of trees.	Surveyor	AEGCL- PMU/ AEGCL Field Officials & PMC	Not Applicable
	B. Construction Stage	Development of inventory of tress before starting stringing for transmission lines.	Transmission line routes	Once during construction phase	Marking of tress by Revenue/Forest authority in presence of Contractor and AEGCL officials Obtaining applicable permission from forest department. Obtain Forest Clearance, in	Contractor / Revenue & Forest Department / AEGCL	AEGCL - PMU/ AEGCL Field officials & PMC	Will comply

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Environmental component	Project stage	Parameters to be monitored	Location	Frequency <sup>1</sup>	Standards	Implementation	Supervision	Compliance Action
					case tree cutting is involved in declared forest area.			
	C. Operation Stage	Pruning/cutting of trees for maintenance activity.	Transmission line routes	Continuous activity	Maintenance of minimum clearance between conductors and trees. Obtaining applicable clearance from forest department in case tree cutting/pruning is involved in declared forest area.	Contractor / Revenue Department / AEGCL	AEGCL- PMU/ AEGCL Field officials & PMC	Will comply for defect liability Period only. AEGCL will comply for operation stage.
9.Stakeholder Engagement	A. Pre-Construction Stage	Mapping of stakeholders	Transmission line routes	Continuous activity	Consultation record with mapped stakeholders (minutes of Consultation and attendance sheet)	DPR Consultant/ Concerned revenue circle	AEGCL- PMU/ AEGCL Field officials & PMC	Not Applicable
	B. Construction Stage	Listing of identified stakeholders (administrative and project affected people).	Transmission line routes	Continuous activity	Consultation record with mapped stakeholders (minutes of Consultation and attendance	Contractor/PMC/ AEGCL/ concerned revenue circle	AEGCL- PMU/ AEGCL Field officials & PMC	Will comply

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)**

ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Environmental component	Project stage	Parameters to be monitored	Location	Frequency <sup>1</sup>	Standards	Implementation	Supervision	Compliance Action
					sheet)			
	C. Operation Stage	Identified stakeholders at project pre construction and construction stage.	Transmission line routes	Continuous activity	Consultation record with identified stakeholders (minutes of Consultation and attendance sheet)	AEGCL – Field Officers	AEGCL- PMU/ AEGCL Field officials & PMC	Will comply for defect liability Period only. AEGCL will comply for operation stage.
10.Grievance Mechanism	A. Pre-Construction Stage	Identification of officials, NGO, stakeholders to be part Grievance redressal committee.	All Project Locations	Continuous activity	Development of Grievance redress mechanism as per provisions Notification of formulation of GRM and GRC	AEGCL - PMU	AEGCL- PMU/ AEGCL Field officials & PMC	Not Applicable
	B. Construction Stage	Working files of GRC and GRM records.	All Project Locations	Continuous activity	Notification of formulation of GRM and GRC and display of GRM procedure in project locations. Working records for GRM	Contractor, PMC, AEGCL – PMU, Department and Concerned electrical circle, AEGCL – Field staff	AEGCL - PMU/ AEGCL Field officials & PMC/GRC	Will comply
	C. Operation Stage	Working files of GRC and GRM records.	All Project Locations	Continuous	Notification of formulation of GRM and GRC and display of GRM procedure in project locations.	Concerned field staff, concerned electrical circle, concerned revenue department	AEGCL- PMU/ AEGCL Field officials & PMC	Will comply for defect liability Period only. AEGCL will comply for operation stage.

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Environmental component	Project stage	Parameters to be monitored	Location	Frequency <sup>1</sup>	Standards	Implementation	Supervision	Compliance Action
					Working records for GRM			
11. Compensation	A. Pre-Construction Stage	Identification of project affected people.	All project locations	During detailed route survey and identification of land parcel	Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013 and IFC's Performance Standard 5	Revenue circle & AEGCL/EPC Contractor	AEGCL– PMU & Revenue Department/ PMC & AEGCL Field Officials	Not Applicable
	B. Construction Stage	Mapping and listing of projects affected people (crop damage (area m2), zirat damage (marking of trees & development of inventory), land acquisition (area m2) –if applicable.	All project locations	Before commencement of working area		Contractor, PMC, Revenue circle & AEGCL /EPC Contractor	AEGCL– PMU & Revenue Department / PMC & AEGCL Field Officials	Will comply
	C. Operation Stage	Marking of tress (enumeration) to where pruning/cutting is required to maintain clearance between trees and conductor. Damage to crop (area m <sup>2</sup> and Listing of crop) during maintenance of line.	Transmission lines routes	Continuous activity		AEGCL – concerned electrical circle and AEGCL – field staff (O&M) /EPC Contractor	AEGCL– PMU & Revenue Department/ PMC & AEGCL Field Officials	Will comply for defect liability Period only. AEGCL will comply for operation stage.
12. Livelihood	A. Pre-Construction Stage	Identification of any impact on livelihood due to acquisition of land, crop damage and zirat damage.	All project locations	Once during detailed route survey	Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013 and IFC's Performance	Revenue Department & AEGCL concerned divisional officer, PMC, EPC Contractor	AEGCL– PMU/ PMC & AEGCL Field Officials	Not Applicable
	B. Construction Stage	Identification of any impact on livelihood due to loss of land (area m <sup>2</sup> ) – land utilization pattern, crop damage (area m <sup>2</sup> and type of	All project locations	Once – before commencing construction work		Revenue Department & AEGCL concerned divisional officer, PMC, EPC	AEGCL– PMU/ PMC & AEGCL Field Officials	Will comply

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT – PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Environmental component	Project stage	Parameters to be monitored	Location	Frequency <sup>1</sup>	Standards	Implementation	Supervision	Compliance Action
		crop) and zirat damage (inventory development).			Standard 5	Contractor		
	C. Operation Stage	Identification of any impact on livelihood due to acquisition of land, crop damage and zirat damage (inventory development).	All project locations	Continuous activity		Revenue Department & AEGCL concerned divisional officer, EPC Contractor	AEGCL– PMU/ PMC & AEGCL Field Officials	Will Comply for defect liability period only. AEGCL will Comply for Operation Stage.
13. Restoration	A. Pre-Construction Stage	Identification of any damage to public utilities and public/private property to be envisaged during construction phase.	All project locations	Once during detailed survey	Right to Fair Compensation and	Revenue Department & AEGCL concerned divisional officer, PMC, EPC Contractor	AEGCL– PMU/ PMC & AEGCL Field Officials	Will comply
	B. Construction Stage	Marking and listing of damage to public utilities / shifting of public utilities and public / private property.	All project locations	Continuous activity	Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013 and	Revenue Department & AEGCL concerned divisional officer, PMC	AEGCL– PMU/ PMC & AEGCL Field Officials	Will comply
	C. Operation Stage	Marking and listing of damage to public utilities / shifting of public utilities and public / private property.	All project locations	Continuous activity	IFC's Performance Standard 5	Revenue Department & AEGCL concerned divisional officer	AEGCL– PMU/ PMC & AEGCL Field Officials	Will Comply for defect liability period only. AEGCL will Comply for Operation Stage.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –****PACKAGE: M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT****11 BUDGET FOR IMPLEMENTATION OF ESMP SPECIFIC FOR ACTIVITIES COVERED BY THE ESIA**

ESMP cost to implement the key environmental & social measures and environmental & social monitoring plan which a part of Engineering Procurement Construction (EPC) Contractor's contract as included in Bill Of Quantity (BOQ) item and as part of their good Engineering practice. Estimation for different ESMP activities to be performed by EPC Contractor is tabulated as under.

