

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

**FOR AUGMENTATION OF PACKAGE – L: 3 NOS. TRANSMISSION LINES BY HIGH
TEMPERATURE LOW SAG (HTLS) CONDUCTORS**

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

SUBMITTED TO

ASIAN INFRASTRUCTURE INVESTMENT BANK



SUBMITTED BY

ASSAM ELECTRICITY GRID CORPORATION LIMITED



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ABBREVIATIONS

AH	Affected Household
AIIB	Asian Infrastructure Investment Bank
AEGCL	Assam Electricity Grid Corporation Limited
AISTSEP	Assam Intra-State Transmission System Enhancement Project
AGM	Assistant General Manager
CPCB	Central Pollution Control Board, Government of India
DPR	Detailed Project Report
DC or D/C	Double Circuit
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
EIA	Environmental Impact Assessment
GoA	Government of Assam
GoI	Government of India
GSS	Grid Sub-station
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HTLS	High Temperature Low Sag
IA	Implementing Agency
INR	Indian Rupee
IPP	Indigenous People Plan
IPPF	Indigenous People Planning Framework
IP	Indigenous Peoples
LA	Land Acquisition
MoEF&CC	Ministry of Environment, Forest and Climate Change
NGO	Non-Government Organization
OPGW	Optical Power Ground Wire
PAPs	Project Affected Persons
PIU	Project Implementation Unit
PMC	Project Management Consultancy
PMU	Project Management Unit
RP	Resettlement Plan
RoW	Right of Way
RFCLARRA	Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013

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ST	Scheduled Tribe
SC or S/C	Single Circuit
SF6	Sulphur Hexafluoride

WEIGHTS AND MEASURES

GW	Gigawatt
Ha. (hectare)	10,000 sq. m = 2.47105 Acre
km (kilometer)	1,000 meters
kV	kilovolt (1,000 volts)
kW	kilowatt (1,000 watts)
MVA	Megavolt Ampere
MW	Megawatt

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ASSAM INTRA STATE TRANSMISSION SYSTEM ENHANCEMENT PROJECT

EXECUTIVE SUMMARY

Asian Infrastructure Investment Bank (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.

Assam Electricity Grid Corporation Limited (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 (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 18 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). However, project associated activity like quarry operation (if any) for the project may require prior Environmental Clearance. 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.

The present Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) report focuses only for augmentation of 3 nos. of transmission lines by High Temperature Low Sag (HTLS) conductors (Package- L) and thus forest, wildlife and wetland clearances are not applicable.

The Project has been assigned to “Category B” as per AIIB’s categorization.

ESS 1 will be applicable for this package as civil works may cause a limited number of potentially unlikely 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 augmentation of 3 nos. transmission lines by High Temperature Low Sag (HTLS) conductors.

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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 nearby the adjoining areas of the T/L has been conducted on 29th September 2022 and no major environmental and social issues were observed during the site visit.

However, if any environmental and social impacts arise during the augmentation work, those will be managed through proper implementation of the ESMP. The ESMP cost to implement the key environmental & social measures and environmental & social monitoring plan is included in the Bill of Quantity (BOQ) and as a part of good engineering practice in Engineering Procurement Construction (EPC) Contractor's contract document. An amount of **INR 2,07,71,100** is estimated to be required for implementation of ESMP.

Public consultation was conducted with local communities, like economically poor communities, women, vulnerable groups and other local community leaders nearby the existing lines on 29th September 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 need based 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 proposed augmentation. No major environmental issues were raised during the consultation process. Local people have shown their interest on unskilled works on temporary basis if any civil works are initiated.

Local people are waiting eagerly for implementation of the sub-project, so they could receive uninterrupted power supply and hoped for some employment opportunities

Draft ESIA - ESMP will be disclosed in the website of AIIB and AEGCL. Hardcopies for the same in English will be available at the following locations:

1. PMU: Project Director,
Address: 1st 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	Pkg	Name of EPC Contractor	Sub-Projects	Focal point / Nominated Official	Contact number (Mobile and WhatsApp)	Communication Address
Mirza	Kamrup (R)	L	M/s APAR Industries Ltd.	*220 kV, D/C Sarusajai-Kukurmara Transmission line-	Mr. Priyam Das, AM	7002176019 (W+C)	O/o The DGM, 400kV Kukurmara Grid, AEGCL,

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Name of the T&T Circle	Name of the Project Districts	Pkg	Name of EPC Contractor	Sub-Projects	Focal point / Nominated Official	Contact number (Mobile and WhatsApp)	Communication Address
				24 km (approx.)			Mirza 781125
Bongaigaon	Kokrajhar			*132 kV D/C Salakati – Dhaligaon Transmission Line- 21 km (Approx) *132 kV S/C Gauripur-Gossaingaon Line – 62 km (approx.)	Sri Rajib Das, AM	8011925974	O/o The DGM, Bongaigaon T&T Circle, AEGCL (ASEB), Dhaligaon, Chirang, 783385 Assam.

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

- 1. PMU:** Project Director,
Address: 1st 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: 1st Floor, AEGCL, Bijulee Bhawan,

Contact No.: 0361-2739520

Website: www.aegcl.co.in,

Contact Person: Mr. Lokhnath Choudhury

(ii) PMU: Project Director,

Address: 1st Floor, AEGCL, Bijulee Bhawan,

Contact No.: 0361-2739520

Website: www.aegcl.co.in,

Contact Person: Mr. Lokhnath Choudhury

Tier 1: As mentioned in the 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:

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- 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:
 - Registrations 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.

The GRM can be accessed through the following channels:

- Project Sign board
- Display in PIU office/T&T Circle office
- To be uploaded 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>

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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 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 18 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 only for augmentation of 3 nos. transmission lines by High Temperature Low Sag (HTLS) conductors (Package- L).

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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 operate intra-state transmission system of Assam to generate PFA from Generating Plants of the State as well as from Central Sector Generating Utilities and from other sources. AEGCL is responsible for transmission of electricity to the distribution entity of Assam.

The project scope involves construction of substations and associated transmission lines, augmentation, up gradation and installation of equipment of substations.

2.2 Description of Sub-Project components

The Sub-Project “Augmentation of 152 km of transmission line, restringing by HTLS conductors” is compiled in one group as Package – L: Augmentation of the following three Transmission Lines-

1. 220 kV, D/C Sarusajai- Kukurmara Transmission line- 24 km (approx.)
2. 132 kV D/C Salakati – Dhaligaon Transmission Line- 21 km (Approx)
3. 132 kV S/C Gauripur- Gossaigaon Line – 62 km (approx.)

Package-L has been awarded to M/S APAR Industries Ltd. and the contract has been effective w.e.f. 14.08.2021.

2.3 Detailed Description of Sub-Project

The subproject focuses on Package – L is of following lines:

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

Sl. No.	Name of Proposed HTLS line	Location (District)	Status of Land
1.	220 kV, D/C Sarusajai- Kukurmara Transmission line- 24 km (approx.)	Kamrup Metro Kamrup Rural	AEGCL Existing T/L
2.	132 kV D/C Salakati – Dhaligaon Transmission Line- 21 km (approx.)	Kokrajhar Bongaigaon	
3.	132 kV S/C Gauripur- Gossaingaon Line – 62 km (approx.)	Dhubri Kokrajhar	

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Figure 1A: Location map of 220 kV, D/C Sarusajai- Kukurmara Transmission line- 24 km (approx.)

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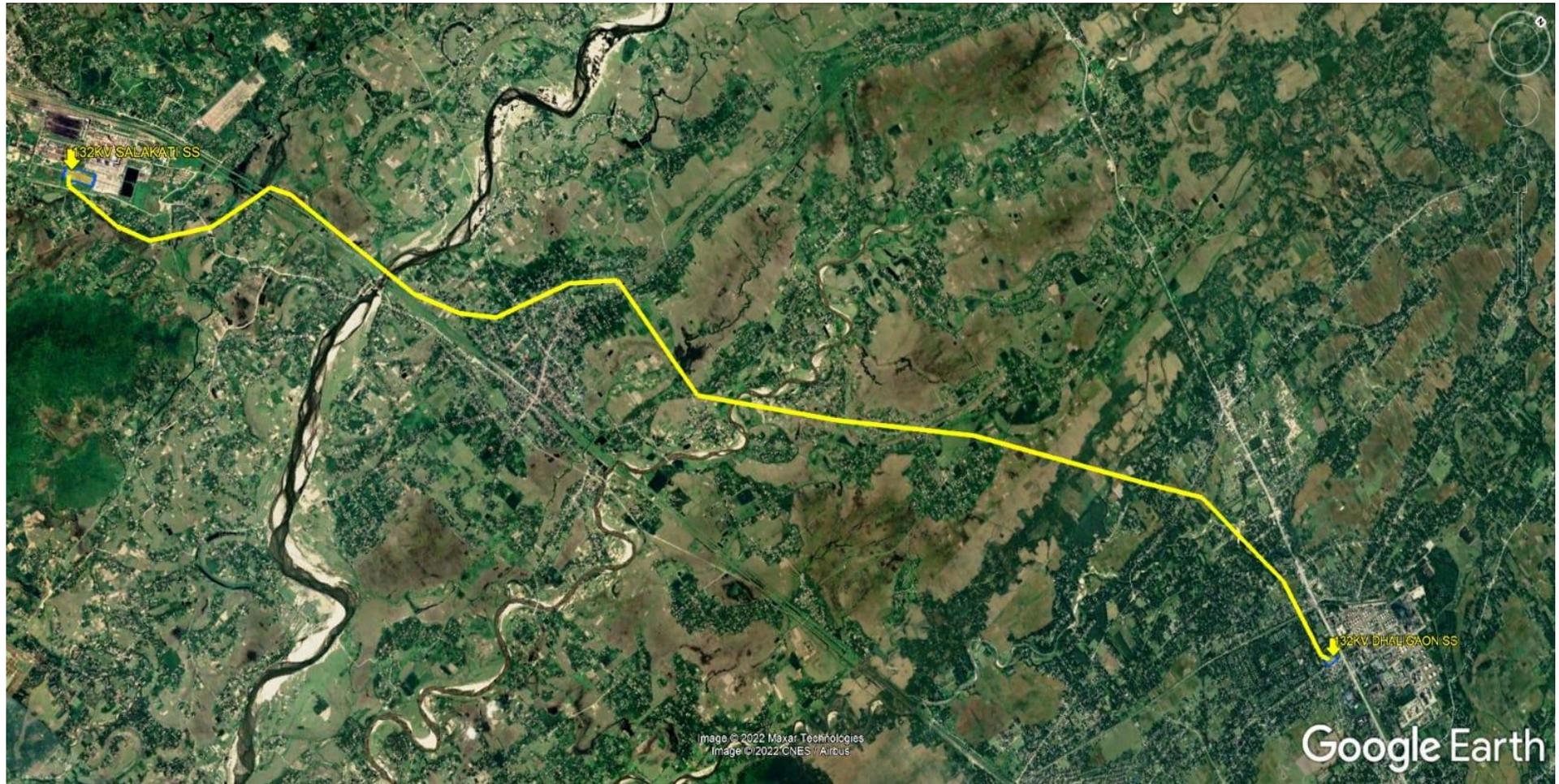


Figure 1B: Location map of 132 kV D/C Salakati – Dhaligaon Transmission Line- 21 km (approx.)

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Figure 1C: Location map of 132 kV S/C Gauripur- Gossaingaon Line – 62 km (approx.)

3 REVIEW OF LEGAL & POLICY FRAMEWORK

The laws, regulations and policies of Government of India (GoI), Government of Assam (GoA), International conventions and the AIBB 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).

The Project has been assigned to “Category B” as per AIBB’s categorization.

ESS 1 will be applicable for this package as civil works may cause a limited number of potentially unlikely 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 augmentation of 3 nos. transmission lines by High Temperature Low Sag (HTLS) conductors.

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.

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4 DESCRIPTION OF ENVIRONMENTAL & SOCIAL BASELINE CONDITIONS

4.1 E&S baseline and primary data pertinent to the potential E&S risks of Sub-project activities for augmentation of 3 nos. transmission lines by High Temperature Low Sag (HTLS) conductors

The monitoring data generated in pre-construction phase for ambient air quality, water 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

Name of Monitoring Station	Monitoring Period/Date	PM10 ($\mu\text{g}/\text{m}^3$)	PM2.5 ($\mu\text{g}/\text{m}^3$)	Remarks
National Ambient Air Quality Standards (NAAQS)		100	60	24-hours average
National Ambient Air Quality Standards (NAAQS)		60	40	Annual
At Kumarmara S/S, For Kukurmara – Sarusajai D/C line	17.02.2022	76	35	
At BTPs Salakati S/S For Salakati – Dhaligaon line	17.02.2022	76	35	
At Near Gantry tower, Joyma S/S For Gauripur - Gossaigaon line	17.02.2022	72	31	

Table-3: Noise Level Monitoring Data of nearby areas of proposed subproject locations

Name of Monitoring Station	Monitoring Period/Date	Sound Parameters(dBA)		
		Category of Zones	Limits in dB(A) / Day time	Limits in dB(A) / Night time
		Industrial	75	70
		Commercial	65	55
		Residential	55	45
		Silence Zone (Sensitive Locations)	50	40
At Kumarmara S/S, For Kukurmara – Sarusajai D/C line	17.02.2022	Commercial	47.0	37.3
AT BTPs Salakati S/S For Salakati – Dhaligaon line	17.02.2022	Commercial	54.2	45.8
At Near Gantry tower, Joyma S/S For Gauripur - Gossaigaon line	17.02.2022	Commercial	50.4	35.5

Table-4: Surface & Ground Water Quality Data of nearby area of proposed subproject locations

Name of Monitoring Station	Sampling Period/Date	Parameters	Method	Unit	Results	IS-10500-2012	
						Requirement (Acceptable Limit)	Permissible Limit in the absence of alternate source
Surface	17.02.2022	pH	IS 3025 part 11 1983 (RA:2017)	–	6.82	6.5-8.5	No relaxation

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Name of Monitoring Station	Sampling Period/Date	Parameters	Method	Unit	Results	IS-10500-2012	
						Requirement (Acceptable Limit)	Permissible Limit in the absence of alternate source
water - Kumarmara S/S, For Kukurmarra – Sarusajai D/C line		Conductivity	IS 3025 part 14 1984 (RA:2013)	µs/cm	0.05	–	–
		Colour	IS 3025 part 4 1983 (RA:2017)	hazen	1	5	15
		Total Dissolved Solids	IS 3025 part 16 1984 (RA:2017)	mg/l	29	500	2000
		Total Suspended Solids	IS 3025 part 17 1984 (RA:2017)	mg/l	<10	–	–
		Turbidity	IS 3025 part 10 1984(RA:2017)	NTU	1	1	5
		Chlorides	IS 3025 part 32 1988(RA:2013)	mg/l	2	250	1000
		Fluoride	IS 3025 part 60 2008(RA:2013)	mg/l	<0.5	1	1.5
		Iron	IS 3025 part 53 2003 (RA:2014)	mg/l	<0.07	0.30	No relaxation
		Oil and Grease	IS 3025 part 39 1991 (RA:2014)	mg/l	<2	–	–
		Sulphates	IS 3025 part 24 1986 (RA:2019)	mg/l	9.4	200	400
Ground water - BTPs Salakati S/S For Salakati – Dhaligao n line		pH	IS 3025 part 11 1983 (RA:2017)	–	6.65	6.5-8.5	No relaxation
		Conductivity	IS 3025 part 14 1984 (RA:2013)	µs/cm	0.09	–	–
		Colour	IS 3025 part 4 1983 (RA:2017)	Hazen	1	5	15
		Total Dissolved Solids	IS 3025 part 16 1984 (RA:2017)	mg/l	185	500	2000
		Total Suspended Solids	IS 3025 part 17 1984 (RA:2017)	mg/l	<10	–	–
		Turbidity	IS 3025 part 10 1984(RA:2017)	NTU	1	1	5
		Chlorides	IS 3025 part 32 1988(RA:2013)	mg/l	4	250	1000
		Fluoride	IS 3025 part 60 2008(RA:2013)	mg/l	<0.5	1	1.5
		Iron	IS 3025 part 53 2003 (RA:2014)	mg/l	0.13	0.30	No relaxation
		Oil and Grease	IS 3025 part 39 1991 (RA:2014)	mg/l	<2	–	–
	Sulphates	IS 3025 part 24 1986 (RA:2019)	mg/l	7.7	200	400	
Ground		pH	IS 3025 part 11 1983 (RA:2017)	–	6.58	6.5-8.5	No relaxation

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Name of Monitoring Station	Sampling Period/Date	Parameters	Method	Unit	Results	IS-10500-2012	
						Requirement (Acceptable Limit)	Permissible Limit in the absence of alternate source
water - Near Gantry tower, Joyma S/S For Gauripur - Gossaiga on line		Conductivity	IS 3025 part 14 1984 (RA:2013)	µs/cm	0.16	–	–
		Colour	IS 3025 part 4 1983 (RA:2017)	Hazen	1	5	15
		Total Dissolved Solids	IS 3025 part 16 1984 (RA:2017)	mg/l	85	500	2000
		Total Suspended Solids	IS 3025 part 17 1984 (RA:2017)	mg/l	<10	–	–
		Turbidity	IS 3025 part 10 1984(RA:2017)	NTU	1	1	5
		Chlorides	IS 3025 part 32 1988(RA:2013)	mg/l	6.4	250	1000
		Fluoride	IS 3025 part 60 2008(RA:2013)	mg/l	<0.5	1	1.5
		Iron	IS 3025 part 53 2003 (RA:2014)	mg/l	<0.14	0.30	No relaxation
		Oil and Grease	IS 3025 part 39 1991 (RA:2014)	mg/l	<2	–	–
		Sulphates	IS 3025 part 24 1986 (RA:2019)	mg/l	9.8	200	400

According to the site reconnaissance survey conducted for HTLS lines on 29th September 2022, it was observed that baseline air quality, ambient noise level and water quality appeared to be within acceptable limits and air or noise pollution poses insignificant threat.