**Table - 9: Environmental and Social Monitoring Plan Budget**

S. No.	Description	Quantity (in No.)	Rate (in INR approx.)	Amount (in INR approx.)
<b>A.</b>	<b>Environmental Monitoring (Pre-construction Stage)</b>			
1	Air Quality*	14	7000	98,000
2	Water Quality	14	7000	98,000
3	Noise Levels	14	3500	49,000
4	Soil	14	7000	98,000
	<b>Sub-Total Cost</b>			<b>3,43,000</b>
<b>B.</b>	<b>Environmental Monitoring (Construction Stage)</b>			
1	Air Quality* (Twice/year for 3 year)	(14x3x2) = 84	7000	5,88,000
2	Water Quality (Twice/year for 3 year)	(14x3x2) = 84	7000	5,88,000
3	Noise Levels (Twice/year for 3 year)	(14x3x2) = 84	3500	2,94,000
4	Soil (Twice/year for 3 year)	(14x3x2) = 84	7000	5,88,000
5	Noise assessments by demand <sup>2</sup>			
	<b>Sub-Total Cost</b>			<b>20,58,000</b>
<b>C.</b>	<b>Environmental Monitoring (Defect Liability period)</b>			
1	Air Quality*	14	7000	98,000
2	Water Quality	14	7000	98,000
3	Noise Levels	14	3500	49,000
4	Soil	14	7000	98,000
	<b>Sub-Total Cost</b>			<b>3,43,000</b>
<b>D.</b>	<b>Training Workshops/Consultations/ Health Awareness Camp</b>			
1	Training on Implementation of ESMP for PMU, contractors and Divisional Nodal Officers	3x 9 = 27	50,000	13,50,000
2	Public Consultation: Pre-Construction- Once, Construction- 1 time / year for 3 years, Defect Liability period – Once	5x 9 = 45	10,000	4,50,000
3	Health & Safety Awareness Camp: Pre-Construction- Once, Construction- 1 time / year for 3 years, Defect Liability period- Once	5x 9 = 45	10,000	4,50,000

<sup>2</sup> Budget for this activity (if arises) will be used from contingency fund



**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –****PACKAGE: M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

4	Training on Implementation of GRM Pre-Construction- Once, Construction- 1 time / year for 3 years, Defect Liability period – Once	5x 9 = 45	30,000	13,50,000
5	Training on Occupation Health and safety Pre-Construction- Once, Construction- 1 time / year for 3 years, Defect Liability period – Once	5x 9 = 45	30,000	13,50,000
6	Training on fire safety and disaster management Pre-Construction- Once, Construction- 1 time / year for 3 years, Defect Liability period – Once	5x 9 = 45	30000	13,50,000
<b>Sub-Total Cost</b>				<b>63,00,000</b>
<b>Total (A+B+C+D+E)</b>				<b>90,44,000</b>
<b>Contingency (5 %)</b>				<b>4,52,200</b>
<b>Grand Total</b>				<b>94,96,200</b>

\* Meteorological data- temperature Humidity, wind speed, wind direction.

## 12 INSTITUTIONAL ARRANGEMENT FOR MONITORING AND REPORTING

### 12.1 Monitoring of ESMP compliance

The proposed mitigation measures comprise of conducting environmental monitoring for Air Quality, Noise Level, Soil Quality and Water Quality during Pre-construction, construction (replacement of existing old conductors by OPGW) and operational phases of the project. The Environment and Social staff of AEGCL shall ensure the monitoring of the environmental and social aspects. During the construction phase, the contractor should ensure that activities like handling of disposal of debris, storage of materials, labor camps, putting proper traffic signals is done properly to have minimum impact on the environment and affected communities. The PMC for the project will monitor these parameters with the supervision of PMU's E&S special staff. The PMU's E&S staff and Divisional official at divisional level will supervise the contractor. Other environmental good practices include sanitary waste management, noise abatement, maintaining hygienic conditions, maintenance of fire and safety equipment.

The Environmental and Social staff of PMU will ensure that site engineers and contractors adhere and comply with all measures and procedures identified in the ESMP. Activities to be monitored should include, but are not limited to:

- All planning, coordination and management activities related to the implementation of E&S safeguard issues;
- The identification of corrective and preventive actions;
- Records of health and safety matters and training activities;
- Consultations with people (as and when needed, particularly during the implementation);
  - Feedback, trouble shooting and project related grievances;
  - Ensuring that livelihoods, where negatively impacted (if any), are restored to pre-Project levels;
  - Preparation of progress and monitoring reports as required by the funding agency, and
  - Verifying the projects overall compliance with safeguard measures and its progress towards achieving the intended loan outcomes.

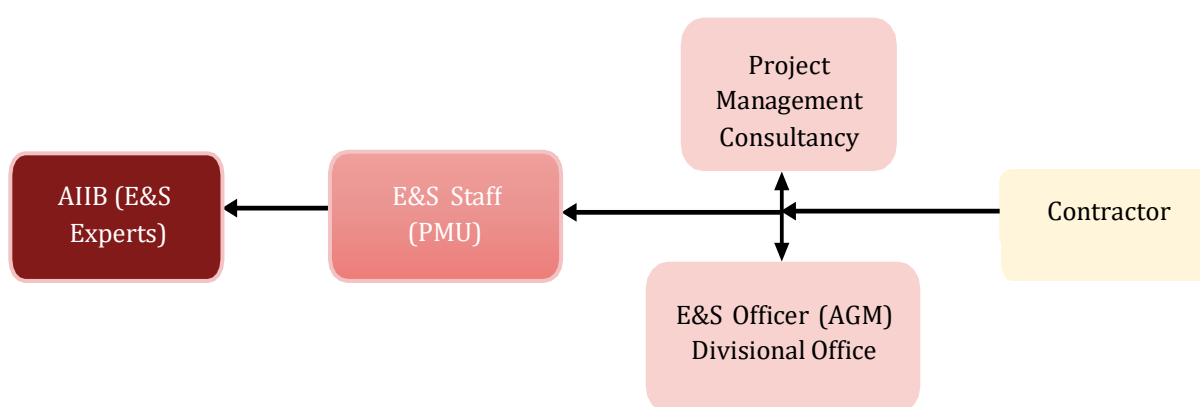
### 12.2 Monitoring of ESMoP Compliance

Environmental Parameters to Be Monitored:

To ensure that project would not generate negative impacts to the environment and communities, monitoring of environmental and social parameters has to be performed by PMU- AEGCL and PMC as per contract provisions. The monitoring activities of the project include site supervision, verification of permits, monitoring of water quality, soil, noise and air, traffic disruptions, livelihood restorations (if any), Occupational, Health and Safety, etc. Monitoring of the quality of water, soil, air and noise during the construction (replacement of existing old conductors by OPGW) stage is the responsibility of the PMC. The ESMoP compliance will be monitored by E&S staff of PMU.

### 12.3 Reporting Line

Mitigation measures related to construction (replacement of existing old conductors by OPGW) as specified in the ESMP to be incorporated into civil works contracts, and their implementation will be primarily the responsibility of the contractors. In addition, contractors are required to submit monthly progress reports on the implementation of ESMP measures to PMC/PMU. The PMU – AEGCL will report to the AIIB E&S experts on progress achieved against the ESMP activities and milestones on a half-yearly basis. Progress reports will include a description of implementable activities and their status; identify the responsible parties involved in their implementation; and provide project management schedules and timeframes for doing so, along with their associated costs. The illustration of reporting line is provided in **Figure** below.



**Figure -2: Illustration of Reporting Line**

The environmental and social monitoring report will be submitted by the PMC- E&S staff to the PMU, which will include the result of environmental monitoring into its environmental report. The Environment and Social Staff of PMU after interaction with PMC E&S staff will ensure the adequacy of submitted monitoring reports and PMU will further submit these reports to AIIB twice in a year. This report will include the results of environmental monitoring to demonstrate that sound environmental management practices are applied, and the set environments targets are achieved.