4.2 District and location wise social profile of Three Numbers of HTLS lines

Table -5: Social profile Social profile of proposed subproject locations

Sl. No	Name of HTLS lines	Particulars	Social profile of proposed substation locations
1.	220 kV, D/C Sarusajai-Kukurmara Transmission line- 24 km (approx.)	Population	Kamrup (M) district - 12, 53,938 (male – 6,47,585; female – 6,06,353)
		Schedule Caste (SC) and Schedule Tribe (ST) Population	Kamrup (M) district – SC-101789. ST-75121
		Literacy rate (%)	Kamrup (M) district – 88.71 (Male-92.13, Female-85.07)
		Sex ratio	Kamrup (M) district – 936/1000
		Population	Kamrup (Rural) - 1,517,542 (male -7,78,461, female – 7,39,081) as per the Census 2011.
		Schedule Caste (SC) and Schedule Tribe (ST)	Kamrup (Rural) – SC-1,07,827, ST-1,82,038

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Sl. No	Name of HTLS lines	Particulars	Social profile of proposed substation locations
		Population	
		Literacy rate	Kamrup (Rural) – 75.55%
		Sex ratio	Kamrup (Rural) – 949/1000 male
	132 kV D/C Salakati – Dhaligaon Transmission Line- 21 km (Approx)	Population	Kokrajhar District: - 8, 87,142 (male- 452,905, female – 4, 34,237) 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
		Population	Bongaigaon District- 738804 (male- 375818, female- 362986) Dhaligaon Circle – 2470 (male- 1209, female- 1261)
		Schedule Caste (SC) and Schedule Tribe (ST) Population	Bongaigaon District - SC- 82784 , ST- 18835 Dhaligaon - SC- 300, ST- 94
		Literacy rate	Bongaigaon District - 69.74% Dhaligaon -83.47%
		Sex ratio	Bongaigaon District - 966 Dhaligaon - 1043
	132 kV S/C Gauripur- Gossaingaon Line – 62 km (approx.)	Population	Dhubri District- 1394144 (male- 715821, female- 678323) Gauripur Town – 25124 (male- 12923, female- 12201)
		Schedule Caste (SC) and Schedule Tribe (ST) Population	Dhubri District- SC- 62628 , ST- 2300 Gauripur Town - SC- 2789, ST- 177
		Literacy rate	Dhubri District- 61.23% Gauripur Town-87.8%
		Sex ratio	Dhubri District- 953 Gauripur Town- 944

4.3 E&S profile

Table 6: E&S profile of the proposed HTLS lines

Sl. No.	Name of HTLS Line	Location (District)	Status of ROW Corridor	Detail of Proposed Site and E&S Condition
1.	220 kV, D/C Sarusajai- Kukurmara Transmission line- 24 km (approx.)	Kamrup (Rural) & Kamrup (Metro)	ROW for the whole existing corridor as taken at the time of its construction.	1. The package L is associated with replacement of old conductors with HTLS conductors in the existing towers of the transmission lines mentioned under Sl. No. 2.2. As such, no foundation and erection of towers required to be carried out during the execution of the work.

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Sl. No.	Name of HTLS Line	Location (District)	Status of ROW Corridor	Detail of Proposed Site and E&S Condition
2.	132 kV S/C Gauripur-Gossaigaon Line – 62 km (approx.)	Kokrajhar & Bongaigaon	Now, only replacement of conductor will be taken under this project.	<p>This restringing activity has been planned to work with machines and using the existing conductor as pilot wire. Therefore, surface damage is negligible. Further, a corridor of 27 m and 35 m is maintained for 132 kV and 220 kV Transmission Lines respectively without allowing any growth of vegetation beneath the line.</p> <p>2. The execution of restringing work is planned to carry out within a short span of period using machines to minimize the outage of the lines and to complete the work within the allotted shutdown period. Therefore, no separate labour camp has been constructed and the vacant quarters at AEGCL residential colony has been allotted temporarily to the labours.</p> <p>3. AEGCL ensures that the necessary precautionary measure towards the safety of the workers and materials are taken care of. Insurance has been done as per existing norms. Further, all safety gadgets like helmet, safety belt, safety shoes etc., to be provided to the workers at site and the Safety Officer of the Contractor is monitoring the safety measures which will be further monitored by AEGCL.</p> <p>4. The checklist for identification of Environmental Impacts, Social Impacts and Project Assessment checklist is presented in the Appendix I for reference.</p> <p>5. The photographs during the restringing of the 132 kV S/C Gauripur- Gossaingaon Line to HTLS are presented in the Appendix – II for reference.</p>
3.	132 kV D/C Salakati – Dhaligaon Transmission Line- 21 km (Approx)	Dhubri & Kokrajhar		

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5 ANALYSIS OF ALTERNATIVE

As the scope of work of package – L is replacement of existing conductor by HTLS conductor in AEGCL existing T/L and thus analysis of alternative is not applicable.

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6 ENVIRONMENT & SOCIAL AUDIT

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

Table - 7: E&S Audit details

Sl. No.	Name of HTLS Line	Location (District)	Status of ROW Corridor	Detail of Proposed Site and E&S Condition	E&S risks noticed
1.	220 kV, D/C Sarusajai-Kukurmara Transmission line- 24 km (approx.)	Kamrup (Rural) & Kamrup (Metro)		1. The package L is associated with replacement of old conductors with HTLS conductors in the existing towers of the transmission lines mentioned under Sl. No. 2.2. As such, no foundation and erection of towers required to be carried out during the execution of the work. This restringing activity has been planned to work with machines and using the existing conductor as pilot wire, therefore surface damage is negligible. Further, a corridor of 27 m and 35 m is maintained for 132 kV and 220 kV Transmission Lines respectively without allowing any growth of vegetation beneath the line.	Only risk associated with safety during working at height.
2.	132 kV S/C Gauripur-Gossaingao n Line – 62 km (approx.)	Kokrajhar & Bongaigao n		2. The execution of restringing work is planned to carry out within a short span of period using machines to minimize the outage of the lines and to complete the work within the allotted shutdown period. Therefore, no separate labour camp has been constructed and the vacant quarters at AEGCL Residentially colony has been allotted temporarily for their stay.	
3.	132 kV D/C Salakati – Dhaligaon Transmiss ion Line- 21 km (Approx)	Dhubri & Kokrajhar		3. AEGCL ensures that the necessary precautionary measure towards the safety of the man and materials is taken care of. Insurance has been done as per existing norms. Further, all safety gadgets like helmet, safety belt, safety shoes etc., to be provided to the workers at site and the Safety Officer of the	

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Sl. No.	Name of HTLS Line	Location (District)	Status of ROW Corridor	Detail of Proposed Site and E&S Condition	E&S risks noticed
				<p>Contractor is monitoring the safety measures which will be further monitored by AEGCL.</p> <p>4. The checklist for identification of Environmental Impacts, Social Impacts and Project Assessment checklist is presented in the Appendix I for reference.</p> <p>5. The photographs during the restringing of the 132 kV S/C Gauripur- Gossaingaon Line to HTLS are presented in the Appendix – II for reference.</p>	

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7 SPECIFIC E&S IMPACTS

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

6.1. 220 kV, D/C Sarusajai- Kukurmara Transmission line- 24 km (approx.)

A. Checklist for identification of Environmental Impacts

Screening Checklist	Yes	No	Remarks
A. Project Siting: Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
1. Cultural heritage site		No	Not Applicable
2. Legally protected Area (core zone or buffer zone)		No	Not Applicable
3. Wetland/ Mangrove/ Estuarine		No	No Wetland observed/reported nearby the T/L. There is no Mangrove / Estuarine nearby the Project site.
4. Special area for protecting biodiversity		No	
B. Potential Environmental Impacts: Will the Project cause			
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to physical cultural resources?		No	
2. Disturbance to precious ecology (e.g. sensitive or protected areas)?		No	
3. Alteration of surface water hydrology of waterways resulting in increased sediment in streams affected by increased soil erosion at construction site?		No	Not applicable
4. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in Construction?		No	Not applicable
5. Increased air pollution due to project construction and operation?		No	Not applicable
6. Noise and vibration due to project construction or operation?		No	No
7. Involuntary resettlement of people? (physical displacement and/or economic displacement)		No	No land acquisition required as the restringing activities is carried out in the existing towers.
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	Existing AEGCL quarters are used for labors. Restringing works are being done through machineries where minimal labours are involved.
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	Local laboures involved.
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	

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Screening Checklist	Yes	No	Remarks
13. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		No	Only restringing works
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	Not Applicable
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	During construction work EPC contractors should maintain the safety measures and maintain the same to keep community safety throughout the construction phase.
16. Generation of solid waste and/or hazardous waste?		No	Not Applicable
17. Use of chemicals?		No	Not Applicable
18. Generation of waste water during construction or operation?		No	Not Applicable

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B. Checklist for identification of Social Impacts

Particulars		Observation
A. Proposed Site Location		
1.	Land requirement for the project (GPS parcel border for Substation)	Not Applicable as the restringing activities are carried out in the existing towers.
2.	Landownership of the project area: Govt. / Private lands	Not Applicable
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.
4.	Present usage of the land parcels is for: Agricultural purposes Residential purposes Commercial purposes Other purposes (Indicate)	Not Applicable
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?	Not Applicable
12.	Is the proposed project site encountering any site of archaeological/historical value? Cultural/Symbolic value?	Not Applicable
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.	All Mainstream
B. Potential Social Impacts- Will the Project cause		
1.	Involuntary resettlement of people? (physical displacement and/or economic displacement)	Not Applicable
2.	Impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?	Not Applicable
3.	Will community facilities require relocation?	Not Applicable
4.	Poor sanitation and solid waste disposal in construction camps and work sites	No
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
6.	Social conflicts relating to inconveniences in living conditions where construction interferes with pre- existing roads	No
7.	Will a Resettlement Plan be required?	Not Applicable

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Particulars		Observation
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?	Not Applicable
10.	Indirect impact due to loss of commercial grounds, market places, places for hawker stalls, etc.?	Not Applicable
11.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	No
12.	Other social concerns relating to inconveniences in living conditions in the project areas?	No
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)	No
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?	Not Applicable
16.	Is there a requirement for an in-depth Indigenous people's plan? (IPP)	Not Applicable
17.	Describe any other impacts that have not been covered in this screening form	Not Applicable
18.	Describe alternatives, if any, to avoid or minimize displacement from private and public lands	Not Applicable

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C. Project Impact Assessment Checklist

S. 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	
2.	Encroachment on precious ecosystem (e.g. Sensitive or protected areas)?		No	
3.	Alteration of surface water hydrology		No	
4.	Deterioration of surface water quality due to silt Runoff, sanitary wastes from worker-based camps and chemicals used in construction?		No	Not Applicable as the restringing activities is carried out in the existing towers.
5.	Increased local air pollution due to rock crushing, cutting and filling?		No	Not Applicable
6.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		No	Proper precaution measures were taken during the restringing work at site. PPE, First Aid box etc. were available during works.
7.	Chemical pollution resulting from chemical clearing of vegetation for construction site?		No	
8.	Noise and vibration due to civil works?		No	
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	
12.	Hazardous driving conditions where construction interferes with pre-existing roads?		No	
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	RoW of 27 meters for 132kV lines is exist.
16.	Facilitation of access to protected areas in case corridors traverse protected areas?		No	Height of the lower line from the ground is as per the standard.
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		No	

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S. 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)
	services (Such as water supply and sanitation systems)?			
19.	Social conflicts if workers from other regions or countries are hired?		No	Existing AEGCL quarters are used for labors. Restraining works are being done through machineries where minimal labours are involved.
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	
21.	Risks to community safety associated with maintenance of lines and related facilities?		No	Not applicable
22.	Community health hazards due to electromagnetic fields, land subsidence, lowered Ground water table and salinization?		No	No Community health hazard is envisaged.
23.	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	
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) 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	
Involuntary Resettlement Screening				
1.	Will the activity be undertaken in public land		No	
2.	If no 1 is yes, are there any non-titled people (squatters) who live at the site or within the public land/RoW? Please provide gender disaggregated number.			Not applicable
3.	Will the activity be undertaken in private land but acquired			Not applicable as the restraining activities is carried out in the existing towers.
4.	If no 3 is yes, when the private land was acquired, the land acquired legally under Gol law? (unknown =No)			Not applicable
5.	If no 3 is yes, are there any outstanding Complaints about the land acquired?			Not applicable
6.	Will the activity require new private land acquisition or use?			Not applicable
7.	If no 6 is yes, the land will be obtained through negotiated settlement or donation?			Not applicable
8.	If no 6 is yes, will it require compulsory land Acquisition?			Not applicable
9.	If no 6 is yes, then will the activity require permanent or temporary relocation Displacement of any people (titled or non-			Not applicable

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S. 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)	
	titled)?				
10.	If no 8 is yes, then will there be any loss of housing/accommodation or severely affected households more than 10% of their productive Asset?			Not applicable	
11.	In all cases, will there be any loss of vegetable gardens or agriculture?		No	Construction activities have been carried out in the off season and post harvesting period to avoid the crop/paddy damage.	
12.	In all cases, will there be any losses of Trees		No		
13.	In all cases, will any small or informal businesses have to be moved or closed temporarily or Permanently?			Not applicable.	
14.	In all cases, will there be temporary or permanent loss of employment as a result of the renovation?			Not applicable.	
15.	In all cases, will there be temporary or permanent impact on women or vulnerable groups?			Not applicable.	
Indigenous Peoples Screening		Yes	No	Not Known	Remarks
16.	Are the subproject areas located in scheduled Tribe area?		No		
17.	Do the applicants belong to scheduled tribes?		No		
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		
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		
20.	Commercial development of the cultural resources and knowledge of Indigenous Peoples?		No		
21.	Physical displacement from traditional or Customary lands?		No		
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 identity and community of Indigenous Peoples?		No		
23.	Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by Indigenous peoples?		No		
24.	Acquisition of lands that are traditionally owned or customarily used occupied or claimed by indigenous peoples?		No		

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6.2. 132 kV S/C Gauripur- Gossaingaon Line – 62 km (approx.)

A. Checklist for identification of Environmental Impacts

Screening Checklist	Yes	No	Remarks
A. Project Siting: Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
1. Cultural heritage site		No	Not Applicable
2. Legally protected Area (core zone or buffer zone)		No	Not Applicable
3. Wetland/ Mangrove/ Estuarine		No	No Wetland observed/reported nearby the T/L. There is no Mangrove / Estuarine nearby the Project site.
4. Special area for protecting biodiversity		No	
B. Potential Environmental Impacts: Will the Project cause			
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to physical cultural resources?		No	
2. Disturbance to precious ecology (e.g. sensitive or protected areas)?		No	
3. Alteration of surface water hydrology of waterways resulting in increased sediment in streams affected by increased soil erosion at construction site?		No	Not applicable
4. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in Construction?		No	Not applicable
5. Increased air pollution due to project construction and operation?		No	Not applicable
6. Noise and vibration due to project construction or operation?		No	No
7. Involuntary resettlement of people? (physical displacement and/or economic displacement)		No	No land acquisition required as the restringing activities is carried out in the existing towers
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	AEGCL quarters are used for labors. Restringing works are being done through machineries where minimal labours are involved.
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	Local laboures involved.
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	
13. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		No	Only restringing works
14. Risks to community health and safety due to the		No	Not Applicable

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Screening Checklist	Yes	No	Remarks
transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
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	During construction work EPC contractors should maintain the safety measures and maintain the same to keep community safety throughout the construction phase.
16. Generation of solid waste and/or hazardous waste?		No	Not Applicable
17. Use of chemicals?		No	Not Applicable
18. Generation of waste water during construction or operation?		No	Not Applicable

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B. Checklist for identification of Social Impacts

Particulars		Observation
A. Proposed Site Location		
1.	Land requirement for the project (GPS parcel border for Substation)	Not Applicable as the restringing activities is carried out in the existing towers.
2.	Landownership of the project area: Govt. / Private lands	Not Applicable
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.
4.	Present usage of the land parcels is for: Agricultural purposes Residential purposes Commercial purposes Other purposes (Indicate)	Not Applicable
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?	Not Applicable
12.	Is the proposed project site encountering any site of archaeological/historical value? Cultural/Symbolic value?	Not Applicable
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.	All Mainstream
B. Potential Social Impacts- Will the Project cause		
1.	Involuntary resettlement of people? (physical displacement and/or economic displacement)	Not Applicable
2.	Impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?	Not Applicable
3.	Will community facilities require relocation?	Not Applicable
4.	Poor sanitation and solid waste disposal in construction camps and work sites	No
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
6.	Social conflicts relating to inconveniences in living conditions where construction interferes with pre- existing roads	No
7.	Will a Resettlement Plan be required?	Not Applicable

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Particulars		Observation
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?	Not Applicable
10.	Indirect impact due to loss of commercial grounds, market places, places for hawker stalls, etc.?	Not Applicable
11.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	No
12.	Other social concerns relating to inconveniences in living conditions in the project areas?	No
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)	No
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?	Not Applicable
16.	Is there a requirement for an in-depth Indigenous people's plan? (IPP)	Not Applicable
17.	Describe any other impacts that have not been covered in this screening form	Not Applicable
18.	Describe alternatives, if any, to avoid or minimize displacement from private and public lands	Not Applicable

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C. Project Impact Assessment Checklist