In case the implementation of ESMP measures is not satisfactory, AEGCL may engage external qualified experts to verify monitoring reports and assess the significant impacts and risks. These external monitoring experts shall recommend actions for AEGCL to enhance environmental compliance. Funding agency will continue to monitor project compliance with safeguard plans and requirements on an on-going basis throughout the duration of the contract.

### 13 STAKEHOLDER & PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

This chapter provides details of public consultation and way forward for continuous consultation with stakeholders and public in different phases of implementation for proposed subproject and process of disclosure.

#### 13.1 Public Consultation

Public consultations were conducted with local habitants 14<sup>th</sup> and 15<sup>th</sup> Sept. 2022. The consultation followed strict protocols to prevent the spread of Covid-19 and to reiterate awareness about safe behavior.

People participated in voluntary public consultation sessions to express their views about the proposed project. The community expressed their opinions freely on the project, its impact and suggestions for mitigating impacts.

Community welcomed the replacement of existing old ground wire by OPGW. No major environmental issues were raised during the consultation process. Local people are waiting eagerly for the implementation to start so they could receive better power supply and hoped for some employment generation. A summary of public consultations is attached in Table 17 and details of consultation with public are provided in Annexure I.

**Table - 10: Summary of Public Consultation**

Issues Discussed	People's views and perceptions
General Perception	Majority communities (including ST/women) were aware of the proposed set up of replacement of old existing ground wire by OPGW. Some have heard it but not sure about the details of the project components. All the people were positive and supportive towards the construction of proposed replacement of old existing ground wire by OPGW.
Support of local people	Most of the communities expressed their support during implementation for the replacement of old existing ground wire by OPGW, as it has been perceived to be great potential for the people of the area. They are happy for contribution of Government of India's effort towards rural electrification with proposed activities. They are hopeful to address their electricity problem such as low voltage and irregular power supply would resolve. Most of the communities expressed that there should be no adverse impact due to the project on their safety.
Critical issues and concern by the local people	Most of the communities expressed that there were no issues regarding the replacement of old existing ground wire by OPGW.
Project site selection criteria	The community held the view that the project should avoid/minimize harm to vegetation's and places of community importance such as schools, community gathering places etc. Some of them suggested that necessary precautions must be taken to ensure safety of people during replacement of old existing ground wire by OPGW.

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Issues Discussed	People's views and perceptions
Employment potential	Some of community members requested that they should be involved not only in unskilled labour job but also in the supervisory work. They complained that the construction work is generally handed over to contractors who would bring their own labour force from outside. They hoped that instead of hiring people from outside the local people should be given employment. Some others felt that better communication lines under the project will ensure proper and regular power supply.
Socio economic standing: land use, cropping pattern	The major sources of livelihood for the communities were agriculture, poultry farming, wage labour and small business. Most of the communities practiced one time cropping in a year, mainly paddy and vegetable cultivation.
Source of drinking water	The main sources of drinking water were hand pump. The other sources of drinking water were ring well and bore well. The availability of water is good as the water table remained high. However, in few people complained about the taste of the drinking water due to iron content in the water and thus they are using simple sand filter for portable use of water.
Negative impact on food grain, availability /land use	In general, the communities did not see any adverse impact on food/grain availability, as the constructions of proposed replacement of old existing ground wire by OPGW will be in the AEGCL existing T/L.
Will project cause widespread imbalance by cutting fruit and commercial trees in the locality	The communities were not foresee any impact.
Will project cause health and safety issues	Most of the communities did not foresee any health or safety issues from the replacement of old existing ground wire by OPGW. Some of them suggested that necessary precautions must be taken to ensure safety of people during replacement of old existing ground wire by OPGW.
Protected areas	Most of the communities informed that protected areas away from proposed OPGW lines.
Will project setting change migration pattern of animals	Communities did not foresee any impacts on animals, birds or their habitats from the replacement of old existing ground wire by OPGW.
Migration pattern	Majority of the communities reported outward migration of young generation especially the boys to big cities in search of work. The popular destinations of migration were Bangalore for security guard and helper jobs; and Gujarat, Maharashtra, Hyderabad etc. for factory jobs. There are very few cases of migration to capital cities of north eastern states in search of work.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –****PACKAGE: M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

Issues Discussed	People's views and perceptions
Perceived benefits from project	Across the communities majority of them viewed that the proposed replacement of old existing ground wire by OPGW would contribute to minimize the prevailing energy crisis such as load shedding, and low voltage in the region. For some, it will increase the rate of rural electrification and provide impetus to open small and medium business units in the area. At community level, the people hoped that project will address the problems of low voltage, and irregular power supply to the households.
Perceived loss	It will be temporary in nature due to damage of crops and trees and can be compensated by AEGCL.

Annexure – I gives the names of all participants including gender-breakdown of the public consultation conducted by the team. The transcript of these discussions will help AEGCL and the EPC contractor to conduct a proper needs assessment to ensure the issues raised by people are addressed appropriately.

### 13.2 Continuous Consultation and Participation

AEGCL with PMC will carry out meaningful consultation as per requirement (Monthly consultation with local people nearby the OPGW lines by PMU, PIU and PMC along with EPC Contractor) with local people and other concerned stakeholders, including civil society and facilitate their informed participation. Consultation process undertaken under the directions of the PMU (i) will begin in the sub-project preparation stage and will be carried out on an on-going basis throughout the sub-project cycle (ii) will provide timely disclosure of relevant information that is understandable and readily accessible to groups and individuals, and specially women; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) will be gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) shall enable the incorporation of all relevant views of affected people and other stakeholders into decision making, such as subproject design, mitigation measures, the sharing of development benefits and opportunities and implementation issues. Consultation will be carried out in a manner commensurate with the impacts on affected communities. The consultation process and its results will be documented and reflected in the environmental and social monitoring report. Feedback about project should be obtained time to time from local people during consultation. Local people may approach GRC if any grievances arise.

### 13.3 Public Consultation Information Disclosure

AEGCL will submit to AIIB the following documents for disclosure on AIIB's website: (i) the final ESIA; (ii) a new or updated ESIA and corrective action plan prepared during sub-project implementation, if any; and (iii) the environmental monitoring reports.

AEGCL will provide relevant environmental and social information, including information from the above documents in a timely manner, in an accessible place and in a form and local language(s) understandable to local people and other stakeholders in accordance with the AIIB's ESP 2019.

ESIA results will also be communicated to the local community before commencement of construction (replacement of existing old ground wire by OPGW) through posting on the website of AEGCL and other suitable means as well as providing a mechanism for the receipt of comments.

ESIA - ESMP will be disclosed online on the website of AIIB and AEGCL. Their hardcopies in English are available at the following locations:

1. PMU: Project Director,  
Address: 1<sup>st</sup> Floor, AEGCL, Bijulee Bhawan,  
Contact No.: 0361-2739520  
Website: www.aegcl.co.in,  
Contact Person: Mr. Lokhnath Choudhury
2. PIU (Refer Table, Page no. 86 & 87)

This executive summary in English and Assamese can be found at the following locations:

1. PMU: Project Director,  
Address: 1<sup>st</sup> Floor, AEGCL, Bijulee Bhawan,  
Contact No.: 0361-2739520  
Website: www.aegcl.co.in,  
Contact Person: Mr. Lokhnath Choudhury
2. PIU: (Refer Table, Page no. 86 & 87)
3. GRC

**Tier 2:**

(i) Chief General Manager (CGM, PP&D), AEGCL

Address: 1<sup>st</sup> Floor, AEGCL, Bijulee Bhawan,

Contact No.: 0361-2739520

Website: www.aegcl.co.in,

Contact Person: Mr. Lokhnath Choudhury

(ii) PMU: Project Director,

Address: 1<sup>st</sup> Floor, AEGCL, Bijulee Bhawan,

Contact No.: 0361-2739520

Website: www.aegcl.co.in,

Contact Person: Mr. Lokhnath Choudhury

**Tier 1:** (Refer Table, Page no. 86 & 87)

ESMPF is disclosed in AEGCL website: <https://www.aegcl.co.in/aiib-project-details/>

## 14 COVID-19 PRECAUTION MEASURES TO BE IMPLEMENTED BY PMU/PIU/PMC/EPC

### **SOP on preventive measures to contain spread of COVID-19 in Workplaces**

**A. Preventive Measures for Self** – The preventive measures include simple public health measures that are to be followed to reduce the risk of infection with COVID-19. These measures need to be observed by all (employees and visitors) at all times. These include:

- Wash your hands often with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, or sneezing.
- If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry.
- Avoid touching your eyes, nose, and mouth with unwashed hands.
- Avoid close contact with people who are sick
- Individuals must maintain a minimum distance of 6 feet (2 gaj ki doori) in common places as far as feasible
- Use of face covers/masks at all times. They must be worn properly to cover nose and mouth. Touching the front portion of mask/face covers to be avoided.
- Self-monitoring of health by all and reporting any illness at the earliest to the immediate supervisory officer.
- Spitting shall be strictly prohibited.

### **B. Preventive Measures for Workplace –**

- Entrance to have mandatory hand hygiene (sanitizer dispenser) and thermal screening provisions.
- Only asymptomatic staff/visitors shall be allowed entry.
- There shall be provision for disinfection at-least twice a day of the interior of the vehicle using 1% sodium hypochlorite solution/spray. A proper disinfection of frequently touched surfaces i.e. steering, door handles, keys, etc. should be taken up.
- All officers and staff / visitors to be allowed entry only if using face cover/masks. The face cover/mask has to be worn at all times inside the work premises.
- Meetings, as far as feasible, should be done through video conferencing.
- Proper crowd management in the working premises – duly following physical distancing norms are ensured.
- Specific markings may be made with sufficient distance to manage the queue and ensure physical distancing in the premises.
- Ensure regular supply of hand sanitizers, soap and running water in the washrooms.
- Cleaning and regular disinfection (using 1% sodium hypochlorite) of frequently touched surfaces (doorknobs, elevator buttons, handrails, benches, washroom fixtures, etc.) shall be done in office premises and in common areas at-least twice a day.
- Proper disposal of face covers / masks / gloves left over by visitors and/or employees in covered bins shall be ensured.
- The seating arrangement to ensure a distance of at least 6 feet between patrons as far as feasible.
- Large physical gatherings continue to remain prohibited.

### **C. Measures to be taken on occurrence of case–**

Despite taking the above measures, the occurrence of cases among the employees working cannot be



ruled out. The following measures will be taken in such circumstances, when one or few people(s) who share a room/close office space is/are found to be suffering from symptoms suggestive of COVID-19:

- Place the ill person in a room or area where they are isolated from others at the workplace. Provide a mask/face cover till such time he/she is examined by a doctor.
- Immediately inform the nearest medical facility (hospital/clinic) or call the state or district helpline.
- If there are one or two cases reported, the disinfection procedure will be limited to places/areas occupied and visited by the patient in past 48 hours and work can be resumed after disinfection of the work.
- In case of larger number of cases are being reported at the workplace, the whole block or building, as the case may be, should be disinfected.
- Other members to wear disposable gloves when serving and helping affected person in self-isolation
- Avoid visiting public places like entertainment restaurant, malls, market etc.

**D. Vaccination:** The concerned person of GRC/PMU/PIU/ PMC/EPC Contractor will ensure that, all project related personals must be vaccinated.

## 15 GRIEVANCE REDRESS MECHANISM

### General overview of the Grievance Redress Mechanism Assam Intra-State Transmission System Enhancement Project

#### Objectives

The Assam Intra-State Transmission System Enhancement Project (the Project) aims to strengthen Assam's electricity transmission system. As the Project is funded by the Asian Infrastructure Investment Bank (AIIB), it complies with the Environmental and Social Framework and the Policy on the Project-affected People's Mechanism of the AIIB.

The Environmental and Social Management and Planning Framework (ESMPF) of the Project provides for the establishment of a Grievance Redress Mechanism (GRM). The GRM is a free system that registers and attempts to resolve concerns or complaints by Project-affected people (PAPs) or construction workers. This process aims to quickly resolve disputes and avoid litigation, thus ensuring the smooth implementation of the project activities.

At all levels of the project Grievance Redress Mechanism, the Grievance Redress Committee members should uphold the objectives of the GRM and strive to achieve them. The primary objectives of GRM are:

- Provide an accessible, transparent, efficient and predictable mechanism for resolution of grievances to all project by:
  - Popularizing the GRM and how it can be accessed for free.
  - Receiving grievances in various possible forms (Written, Verbal, Electronic, Email, Social Media, Telephone, Fax, Suggestion Box)
  - Establishing clear procedures for redress that covers:
    - Registration in the GRM log all grievances (including minor and verbal).
    - Acknowledgement to the complainant, explaining expected duration for resolution.
    - Investigation of the grievance, proposing a solution to the complainant and if acceptable closure of the complaint. OR
    - Escalation of the grievance to Tier II which should be communicated to the complainant.
    - Investigation of the grievance, proposing a solution to the complainant
    - Provision of feedback and closure of the grievance in the GRM Log.
  - Complaint should be made aware that:
    - There is no retribution or intimidation for complainants.
    - Access of the GRM is free for the complainants.
    - The GRM does not replace the judicial system.
- Observe for any repeated complaints and inform PMU of such for their systemic resolution.
- Providing an environment that fosters free and honest exchange of information, views, and ideas.

#### Stakeholders with Grievances

It is likely the following categories of stakeholders may have grievances and file the grievances for redressal. They are

- Individuals, both men and women
- Communities/ Groups of individuals
- Project workers – local and migrant
- Community Based Organizations or Common Interest Groups
- Firms, Companies, Enterprises, Service Providers, and other businesses
- National/ International NGOs

**Roles and Responsibilities of GRC Members**

<b>PMU/ PIU GRC Members</b>	<b>Community GRC Members</b>
<ul style="list-style-type: none"> <li>➤ Receives grievance from complainant and record them in a logbook.</li> <li>➤ Acknowledge receipt of complaints with a written record.</li> <li>➤ Arrange for GRC meetings to consider the grievances.</li> <li>➤ Work closely with the GRC members to develop and implementing actions to resolve grievances.</li> <li>➤ Prepare minutes of GRC meetings and record solutions.</li> <li>➤ Provide feedback information on the status of resolution to the complainant within assigned timeline.</li> <li>➤ Review grievance response and submit to Contractor/PIU/PMU for approval or implementation.</li> <li>➤ Submit proposed solutions to the complainant within assigned timeline.</li> <li>➤ Ensure proper logging, escalation, tracking, reporting, and following up on all project specific grievances.</li> <li>➤ Swiftly escalate any grievances that cannot be resolved at the project level or may pose a big reputational risk to the project. This includes any complaints related to the health, safety, dignity, and wellbeing of any person (both men and women).</li> <li>➤ Notify PMU within 12 hours of any grievances that require investigation or intervention by the police or other relevant authorities.</li> <li>➤ Provide monthly update to a member of the PMU who will track grievances and always include a section on grievance management in the monthly progress report.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Popularize the existence, functions, and accessibility of the GRM among all project-affected people, <b>both men and women</b>.</li> <li>➤ Encourage key community members to facilitate submission of complaints, if needed.</li> <li>➤ Attend regularly and actively participate in GRM meetings to review and provide solutions to project related grievances.</li> <li>➤ Facilitate and mediate resolution of grievance.</li> <li>➤ Accept and record grievances from community members.</li> <li>➤ Facilitate the communication of the response of the GRC to complainants/aggrieved.</li> <li>➤ Keep communicating project related matters to GRC/ PIU.</li> </ul>