S. 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	
2.	Encroachment on precious ecosystem (e.g. Sensitive or protected areas)?		No	
3.	Alteration of surface water hydrology		No	
4.	Deterioration of surface water quality due to silt Runoff, sanitary wastes from worker-based camps and chemicals used in construction?		No	as the restringing activities is carried out in the existing towers.
5.	Increased local air pollution due to rock crushing, cutting and filling?		No	Not Applicable
6.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		No	Proper precautionary measures were taken during the restringing work at site. PPE, First Aid box etc were available during works.
7.	Chemical pollution resulting from chemical clearing of vegetation for construction site?		No	
8.	Noise and vibration due to civil works?		No	
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	
12.	Hazardous driving conditions where construction interferes with pre-existing roads?		No	
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	RoW of 27 meters for 132kV lines is exist.
16.	Facilitation of access to protected areas in case corridors traverse protected areas?		No	Height of the lower line from the ground is as per the standard.
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		No	

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S. 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)
	services (Such as water supply and sanitation systems)?			
19.	Social conflicts if workers from other regions or countries are hired?		No	AEGCL quarters are used for labors. Restraining works are being done through machineries where minimal labours are involved.
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	
21.	Risks to community safety associated with maintenance of lines and related facilities?		No	Not applicable
22.	Community health hazards due to electromagnetic fields, land subsidence, lowered Ground water table and salinization?		No	No Community health hazard is envisaged.
23.	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	
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) 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	
Involuntary Resettlement Screening				
1.	Will the activity be undertaken in public land		No	
2.	If no 1 is yes, are there any non-titled people (squatters) who live at the site or within the public land/RoW? Please provide gender disaggregated number.			Not applicable
3.	Will the activity be undertaken in private land but acquired			Not applicable as the restraining activities is carried out in the existing towers.
4.	If no 3 is yes, when the private land was acquired, the land acquired legally under Gol law? (unknown =No)			Not applicable
5.	If no 3 is yes, are there any outstanding Complaints about the land acquired?			Not applicable
6.	Will the activity require new private land acquisition or use?			Not applicable
7.	If no 6 is yes, the land will be obtained through negotiated settlement or donation?			Not applicable
8.	If no 6 is yes, will it require compulsory land Acquisition?			Not applicable
9.	If no 6 is yes, then will the activity require permanent or temporary relocation Displacement of any people (titled or non-			Not applicable

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S. No.	Potential Environmental Impacts Will the Project cause			Remarks (If yes, what is the proposed mitigation measures and indicate which Environmental and Social Management Standard will be implemented)	
		Yes	No		
	titled)?				
10.	If no 8 is yes, then will there be any loss of housing/accommodation or severely affected households more than 10% of their productive Asset?			Not applicable	
11.	In all cases, will there be any loss of vegetable gardens or agriculture?		No	Construction activities have been carried out in the off season and post harvesting period to avoid the crop/paddy damage.	
12.	In all cases, will there be any losses of Trees		No		
13.	In all cases, will any small or informal businesses have to be moved or closed temporarily or Permanently?			Not applicable.	
14.	In all cases, will there be temporary or permanent loss of employment as a result of the renovation?			Not applicable.	
15.	In all cases, will there be temporary or permanent impact on women or vulnerable groups?			Not applicable.	
Indigenous Peoples Screening		Yes	No	Not Known	Remarks
16.	Are the subproject areas located in scheduled Tribe area?		No		
17.	Do the applicants belong to scheduled tribes?		No		
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		
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		
20.	Commercial development of the cultural resources and knowledge of Indigenous Peoples?		No		
21.	Physical displacement from traditional or Customary lands?		No		
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 identity and community of Indigenous Peoples?		No		
23.	Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by Indigenous peoples?		No		
24.	Acquisition of lands that are traditionally owned or customarily used occupied or claimed by indigenous peoples?		No		

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6.3 132 kV D/C Salakati – Dhaligaon Transmission Line- 21 km (Approx.)

A. Checklist for identification of Environmental Impacts

Screening Checklist	Yes	No	Remarks
A. Project Siting: Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
1. Cultural heritage site		No	Not Applicable
2. Legally protected Area (core zone or buffer zone)		No	Not Applicable
3. Wetland/ Mangrove/ Estuarine		No	No Wetland observed/reported nearby the T/L. There is no Mangrove / Estuarine nearby the Project site.
4. Special area for protecting biodiversity		No	
B. Potential Environmental Impacts: Will the Project cause			
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to physical cultural resources?		No	
2. Disturbance to precious ecology (e.g. sensitive or protected areas)?		No	
3. Alteration of surface water hydrology of waterways resulting in increased sediment in streams affected by increased soil erosion at construction site?		No	Not applicable
4. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in Construction?		No	Not applicable
5. Increased air pollution due to project construction and operation?		No	Not applicable
6. Noise and vibration due to project construction or operation?		No	No
7. Involuntary resettlement of people? (physical displacement and/or economic displacement)		No	No land acquisition required as the restringing activities is carried out in the existing towers.
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	AEGCL quarters are used for labors. Restringing works are being done through machineries where minimal labours are involved.
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	Local laboures involved.
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	
13. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		No	Only restringing works
14. Risks to community health and safety due to the		No	Not Applicable

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Screening Checklist	Yes	No	Remarks
transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
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	During construction work EPC contractors should maintain the safety measures and maintain the same to keep community safety throughout the construction phase.
16. Generation of solid waste and/or hazardous waste?		No	Not Applicable
17. Use of chemicals?		No	Not Applicable
18. Generation of waste water during construction or operation?		No	Not Applicable

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B. Checklist for identification of Social Impacts

Particulars		Observation
A. Proposed Site Location		
1.	Land requirement for the project (GPS parcel border for Substation)	Not Applicable as the restringing activities is carried out in the existing towers..
2.	Landownership of the project area: Govt. / Private lands	Not Applicable
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.
4.	Present usage of the land parcels is for: Agricultural purposes Residential purposes Commercial purposes Other purposes (Indicate)	Not Applicable
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?	Not Applicable
12.	Is the proposed project site encountering any site of archaeological/historical value? Cultural/Symbolic value?	Not Applicable
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.	All Mainstream
B. Potential Social Impacts- Will the Project cause		
1.	Involuntary resettlement of people? (physical displacement and/or economic displacement)	Not Applicable
2.	Impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?	Not Applicable
3.	Will community facilities require relocation?	Not Applicable
4.	Poor sanitation and solid waste disposal in construction camps and work sites	No
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
6.	Social conflicts relating to inconveniences in living conditions where construction interferes with pre- existing roads	No
7.	Will a Resettlement Plan be required?	Not Applicable
8.	Impact on local economy – Fisheries, local tourism related	No

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Particulars		Observation
	businesses, market places, etc.?	
9.	Livelihood- Direct impact due to loss of land and structures?	Not Applicable
10	Indirect impact due to loss of commercial grounds, market places, places for hawker stalls, etc.?	Not Applicable
11	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	No
12	Other social concerns relating to inconveniences in living conditions in the project areas?	No
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)	No
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?	Not Applicable
16	Is there a requirement for an in-depth Indigenous people's plan? (IPP)	Not Applicable
17	Describe any other impacts that have not been covered in this screening form	Not Applicable
18	Describe alternatives, if any, to avoid or minimize displacement from private and public lands	Not Applicable

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C. Project Impact Assessment Checklist

S. 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	
2.	Encroachment on precious ecosystem (e.g. Sensitive or protected areas)?		No	
3.	Alteration of surface water hydrology		No	
4.	Deterioration of surface water quality due to silt Runoff, sanitary wastes from worker-based camps and chemicals used in construction?		No	Not Applicable as the restringing activities is carried out in the existing towers.
5.	Increased local air pollution due to rock crushing, cutting and filling?		No	Not Applicable
6.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		No	Proper precautionary measures were taken during the restringing work at site. PPE, Fast Aid box etc. were available during works.
7.	Chemical pollution resulting from chemical clearing of vegetation for construction site?		No	
8.	Noise and vibration due to civil works?		No	
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	
12.	Hazardous driving conditions where construction interferes with pre-existing roads?		No	
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	RoW of 27 meters for 132kV lines is exist.
16.	Facilitation of access to protected areas in case corridors traverse protected areas?		No	Height of the lower line from the ground is as per the standard.
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		No	

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S. 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)
	services (Such as water supply and sanitation systems)?			
19.	Social conflicts if workers from other regions or countries are hired?		No	AEGCL quarters are used for labors. Restraining works are being done through machineries where minimal labours are involved.
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	
21.	Risks to community safety associated with maintenance of lines and related facilities?		No	Not applicable
22.	Community health hazards due to electromagnetic fields, land subsidence, lowered Ground water table and salinization?		No	No Community health hazard is envisaged.
23.	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	
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) 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	
Involuntary Resettlement Screening				
1.	Will the activity be undertaken in public land		No	
2.	If no 1 is yes, are there any non-titled people (squatters) who live at the site or within the public land/RoW? Please provide gender disaggregated number.			Not applicable
3.	Will the activity be undertaken in private land but acquired			Not applicable as the restraining activities is carried out in the existing towers..
4.	If no 3 is yes, when the private land was acquired, the land acquired legally under Gol law? (unknown =No)			Not applicable
5.	If no 3 is yes, are there any outstanding Complaints about the land acquired?			Not applicable
6.	Will the activity require new private land acquisition or use?			Not applicable
7.	If no 6 is yes, the land will be obtained through negotiated settlement or donation?			Not applicable
8.	If no 6 is yes, will it require compulsory land Acquisition?			Not applicable
9.	If no 6 is yes, then will the activity require permanent or temporary relocation Displacement of any people (titled or non-			Not applicable