**Most Common Grievances and Redressal<sup>3</sup>**

<b>Common Grievance Categories</b>	<b>Issues and Likely Solutions</b>
Technical/ Engineering	<ul style="list-style-type: none"> <li>➤ Design related – Suit the design to the site. Restrict the width according to the available land and modify the design accordingly</li> <li>➤ Alignment related – Always use GPS coordinates. In case of problem contact Revenue department to correct the alignment</li> <li>➤ Quality related – Get the materials and finished product tested at reputed laboratories and publicize the results</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>➤ Storm water – Do not obstruct or divert natural drainage. Provide for culverts or bridges where necessary</li> <li>➤ Stone blasting – Take precautions as per law and inform the communities accordingly</li> <li>➤ Dust – Keep watering as required so that dust doesn't spread or rise.</li> <li>➤ Noise – Use barriers at sensitive receptors and take up work at appropriate timings.</li> <li>➤ Uncovered borrow areas – Dig borrow pits as per specifications.</li> <li>➤ Waste Disposal – Dispose of waste at designated places only.</li> </ul>
Social	<ul style="list-style-type: none"> <li>➤ Disruption of other existing public services e.g. hospitals, schools, Water and electricity supply – Consult communities and minimize the disruption of service. Provide alternative supplies.</li> <li>➤ Historical and Cultural sites – Follow the government guidelines on this. Do not deface any historical or cultural sites.</li> <li>➤ HIV/AIDS/ Covid-19 issues – Follow the government SoP for these. Conduct awareness campaigns among the communities and workers.</li> <li>➤ Child labour – Avoid child labour. No children below 14 years on work. No children below 18 years on hazardous work.</li> <li>➤ Rape / sexual and Gender-Based Violence – Conduct awareness camps among workers and community. Have a code of conduct. Set up Internal Complaints Committees to redress gender related grievances.</li> </ul>
Land, Compensation and Resettlement	<ul style="list-style-type: none"> <li>➤ Non-payment of compensation money – Do not take possession of land before paying full compensation</li> <li>➤ Underpayment of compensation money – All compensation valuation has to be done as per the LA Act 2013 and verified before payments</li> <li>➤ Disputes of land ownership – Refer to Revenue Department for measurement and survey to decide on the ownership</li> <li>➤ Injurious affections such as cracks in buildings, damages to properties – Do take care not to cause damage to houses. Repair all damages and bring them back to original status.</li> <li>➤ Boundary queries between PAPs – Do not get involved in this. Leave these matters to PAPs to decide themselves.</li> </ul>

<sup>3</sup> Site specific ESIA report for Transmission lines will be prepared separately.

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

Common Grievance Categories	Issues and Likely Solutions
Road Safety	<ul style="list-style-type: none"> <li>➤ Accidents – Report immediately to PIU/ PMU.</li> <li>➤ Humps – Do not erect humps without the permission of PIU. The hump has to be as per the design. No private person can built humps</li> <li>➤ Signage – All signage has to be fixed by PIU/ Contractor.</li> <li>➤ Cutting of pavement by utility companies – No utility company can cut the pavement without the permission</li> <li>➤ Overloaded vehicles/ Road littering – Such incidents to be reported to PIU for action.</li> </ul>
Occupational Health and Safety	<ul style="list-style-type: none"> <li>➤ Protective gear – The workers must wear protective gear at all times during the work.</li> <li>➤ HIV/AIDS / Covid-19 services – The workers and communities must be educated about these. They should follow the SoP.</li> </ul>
Governance	<ul style="list-style-type: none"> <li>➤ Procurement – To be transparent and all matters related to procurement to be disclosed</li> <li>➤ Contractor highhandedness – All contractors to be instructed not to deal with the communities directly. Always involve PIU in dialogue with communities</li> <li>➤ Corruption – Such cases to be sent to the respective agencies for enquiring and investigation.</li> </ul>

## DOs and DON'Ts for GRC Members

Dos	DON'Ts
<ul style="list-style-type: none"> <li>➤ <b>Respect</b> complaints.</li> <li>➤ Follow the established GRM procedures</li> <li>➤ Popularize the GRM's existence, accessibility, and free access.</li> <li>➤ Establish accessible compliant receipt locations and channels for vulnerable groups considering their constraints.</li> <li>➤ Maintain logbooks.</li> <li>➤ Establish clear timetables for resolving grievances.</li> <li>➤ Assign each compliant a unique ID, track and report its resolution.</li> <li>➤ Work with the complainant to find a resolution throughout the GRM.</li> <li>➤ Keep complainant informed of resolution process.</li> <li>➤ Seek feedback from the complainant to improve GRM functionality.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Intimidate, threat, or harass complainants.</li> <li>➤ Set unrealistic redress durations.</li> <li>➤ Exclude vulnerable groups.</li> <li>➤ Create constraints in filing grievances.</li> <li>➤ Create barriers or compound the procedures for grievance filing receipt.</li> <li>➤ Disclose aggrieved identity to others.</li> <li>➤ Make false promises to the complainant.</li> <li>➤ Be biased in redressal.</li> <li>➤ Expect or seek any compensation or benefits from complainants.</li> </ul>

## General overview of the Grievance Redress Mechanism

### Assam Intra-State Transmission System Enhancement Project

#### **Project Introduction**

The Assam Intra-State Transmission System Enhancement Project (the Project) aims to strengthen Assam's electricity transmission system. The Project will facilitate connection of remote areas, enhance the capacity and reliability of the system, improve voltage profile, and reduce losses and ultimately enhance satisfaction for all categories of consumers. As the Project is funded by the Asian Infrastructure Investment Bank (AIIB), it complies with the Environmental and Social Framework and the Policy on the Project-affected People's Mechanism of the AIIB.

The construction activities under the Project may cause some minor disturbances to the physical environment and communities. These are typical of civil works, such as generating dust, noise, air pollution, and construction debris, influx of construction workers and limited need to acquire permanently or temporary land. Thus, a multi-tiered Grievance Redressal Committee (GRC) will be applicable to the project in its entirety. To honor the GRM, Assam Electrical Grid Corporation Limited (AEGCL) will adopt the practice to resolve any major/ minor grievances, where AEGCL shall accept, review and address issues or problems raised by Project Affected Persons (PAPs), local people and project workers related to project works. GRC will review grievances involving all resettlement benefits, compensation, relocation, replacement cost, other additional assistance for vulnerable groups including Indigenous Peoples (IPs) and grievances related to environmental issues (if any).

The Environmental and Social Management and Planning Framework (ESMPF) provides guidelines how to reduce potential risks and mitigate impacts. Site-specific Environmental and Social Management Plans (ESMP) <sup>4</sup> gives specific measures for specific locations.

#### **Overview of the Grievance Redress Mechanism**

The Project provides for the establishment of a Grievance Redress Mechanism (GRM). **The GRM is a free system that registers and attempts to resolve concerns or complaints by Project-affected people (PAPs) or workers/employees arising from project activities.** This process aims to quick resolve of disputes and avoid litigation, thus ensuring the smooth implementation of the project activities.