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S. 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
	titled)?				
10.	If no 8 is yes, then will there be any loss of housing/accommodation or severely affected households more than 10% of their productive Asset?				Not applicable
11.	In all cases, will there be any loss of vegetable gardens or agriculture?		No		Construction activities have been carried out in the off season and post harvesting period to avoid the crop/paddy damage.
12.	In all cases, will there be any losses of Trees		No		
13.	In all cases, will any small or informal businesses have to be moved or closed temporarily or Permanently?				Not applicable.
14.	In all cases, will there be temporary or permanent loss of employment as a result of the renovation?				Not applicable.
15.	In all cases, will there be temporary or permanent impact on women or vulnerable groups?				Not applicable.
Indigenous Peoples Screening		Yes	No	Not Known	Remarks
16.	Are the subproject areas located in scheduled Tribe area?		No		
17.	Do the applicants belong to scheduled tribes?		No		
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		
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		
20.	Commercial development of the cultural resources and knowledge of Indigenous Peoples?		No		
21.	Physical displacement from traditional or Customary lands?		No		
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 identity and community of Indigenous Peoples?		No		
23.	Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by Indigenous peoples?		No		
24.	Acquisition of lands that are traditionally owned or customarily used occupied or claimed by indigenous peoples?		No		

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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 conductor by HTLS conductor 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 conductor by HTLS conductor and thus, cumulative impact assessment is not applicable.

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8 AUDIT FINDINGS AND PROPOSED REMEDIATION MEASURES

Table - 8: Audit Findings and Proposed Remediation Measures

Sl. No.	Name of HTLS Line	Location (District)	Status of ROW Corridor	Detail of Proposed Site and E&S Condition	E&S risks noticed
1.	220 kV, D/C Sarusajai-Kukurmara Transmission line- 24 km (approx.)	Kamrup (Rural) & Kamrup (Metro)		<ul style="list-style-type: none"> The package L is associated with replacement of old conductors with HTLS conductors in the existing towers of the transmission lines mentioned under Sl. No. 2.2. As such, no foundation and erection of towers required to be carried out during the execution of the work. This restringing activity has been planned to work with machines and using the existing conductor as pilot wire, therefore surface damage is negligible. Further, a corridor of 27 m and 35 m is maintained for 132 kV and 220 kV Transmission Lines respectively without allowing any growth of vegetation beneath the line. 	<ul style="list-style-type: none"> No E&S issues observed accept risk observed for safety during working at height and dealing with high voltage transmission lines.
2.	132 kV S/C Gauripur-Gossaingaon Line – 62 km (approx.)	Kokrajhar & Bongaigaon		<ul style="list-style-type: none"> The execution of restringing work is planned to carry out within a short span of period using machines to minimize the outage of the lines and to complete the work within the allotted shutdown period. Therefore, no separate labour camp has been constructed and the vacant quarters at AEGCL Residentially colony has been allotted temporarily for their stay. 	
3.	132 kV D/C Salakati – Dhaligaon Transmission Line- 21 km (Approx)	Dhubri & Kokrajhar		<ul style="list-style-type: none"> AEGCL ensures that the necessary precautionary measure towards the safety of the man and materials is taken care of. Insurance has been done as per existing 	

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Sl. No.	Name of HTLS Line	Location (District)	Status of ROW Corridor	Detail of Proposed Site and E&S Condition	E&S risks noticed
				<p>norms. Further, all safety gadgets like helmet, safety belt, safety shoes etc., to be provided the workers at site and the Safety Officer of the Contractor is monitoring the safety measures will be monitored by AEGCL.</p> <ul style="list-style-type: none"> • The checklist for identification of Environmental Impacts, Social Impacts and Project Assessment checklist is presented in the Appendix I for reference. • The photographs during the restringing of the 132 kV S/C Gauripur- Gossaingaon Line to HTLS are presented in the Appendix – II for reference. 	

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

Table – 9: Environmental & Social Management Plan (ESMP)

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

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

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Aspect/Project activity	Location (with GPS Coordinates)/type of impact	Impacts	Mitigation Measures
		is only replacement of existing old conductors by HTLS conductors.	replacement of existing old conductors by HTLS conductors.
Construction of Transmission towers	Transmission line alignment	<ul style="list-style-type: none"> • Not Applicable, as the scope of work is only replacement of existing old conductors by HTLS conductors. 	<ul style="list-style-type: none"> • Not Applicable, as the scope of work is only replacement of existing old conductors by HTLS conductors.
Provision of facilities for construction workers	Construction labour camp	<ul style="list-style-type: none"> • Contamination of receptors (land, water, air). Health Impact on labour due to lack of basic amenities. 	<ul style="list-style-type: none"> • Existing AEGCL staff quarters nearby the line will be used as project office and labour camps.
Construction works and machine operations	Transmission line alignment	<ul style="list-style-type: none"> • Noise, vibration and operator safety, efficient operation. • Noise, vibration, equipment wears and tear. • Injury and sickness of workers and members of the public. • Incidents/accidents; GBV/SE; • Electrocutation and other accident may occur due to lack of proper awareness of the Workers. • COVID-19 Response • 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. • Road safety 	<ul style="list-style-type: none"> • Scheduled maintenance of construction equipment and machines. • Follow noise control regulations and national and international standards during construction phase. • Installation of adequate signage and barriers around charged components. • Implementation of approved health and safety plan and provide workers. • Provide required PPE to workers, working on noisy machine • Training to workers on health and safety requirements including on COVID-19, AIDS and sexually transmitted diseases (STD). • Preparation of Covid-19 Response & Management Plan following guidelines of GoI, World Health Organization, International Labour Organization etc. • Reporting and recording of incidents and accidents at project site. • Traffic Management guidelines will be followed. • Instruction to drivers of construction vehicles to strictly follow road regulations;

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Aspect/Project activity	Location (with GPS Coordinates)/type of impact	Impacts	Mitigation Measures
			<ul style="list-style-type: none"> • Installation of adequate and clearly visible warning signs (such as danger, detour, cross here, works in progress, people at work, etc.) at designated sites.
Storage of chemicals and materials	Transmission line alignment	<ul style="list-style-type: none"> • Contamination of receptors (land, water, air). 	<ul style="list-style-type: none"> • Storage of fuel and other hazardous materials on paved surface with spill control and limited access. • Record of spill control during the project with details of type and quantities of chemical spilled.
C. Ecological Environment			
Wood/vegetation harvesting, cut and fill operations	Transmission line construction site	<ul style="list-style-type: none"> • Loss of vegetation and deforestation • Effect on fauna (including avifauna) 	<ul style="list-style-type: none"> • Trimming /cutting of trees will be done as per requirement. • Construction workers should be provided with gas cylinders for cooking • Prohibition of use of wood burning in the project area during their employment. • Preventing work force from disturbing the flora, fauna including hunting of animals and fishing in water bodies. • Provision of penalty on work force involved in illegal poaching and hunting. • Awareness program regarding conservation of flora, fauna including ground vegetation to all workers.
D. Social Environment			
Construction works at project site and material transportation	Transmission line alignment site and labour camp	<ul style="list-style-type: none"> • Community disturbance and health and safety • Community health and safety due to air pollution and increase in noise level • Human and Animal interference in Transmission line area 	<ul style="list-style-type: none"> • Avoiding storage of construction materials beside the road, around water bodies, residential or CPR. • Construction materials will be covered with tarpaulin, if required. • Water sprinkling to minimize the dust. • Proper maintenance of construction machinery. • Reinstated of agriculture land following completion of

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Aspect/Project activity	Location (with GPS Coordinates)/type of impact	Impacts	Mitigation Measures
		<ul style="list-style-type: none"> • Potential conflict between migrant workforce and local may took place • Chances of finding archaeological /cultural artifacts • Loss of agricultural productivity • Road safety 	<ul style="list-style-type: none"> • construction. • Compensation for loss of agriculture production, if any. • Traffic Management guidelines will be followed. • Training session to the workforce to avoid conflict with local people during project work. • 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.

Abbreviations

PMU – Project Management Unit

PMC – Project Management

Consultancy P&E Wing -

Planning and Engineering Wing

SO₂- -Sulphur Dioxide; NO₂- - Nitrogen Dioxide; CO- Carbon Monoxide; EC – Electric Conductivity;

Pb – Lead; PM_{2.5} - Particulate Matter <2.5; PM₁₀ - Particulate Matter <10; TSPM- Total suspended Particulate

Matter;EC - Electrical Conductivity; DO - Dissolved Oxygen; TSS - Total Suspended Solids;

BOD - Biological Oxygen Demand; NAAQS - National Ambient Air Quality Standards;

NWQS - National water Quality Standards; AEGCL - Assam Electricity Grid Corporation

Limited;ORP – Oxidation Reduction Potential, PMC – Project Management Consultancy

PMU – Project Management Unit (AEGCL), PIU – Project Implementation Unit (AEGCL)IFC – International Finance Corporation (World Bank Group), HR – Human Resource

PS – Performance Standards.