Every person, man, woman, or construction worker employed in Project activities, who feels that they have been adversely affected by the Project, can file their concerns **for free** to the GRM. **The Project guarantees that there will be no reprisals or retributions for raising grievances.** The GRM process does not prevent project affected people to seek their rights through the judicial system but provides an additional and free way to resolve problems. Anonymous grievances are acceptable, but it will be impossible to inform the complainant of the outcome. In this case, the grievance and the proposed resolution will be publicized on site.

Complaints which may be arises during the project implementation period (Pre Construction, During Construction and Post Construction) will be handled according to the following procedure:

1. Project-affected person approaches a member of the CGRC (Tier-1) in person or via the phone/WhatsApp. (Dedicated phone number will be assigned)

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<sup>4</sup> The site specific HSESMP (Health, Safety, Environment and Social Management Plan) to be prepared by EPC after finalization of ESMP template from AIIB's end.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –****PACKAGE: M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

2. The Circle level GRC (Tier 1) member receives the grievances and records the details in the GRM logbook.
3. The CGRC (Tier-1) acknowledges the receipt of the grievance and provides a dated proof (official slip, text or WhatsApp message).
4. The CGRC (Tier-1) gathers information, visits site and interviews people to evaluate if they can find a resolution of the grievance within 10 working days.
5. The CGRC (Tier-1) informs grievated party of the proposed resolution in writing.
  - a. Grievated party can accept the proposed solution, which is duly recorded.
  - b. Grievated party may not accept the proposed solution, which is duly recorded.
6. If the CGRC (Tier-1) is unable to find a solution, or if the grievated party does not accept the proposition, the CGRC can automatically escalate the issue to the Tier -2 GRC, if grievated party agrees.
7. The Tier-2 GRC acknowledges the receipt of the grievance and provides a dated proof (official slip, text or WhatsApp message).
8. The Tier 2 GRC gathers information, visits site and interviews people to evaluate if they can find a resolution of the grievance within 20 working days.
9. The Tier 2 GRC informs grievated party of the proposed resolution in writing.
  - a. Grievated party can accept the proposed solution, which is duly recorded.
  - b. Grievated party may not accept the proposed solution, which is duly recorded.
10. The grievated party may seek their rights in the court of law.

**The members of the Tier-1 GRC and their communication details in the project Districts are**

Name of the T&T Circle	Name of the Project Districts	Package	Sub-Projects	Focal point / Nominated Official	Contact number (Mobile and WhatsApp)*	Communication Address
Lower Assam	Kokrajhar, Dhubri	M	132KV Gossaigaon to Gauripur , 61.18 km	AGM, Comm., Lower Assam, Dibrugarh	97078-54367(W+C)	O/o The DGM, Lower Assam T&T Circle, Guwahati
			132KV Gossaigaon to Dhaligaon, 64 km			
			132KV Gauripur to Bilasipara, 37.6 km			
			132KV Bilasipara to Kokrajhar, 24.2 km			
			132KV Kokrajhar to Salakati, 10 km			
	Jorhat, Golaghat, N, Lakhimpur, Sivasagar, Dibrugarh		220KV Mariani to Samaguri (Circuit-1) (LILo at 220KV Khumtai and 220 KV Jakhalabandha GIS, 169 km	AGM, Comm., Upper Assam, Dibrugarh	99576-37621(W+C)	O/o The DGM, Upper T&T Circle Assam, Dibrugarh

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –****PACKAGE: M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

			132KV Majuli to Nalkata (North Lakhimpur), 46 km			
			132KV Dibrugarh to Lakwa (LILO at 132KV Behiating & 132 KV Moran, 77 km			
			220KV Mariani to Namrup, 145 km			

**The members of the Tier-2 GRC and their communication details in the corporate level**

SL. No.	Designation	Position in the Committee	Communication Address	Website & Email id
1.	Chief General Manager(PP&D), AEGCL	Chairman		Contact No.: 0361-2739520
2.	Project Director(EAP) Projects, AEGCL	Deputy Chairman	Assam Electricity Grid Corporation Ltd, (AEGCL) First Floor, Bijuli Bhawan Guwahati-781001	Mobile No.: 9859181640
3.	Dy. General Manager (EAP), PMU, AEGCL	Member		Mobile No.: 7002649012
4.	E&S Safeguard Specialist, PMU, AEGCL	Member		Mobile No.: 985433922
5.	Project Related AGMs(EAP), AEGCL	Members		Mobile No.: 9706078551 9864602779 9864577672
6.	Joint Secretary (Power, Electricity), GoA	Member		GoA, Power (Electricity Dept.), Assam Secretariat, Dispur, Guwahati-781006 Contact No.: 0361-2237260
7.	Team Leader, Environment Expert and Social Expert, PMC	Members	2B, Saroj Enclave, K.C Patowary Road. Ulubari, Guwahati-781007 Mobile No. 8308419879	hemant.bhave@feedba ckinfra.com

If any unwanted situation like danger, sexual harassment and other life threatening, the victim person may reach to the concerned officials who belong to the Tier-1 and Tier-2 committee and may contact for further needful action or the matter should be informed to AIIB immediately.



**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –****PACKAGE: M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT****Grievance Register**

<b>Grievance Register</b>	
Date of Grievance Recorded	* The mobilisation of EPC is awaiting and once EPC starts their work in the S/S as well as in T/L, then the grievances may arise if any, the record will be maintained accordingly
Grievance Recorder	
Grievance submitted through	
Name of Complainant	
Complainant Preferred Contact	
Complainant Address	
Type of Grievance	
Describe Grievance	
Date of Grievance Occurrence	
Date of Acknowledgement	
Mode of Acknowledgement	
Brief Outline of Proposed Resolution	
Action Taken	
Action Taken on	
Outcome	
Outcome communicated to PAH on	
Status Update	
Mode of Complainant Update	
Acknowledged by	
Date Closed	
Days to Close Grievance	
Date of Grievance Received to Tier 2	
Date of GRC meeting (2nd Tier)	
Estimated Time for Resolution	
Action Taken	
Action Taken on	
Outcome	
Outcome communicated to PAH on	
Status Update	
Mode of Complainant Update	
Acknowledged by	
Date Closed	
Days to Close Grievance	

## 16 SUMMARY & CONCLUSION

The project scope involves replacement of existing old ground wire by OPGW.

Power transmission projects including the construction of substations have not been listed in the list of environmentally sensitive projects and hence, no environmental clearance is required, as per the Environmental Impact Assessment (EIA) notification of 2006 and its subsequent amendments by the Ministry of Environment, Forest and Climate Change (MoEF&CC).

As the scope of work of Package – M is replacement of existing old ground wire by OPGW and thus environmental clearance for associated activity like quarry operation, forest, wildlife and wetland clearances are not applicable.

**ESS 1** will be applicable to the Project as stringing of OPGW works may cause a limited number of insignificant environmental and social impacts. These impacts are not unprecedented and are limited to the Project area.

**ESS 2** and **ESS 3** are not applicable, as the present scope of work is only replacement of existing ground wire by OPGW.

The detail of the various regulatory frameworks pertaining to the project has already been discussed / considered in ESMPF.

AEGCL's working operation safety manual also serves as its commitment towards fulfilling the E&S responsibilities including occupation health and safety.

A baseline study to assess the environmental and socio-economic conditions of adjoining areas has been conducted on 6<sup>th</sup> to 18<sup>th</sup> June and 14 & 15<sup>th</sup> Sept. 2022 to gather baseline information of the environmental and social profile.

Environmental sensitive sites are away from the existing line where replacement of ground wires by OPGW. Environmental conditions of the sites of existing lines are quite good.

As assessed from the baseline condition, the impacts are manageable as no significant environmental issues have been recorded during site visit. The overall E&S risks associated with the replacement of existing old ground wire by OPGW will be insignificant and are temporary in nature and can be easily mitigated through management plan during implementation, whereas it will contribute to major economic development in the relevant areas. Details of impact and mitigation measures are discussed in the main report. Overall, the environmental impacts associated with the replacement of existing old ground wire by OPGW are insignificant and limited mostly to the RoW of T/L and insignificant in operation period. These can be mitigated to an acceptable level by implementation of recommended measures and by best engineering and environmental practices. ESMP cost to implement the key environmental & social measures and environmental & social monitoring plan which a part of Engineering Procurement Construction (EPC) Contractor's contract as included in Bill Of Quantity (BOQ) item and as part of their good Engineering practice. An amount of **INR 94,96,200** is estimated to be required for implementation of ESMP.

The detailed plan by the EPC contractor will ensure the inclusion of any such environmental impacts that could not be specified or identified at this stage are taken into account and mitigated where necessary. Those impacts can be reduced through the use of mitigation measures such as improvement in work practices at the construction site.

One round of public consultation was conducted at the adjoining villages of proposed OPGW lines. The outcome indicates broad support for the project based on perceived economic and social benefits.

The project implementation will lead to the development of distribution projects, which involve distribution of power and overall energy efficiency improvement. Some of the important project benefits are - strengthen the electricity transmission network, improve reliability to power supply, reduce the transmission losses, improve livelihood and boosts the economic growth of the region and nation as a whole.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –****PACKAGE: M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT****ANNEXURE – I: Details of Public Consultation at the adjoining villages of proposed OPGW lines****Site/Location:** Gossaigaon, **Village-** Gossaigoan, **Circle/Block** – Gossaigoan, **District** –Kokrajhar**Date of Consultation:** 14<sup>th</sup> Sept. 2022**Type of Area (Urban/Rural/ Highly Congested Urban:** Rural

S.No.	ISSUES	PARTICIPANTS' COMMENTS AND SUGGESTIONS	OPINION,
<b>SOCIAL</b>			
1.	Have you heard about the Project or Do you have any information about the project?	Yes, Electrical department is replacing existing old ground wire by OPGW.	
2.	What is your opinion about this Project?	Useful for public	
3.	Do you support this Project?	Yes	
4.	Do you think that the Project is necessary?	Yes	
5.	What are your main concerns/issues about the project?	No issue	
6.	Can you suggest how best to address your concerns/issues?	Good for people	
7.	The proposed new land which may be government or privately owned. Would you volunteer to donate or sell the land for the Project?	AEGCL existing line	
8.	Do you expect any kind of compensation if there is loss to land or crops or trees during construction?	Yes, expecting compensation if any damage by the sub-project.	
9.	If you need compensation, what kind of compensation will you be expecting (cash or kind) in case of land acquisition?	Cash compensation	
10.	Health status, Availability of Hospitals and over all environmental condition. Is there any chronic disease prevalent in this area and are you aware about HIV/AIDS and STP?	No Chronic disease , Aware about COVID-19/HIV/AIDS disease	
11.	What positive impacts and/or benefits do you think the project will have?	24 hours power supply. Voltage level will be improved.	
12.	What negative impacts do you think the project will have?	No arises	
13.	How safe do you think or consider the distribution feeder?	No idea	
14.	Any criteria you would like to be considered for project design, construction and operation stage?	No	
15.	How long have you been living in this area?	From my Birth	

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –****PACKAGE: M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

16.	Are there any indigenous people/ tribal people or ethnic minority living in this area? If yes, how far and what is the name of tribe group and what is their number of Households etc.?	Yes, but there will be no impact on them as the present scope of work is only replacement of existing old ground wire by OPGW.
17.	If you are from indigenous people/tribal do you expect any impacts from projects on your culture, territory, and livelihood impacts?	No
<b>ENVIRONMENT</b>		
1	Protected areas (national park, protected forest, religiously sensitive sites, historical or archaeological sites), if any	No protected wildlife area falls in the proposed OPGW line.
2	Access to the forest land and the use of the forest land (if any)	No
3	Current environmental conditions in the area – air, dust, noise conditions in the area.	Good
4	Will the project siting adversely impact the water or soil resource in the locality	No
5	Type of trees in the area: Fruit/non fruit/forest/ rare/endangered species etc.	Mixed trees with Fruit/non fruit etc. species in the village of OPGW lines.
6	Wild, endemic, endangered animals in the area.	There will be no impact, as the present scope of work is only replacement of existing old ground wire by OPGW.
7	Is the consultation useful	Yes
8	Would you support and participate during the implementation of Project	Yes
9	Any other Suggestions?	A few of the local people has shown their interest on unskilled works on temporary basis during project execution.

## ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –

## PACKAGE: M (OPGW)

## ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

**Site/Location:** Mariani, **Village-** Nagajanka, **Circle/Block** – Mariani, **District** –Jorhat

**Date of Consultation:** 15<sup>th</sup> Sept. 2022

**Type of Area (Urban/Rural/ Highly Congested Urban:** Rural

Sl.No.	ISSUES	PARTICIPANTS' COMMENTS AND SUGGESTIONS	OPINION,
<b>SOCIAL</b>			
1.	Have you heard about the Project or Do you have any information about the project?	Yes, Electrical department is replacing existing old ground wire by OPGW.	
2.	What is your opinion about this Project?	Useful for public	
3.	Do you support this Project?	Yes	
4.	Do you think that the Project is necessary?	Yes	
5.	What are your main concerns/issues about the project?	No issue	
6.	Can you suggest how best to address your concerns/issues?	Good for people	
7.	The proposed new land which may be government or privately owned. Would you volunteer to donate or sell the land for the Project?	AEGCL existing line	
8.	Do you expect any kind of compensation if there is loss to land or crops or trees during construction?	Yes, expecting compensation if any damage by the sub-project.	
9.	If you need compensation, what kind of compensation will you be expecting (cash or kind) in case of land acquisition?	Cash compensation	
10.	Health status, Availability of Hospitals and over all environmental condition. Is there any chronic disease prevalent in this area and are you aware about HIV/AIDS and STP?	No Chronic disease , Aware about COVID-19/HIV/AIDS disease	
11.	What positive impacts and/or benefits do you think the project will have?	24 hours power supply. Voltage level will be improved.	
12.	What negative impacts do you think the project will have?	No arises	
13.	How safe do you think or consider the distribution feeder?	No idea	
14.	Any criteria you would like to be considered for project design, construction and operation stage?	No	
15.	How long have you been living in this area?	From my Birth	
16.	Are there any indigenous people/ tribal people or ethnic minority living in this area? If yes, how far and	Yes, but there will be no impact on them as the present scope of work is	

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –****PACKAGE: M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

	what is the name of tribe group and what is their number of Households etc.?	only replacement of existing old ground wire by OPGW.
17.	If you are from indigenous people/tribal do you expect any impacts from projects on your culture, territory, and livelihood impacts?	No
<b>ENVIRONMENT</b>		
1	Protected areas (national park, protected forest, religiously sensitive sites, historical or archaeological sites), if any	No protected wildlife area falls in the proposed OPGW line.
2	Access to the forest land and the use of the forest land (if any)	No
3	Current environmental conditions in the area – air, dust, noise conditions in the area.	Good
4	Will the project siting adversely impact the water or soil resource in the locality	No
5	Type of trees in the area: Fruit/non fruit/forest/rare/endangered species etc.	Mixed trees with Fruit/non fruit etc. species in the village of OPGW lines.
6	Wild, endemic, endangered animals in the area.	There will be no impact, as the present scope of work is only replacement of existing old ground wire by OPGW.
7	Is the consultation useful	Yes
8	Would you support and participate during the implementation of Project	Yes
9	Any other Suggestions?	A few of the local people has shown their interest on unskilled works on temporary basis during project execution.