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10 ENVIRONMENTAL AND SOCIAL MONITORING PLAN (ESMOP)

Table - 10: Environmental and Social Monitoring Plan

Environmental component	Project stage	Parameters to be monitored	Location	Frequency ¹	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 approved laboratory	CPCB 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 approved laboratory	CPCB 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 approved laboratory	CPCB 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 CaCO ₃), corrosivity, Taste).	Nearest downstream spring/hand pump along the Project site	One time	National water quality standards of CPCB	EPC by approved laboratory	CPCB AEGCL - PMU/ AEGCL Field Officials & PMC	Complied, baseline monitoring for this stage conducted through approved laboratory.

¹ Here the frequency means the frequency for the monitoring report.

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Environmental component	Project stage	Parameters to be monitored	Location	Frequency ¹	Standards	Implementation	Supervision	Compliance Action
	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 CaCO3), corrosivity, Taste}.	Nearest downstream spring/hand pump along the Project site	Twice a year	National water quality standards of CPCB	EPC by approved laboratory CPCB	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 CaCO3), corrosivity, Taste).	Nearest downstream spring/hand pump along the Project site	One Time	National water quality standards of CPCB	EPC by approved laboratory CPCB	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 approved laboratory CPCB	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 approved laboratory CPCB	AEGCL - PMU/ AEGCL Field officials& PMC	The monitoring at adequate locations through

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Environmental component	Project stage	Parameters to be monitored	Location	Frequency ¹	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 approved laboratory	CPCB 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 approved laboratory	CPCB 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 approved laboratory	CPCB 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 approved laboratory	CPCB AEGCL- PMU/ AEGCL Field officials & PMC	Will comply for defect liability Period only. AEGCL will comply for operation stage.

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Environmental component	Project stage	Parameters to be monitored	Location	Frequency ¹	Standards	Implementation	Supervision	Compliance Action
5. EMF	A. Pre-Construction Stage	Design specification	-	Once during final design approval	National Electrical Safety Code, American National Standard Institute, C2	Contractor (designing), PMC and PMU (design review)	AEGCL- PMU/ AEGCL Field officials& PMC	Not Applicable
	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) to be reported to concerned forest/wildlife authority for identification of species. Record to be maintained for number of carcasses.	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		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 survey and increased traffic	Surveyor	AEGCL- PMU/ AEGCL Field officials& PMC	Not Applicable

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Environmental component	Project stage	Parameters to be monitored	Location	Frequency ¹	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.	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	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 case tree cutting is involved in declared forest area.	Contractor / Revenue & Forest Department / AEGCL	AEGCL - PMU/ AEGCL Field officials & PMC	Will comply
	C. Operation Stage	Pruning/cutting of tress for maintenance activity.	Transmission line routes	Continuous activity	Maintenance of minimum	Contractor / Revenue	AEGCL- PMU/ AEGCL Field	Will comply for defect liability

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Environmental component	Project stage	Parameters to be monitored	Location	Frequency ¹	Standards	Implementation	Supervision	Compliance Action
					clearance between conductors and trees. Obtaining applicable clearance from forest department in case tree cutting/pruning is involved in declared forest area.	Department / AEGCL	officials & PMC	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 sheet)	Contractor/PMC/ AEGCL/ concerned revenue circle	AEGCL- PMU/ AEGCL Field officials & PMC	Will comply
	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	A. Pre-	Identification of officials,	All Project	Continuous	Development of	AEGCL - PMU	AEGCL- PMU/	Not Applicable

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Environmental component	Project stage	Parameters to be monitored	Location	Frequency ¹	Standards	Implementation	Supervision	Compliance Action
Mechanism	Construction Stage	NGO, stakeholders to be part Grievance redressal committee.	Locations	activity	Grievance redress mechanism as per provisions Notification of formulation of GRM and GRC		AEGCL Field officials & PMC	
	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. Working records for GRM	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.
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	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	All project locations	Before commencement of working area	Rehabilitation and Resettlement Act, 2013 and IFC's Performance Standard 5	Contractor, PMC, Revenue circle & AEGCL /EPC Contractor	AEGCL– PMU & Revenue Department / PMC & AEGCL Field Officials	Will comply

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Environmental component	Project stage	Parameters to be monitored	Location	Frequency ¹	Standards	Implementation	Supervision	Compliance Action
		(area m ²) –if applicable.						
	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 ² 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 Standard 5	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 ²) – land utilization pattern, crop damage (area m ² and type of crop) and zirat damage (inventory development).	All project locations	Once – before commencing construction work		Revenue Department & AEGCL concerned divisional officer, PMC, EPC Contractor	AEGCL– PMU/ PMC & AEGCL Field Officials	Will comply
	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	All project locations	Once during detailed survey	Right to Fair Compensation and Transparency in	Revenue Department & AEGCL concerned	AEGCL– PMU/ PMC & AEGCL Field Officials	Will comply

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Environmental component	Project stage	Parameters to be monitored	Location	Frequency ¹	Standards	Implementation	Supervision	Compliance Action
		be envisaged during construction phase.			Land Acquisition Rehabilitation and Resettlement Act, 2013 and IFC's Performance Standard 5	divisional officer, PMC, EPC Contractor		
	B. Construction Stage	Marking and listing of damage to public utilities / shifting of public utilities and public / private property.	All project locations	Continuous activity		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		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.

Abbreviations

PMU – Project Management Unit

PMC – Project Management Consultancy P&E Wing - Planning and Engineering Wing

SO₂ - Sulphur Dioxide; NO₂ - Nitrogen Dioxide; CO- Carbon Monoxide; EC – Electric Conductivity;

Pb – Lead; PM_{2.5} - Particulate Matter <2.5; PM₁₀ - Particulate Matter <10; TSPM- Total suspended Particulate Matter; EC - Electrical Conductivity; DO - Dissolved Oxygen; TSS - Total Suspended Solids;

BOD - Biological Oxygen Demand; NAAQS - National Ambient Air Quality Standards;

NWQS - National water Quality Standards; AEGCL - Assam Electricity Grid Corporation Limited; ORP – Oxidation Reduction Potential, PMC – Project Management Consultancy

PMU – Project Management Unit (AEGCL), PIU – Project Implementation Unit (AEGCL) IFC – International Finance Corporation (World Bank Group), HR – Human Resource

PS – Performance Standards

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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 is 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 for HTLS lines is tabulated as under.

Table - 11: Environmental and Social Monitoring Plan Budget

S. No.	Description	Quantity (in No.)	Rate (in INR approx.)	Amount (in INR approx.)
A.	Environmental Monitoring (Pre-construction Stage)			
1	Air Quality*	7	7000	49,000
2	Water Quality	7	7000	49,000
3	Noise Levels	7	3500	24,500
4	Soil	7	7000	49,000
	Sub-Total Cost			
B.	Environmental Monitoring (Construction Stage)			
1	Air Quality* (Twice/year for 3 year)	(2x3x7) = 42	7000	2,94,000
2	Water Quality (Twice/year for 3 year)	(2x3x7) = 42	7000	2,94,000
3	Noise Levels (Twice/year for 3 year)	(2x3x7) = 42	3500	1,47,000
4	Soil (Twice/year for 3 year)	(2x3x7) = 42	7000	2,94,000
5	Noise assessments by demand ²			
	Sub-Total Cost			
C.	Environmental Monitoring (Defect Liability period)			
1	Air Quality*	7	7000	49,000
2	Water Quality	7	7000	49,000
3	Noise Levels	7	3500	24,500
4	Soil	7	7000	49,000
	Sub-Total Cost			
	Total Cost			
D.	Training Workshops/Consultations/ Health Awareness Camp			
1	Training on Implementation of ESMP for PMU, contractors and Divisional Nodal Officers	5x 7 = 35	50,000	17,50,000
2	Public Consultation: Pre-Construction- Once, Construction- 2 times / year for 3 years, Defect Liability period - Once	8x 7= 56	10,000	5,60,000
3	Health & Safety Awareness Camp: Pre-Construction- Once, Construction- 2 times / year for 3 years, Defect Liability period- Once	8x 7= 56	10,000	5,60,000
4	Training on Implementation of GRM Pre-Construction- Once, Construction- 2 times / year for 3 years, Defect Liability period - Once	8x 7= 56	30,000	16,80,000

² Budget for this activity (if arises) will be used from contingency fund

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5	Training on Occupation Health and safety Pre-Construction- Once, Construction- 2 times / year for 3 years, Defect Liability period - Once	8x 7= 56	30,000	16,80,000
6	Training on fire safety and disaster management Pre-Construction- Once, Construction- 2 times / year for 3 years, Defect Liability period - Once	8x 7= 56	30000	16,80,000
E. BOQ items				
7	Personal protective equipment's (Hard hats (with full/partial brims as necessary) Safety glasses with side shields. Face masks/shields. Suitable footwear (safety/steel-toed boots, rated dielectric footwear) Insulating gloves (rated, used along with leather/cloth linings for shock protection)) as per site requirement.	1 LOTx 7 S/S	10,00,000	70,00,000
8	SF6 retrieving arrangement as per site requirement.	1 LOTx 7 S/S	5,00,000	35,00,000
	Total (A+B+C+D+E)			1,97,82,000
	Contingency			9,89, 100
	Grand Total			2,07,71,100

* 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 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 etc. is done properly to have minimum impact on the environment and local 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 project affected people (as and when needed, particularly during the implementation);
 - Feedback, trouble shooting and project related grievances;
 - Ensuring that livelihoods, where negatively impacted, 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 affected 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, Occupational, Health and Safety, etc. Monitoring of the quality of water, soil, air and noise during the construction 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 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,

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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.