**Photographs**



**Public consultation at Gossaigaon**



**Public consultation at Nagajhanka**



**Attendance sheet****Attendance Sheet of Public Consultation**Name of the Sub- Project... Mariani G. Nampur Pkg - M .....Date ... 15/09/2022 .....Venue... Naganjanka .....

Sl No.	Name	Designation	Contact Number	Signature
1	Richi Nath choffni	Business	91365428225	Bhatta
2	Tharuram Gogoi	Business	—	Gogoi
3	Sarat Bhawal	Business	8133086866	Bhawal
4/5	Purna Gogoi	Business	—	Gogoi
5	Purnya Gogoi	House wife	—	Purnya Gogoi
6	Nityrajit Koch	Business	—	Koch
7	Mitku Orang	Mason	—	Orang
8	Budheswar Orang	Business	—	Orang
9	Putul Nayak	Labour	—	Nayak
10	Brepan Tati	Business	—	Tati

**Annexure – II: Some Photographs of proposed OPGW**



### ANNEXURE-III: CODE OF CONDUCT FOR CONTRACTOR’S WORKERS

As Bona fide Contractor, [enter name of Contractor] for the project (enter name of the project) we have signed a contract with [enter name of Employer] for [enter specific description of the Works]. These Works will be carried out at [enter the Site and other locations where the Works will be carried out]. Our contract requires us to implement measures to address environmental and social risks related to the Services and Works, including the risks of misdemeanor in workplace / worker’s camps, sexual exploitation, abuse, harassment, and gender-based violence.

This Code of Conduct is part of the measures to deal with environmental and social risks related to the Works. This involves all workers, labor camps and the workplace. It applies to all our staff, laborers and other employees at the Works Site or other places where the Works are being carried out. It also applies to the personnel of each subcontractor and any other personnel assisting us in the execution of the Works. All such persons are referred to as “**Contractor’s Personnel**” and are subject to this Code of Conduct.

This Code of Conduct identifies the conduct that is required from all Contractor’s Personnel.

In our workplace, unsafe, offensive, abusive, or violent behavior will not be tolerated, and all persons should feel comfortable raising issues or concerns without fear of retaliation.

Contractor’s Personnel shall:

#### General Conduct

1. Make earnest efforts to understand his/her responsibilities detailed in this Code of Conduct and any other documents and trainings, as directed by the Employer. Proactively seek clarifications to enable work to be undertaken in strict compliance with this Code of Conduct.
2. Carry out his/her duties competently and diligently.
3. Comply with this Code of Conduct and all applicable laws, regulations, and other requirements, including requirements to protect the health, safety and well-being of other Contractor’s Workers, colleagues working under the same contractor and any other person.
4. Maintain a safe working environment by:
  - a. Abiding by safety guidelines to ensure that workplaces, machinery, equipment, and processes under each person’s control are safe and without risk to health.
  - b. Using required Personal Protective Equipment.
  - c. All works are conducted with safety clearance and under appropriate supervision.
  - d. Using appropriate measures relating to chemical, physical, and biological substances, and agents.
  - e. Following applicable emergency operating procedures.
  - f. Providing separate, safe, and easily accessible working and accommodation facilities for women and men working on the site.
5. Report to the Supervisor about work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she believes presents an imminent and danger to his/her life or health.

**ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT – ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN REPORT –****PACKAGE: M (OPGW)****ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT**

6. Treat other people with respect, and not discriminate against specific groups such as women, persons with different sexual orientation, people with disabilities, migrant workers, or children.
7. Not engage in sexual harassment which includes unwelcome sexual advances, requests for sexual favors, and other unwanted verbal or physical conduct of a sexual nature in the workplace or with respect to neighboring communities.
8. Engage with the community and/or project affected persons with utmost respect. Intimidation, threats, and coercive behavior will not be tolerated.
9. Not engage in sexual exploitation and abuse, which means any actual or attempted abuse of position of vulnerability, differential power, or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially, or politically from the sexual exploitation of another.
10. Not engage in sexual assault, which means any form and/or threat of non-consensual sexual contact.
11. Not engage in any form of sexual activity with individuals under the age of 18.
12. Not make any inappropriate and unwanted sexual advances to people in the adjoining (host) communities or settlements.
13. Not work or be present in the worksite(s) under the influence of any intoxicating substances, such as alcohol or drugs.
14. Not possess alcohol or any other illegal/ intoxicating substances while on duty or in the labor camps.
15. Return to the labor camp no later than 22:00, unless working on night shift.
16. Participate and complete relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, Gender-based violence (GBV), Sexual Exploitation, Abuse and Harassment (SEAH).
17. Report violations of this Code of Conduct.
18. Not retaliate against any person who reports violations of this Code of Conduct, whether to AIB or the Employer, or who makes use of the grievance mechanism for Contractor's Workers or the project's Grievance Redress Mechanism.

**RAISING CONCERNS** *(Please refer to section on GRM in the bidding document and provide information as needed: An appropriate GRM shall be constituted by the contractor for grievances in the worksite. This should include an effective mechanism for receiving and promptly addressing allegations of SEA and/or SH from the Contractor's or Employer's Personnel or any other person including third parties.)*

If any person observes a behavior that he/she believes may represent a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done in either of the following ways:

1. Contact [enter name of the Contractor's Social Expert] in writing at this address [X] or by telephone at [X] or in person at [X]; or
2. Call [X] to reach the Contractor's hotline (if any) and leave a message.

The Complainant's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the person who experienced the alleged incident, as appropriate.

There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

**CONSEQUENCES OF VIOLATING THE CODE OF CONDUCT**

Any violation of this Code of Conduct by Contractor’s Personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

The information contained in this note will be disseminated to all Contractor’s Personnel. At the time of engagement of any worker/ personnel, the above information will be provided verbally, and a copy of the Code of Conduct will be provided signed by the Personnel and countersigned by the Contractor. A prototype is provided below:

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**FOR CONTRACTOR’S PERSONNEL:**

I have received a copy of this Code of Conduct written in  language that I understand. I recognize that if I have any questions about this Code of Conduct, I can contact [*enter name of Contractor’s contact person with relevant background in handling gender-based violence*] requesting an explanation.

Name of Contractor’s Personnel: [insert name]

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

Countersignature of authorized representative of the Contractor: [insert name]

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

ATTACHMENT 1: Behaviors constituting Sexual Exploitation and Abuse (SEA) and behaviors constituting Sexual Harassment (SH)

The following non-exhaustive list is intended to illustrate types of prohibited behaviors:

1. Examples of sexual exploitation and abuse include, but are not limited to:
  - A Worker/Expert tells a member of the community that he/she can get them jobs in the work site (e.g., cooking and cleaning) in exchange for sex.
  - A Worker/Expert that is connecting electricity input to households says that he can connect women headed households to the grid in exchange for sex.
  - A Worker/Expert rapes, or otherwise sexually assaults a member of the community.
  - A Worker/Expert denies a person access to the Site unless he/she performs a sexual favor.
  - A Worker/Expert tells a person applying for employment under the Contract that he/she will only hire him/her if he/she has sex with him/her.
2. Examples of sexual harassment in a work context
  - A Worker/Expert comment on the appearance of another Worker/Expert (either positive or negative) and sexual desirability.
  - When a Worker/Expert complains about comments made by another Worker/Expert on his/her appearance, the other Worker/Expert comment that he/she is “asking for it” because of how he/she dresses.
  - Unwelcome touching of a Worker/Expert or Employer’s Personnel by another Worker/Expert.
  - A Worker/Expert tells another Worker/Expert that he/she will get him/her a salary raise or promotion if he/she sends him/her naked photographs of himself/herself.