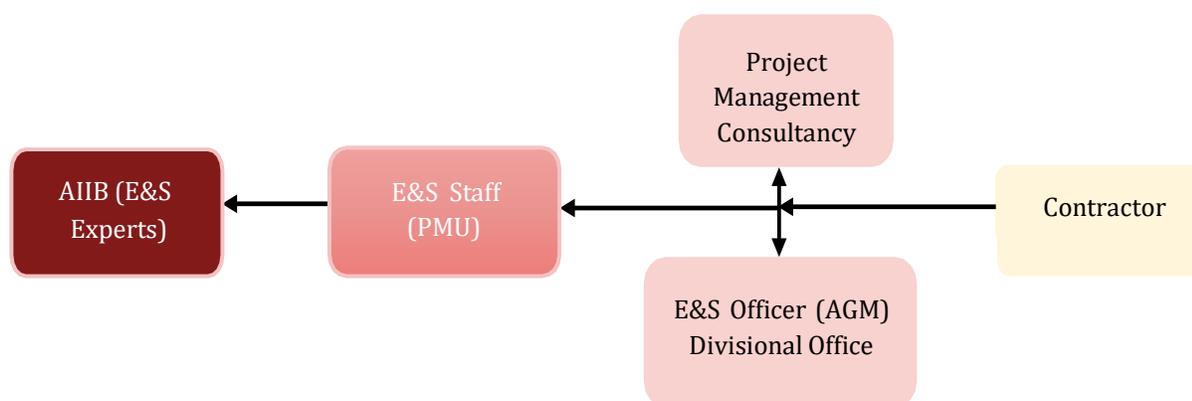


Figure -2: Illustration of Reporting Line

The environmental 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.

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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 substations and process of disclosure.

13.1 Public Consultation

Public consultations were conducted with local habitants 29th Sept. 2022. 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 conductor by HTLS conductor. 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 **Appendix I**.

Table - 12: 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 conductor by HTLS conductor. 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 conductor by HTLS conductor.
Support of local people	Most of the communities expressed their support during implementation for the replacement of existing old conductor by HTLS conductor, 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 conductor by HTLS conductor.
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 conductor by HTLS conductor.
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

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Issues Discussed	People's views and perceptions
	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 conductor by HTLS conductor will be in the AEGCL existing T/L.
Will project cause widespread imbalance by cutting fruit and commercial trees in the locality	The communities don't 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 conductor by HTLS conductor. Some of them suggested that necessary precautions must be taken to ensure safety of people during replacement of old existing conductor by HTLS conductor.
Protected areas	Most of the communities informed that protected areas away from proposed HTLS conductor 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 conductor by HTLS conductor.
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.
Perceived benefits from project	Across the communities majority of them viewed that the proposed replacement of old existing conductor by HTLS conductor 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

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Issues Discussed	People's views and perceptions
	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.

Appendix – 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 HTLS 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 conductor by HTLS conductor) 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:

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1. PMU: Project Director,
Address: 1st Floor, AEGCL, Bijulee Bhawan,
Contact No.: 0361-2739520
Website: www.aegcl.co.in,
Contact Person: Mr. Lokhnath Choudhury
2. PIU (Refer Table, Page no. 71)

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

1. PMU: Project Director,
Address: 1st Floor, AEGCL, Bijulee Bhawan,
Contact No.: 0361-2739520
Website: www.aegcl.co.in,
Contact Person: Mr. Lokhnath Choudhury
2. PIU: (Refer Table, Page no. 71)
3. GRC

Tier 2:

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

Address: 1st Floor, AEGCL, Bijulee Bhawan,

Contact No.: 0361-2739520

Website: www.aegcl.co.in,

Contact Person: Mr. Lokhnath Choudhury

(ii) PMU: Project Director,

Address: 1st Floor, AEGCL, Bijulee Bhawan,

Contact No.: 0361-2739520

Website: www.aegcl.co.in,

Contact Person: Mr. Lokhnath Choudhury

Tier 1: (Refer Table, Page no. 71)

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 double 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

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- National/ International NGOs

Roles and Responsibilities of GRC Members

PMU/ PIU GRC Members	Community GRC Members
<ul style="list-style-type: none"> ➤ Receives grievance from complainant and record them in a logbook. ➤ Acknowledge receipt of complaints with a written record. ➤ Arrange for GRC meetings to consider the grievances. ➤ Work closely with the GRC members to develop and implementing actions to resolve grievances. ➤ Prepare minutes of GRC meetings and record solutions. ➤ Provide feedback information on the status of resolution to the complainant within assigned timeline. ➤ Review grievance response and submit to Contractor/PIU/PMU for approval or implementation. ➤ Submit proposed solutions to the complainant within assigned timeline. ➤ Ensure proper logging, escalation, tracking, reporting, and following up on all project specific grievances. ➤ 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). ➤ Notify PMU within 12 hours of any grievances that require investigation or intervention by the police or other relevant authorities. ➤ 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. 	<ul style="list-style-type: none"> ➤ Popularize the existence, functions, and accessibility of the GRM among all project-affected people, both men and women. ➤ Encourage key community members to facilitate submission of complaints, if needed. ➤ Attend regularly and actively participate in GRM meetings to review and provide solutions to project related grievances. ➤ Facilitate and mediate resolution of grievance. ➤ Accept and record grievances from community members. ➤ Facilitate the communication of the response of the GRC to complainants/aggrieved. ➤ Keep communicating project related matters to GRC/ PIU.

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Most Common Grievances and Redressal³

Common Grievance Categories	Issues and Likely Solutions
Technical/ Engineering	<ul style="list-style-type: none"> ➤ Design related – Suit the design to the site. Restrict the width according to the available land and modify the design accordingly ➤ Alignment related – Always use GPS coordinates. In case of problem contact Revenue department to correct the alignment ➤ Quality related – Get the materials and finished product tested at reputed laboratories and publicize the results
Environmental	<ul style="list-style-type: none"> ➤ Storm water – Do not obstruct or divert natural drainage. Provide for culverts or bridges where necessary ➤ Stone blasting – Take precautions as per law and inform the communities accordingly ➤ Dust – Keep watering as required so that dust doesn't spread or rise. ➤ Noise – Use barriers at sensitive receptors and take up work at appropriate timings. ➤ Uncovered borrow areas – Dig borrow pits as per specifications. ➤ Waste Disposal – Dispose of waste at designated places only.
Social	<ul style="list-style-type: none"> ➤ 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. ➤ Historical and Cultural sites – Follow the government guidelines on this. Do not deface any historical or cultural sites. ➤ HIV/AIDS/ Covid-19 issues – Follow the government SoP for these. Conduct awareness campaigns among the communities and workers. ➤ Child labour – Avoid child labour. No children below 14 years on work. No children below 18 years on hazardous work. ➤ 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.
Land, Compensation and Resettlement	<ul style="list-style-type: none"> ➤ Non-payment of compensation money – Do not take possession of land before paying full compensation ➤ Underpayment of compensation money – All compensation valuation has to be done as per the LA Act 2013 and verified before payments ➤ Disputes of land ownership – Refer to Revenue Department for measurement and survey to decide on the ownership ➤ 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. ➤ Boundary queries between PAPs – Do not get involved in this. Leave these matters to PAPs to decide themselves.
Road Safety	<ul style="list-style-type: none"> ➤ Accidents – Report immediately to PIU/ PMU. ➤ 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

³ Site specific ESIA report for HTLS Lines has been submitted to AIIB for further needful.

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

DOs and DON'Ts for GRC Members

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

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)⁴ 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)
2. The Circle level GRC (Tier 1) member receives the grievances and records the details in the GRM logbook.

⁴ 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.

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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 grieved party of the proposed resolution in writing.
 - a. Grieved party can accept the proposed solution, which is duly recorded.
 - b. Grieved 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 grieved party does not accept the proposition, the CGRC can automatically escalate the issue to the Tier -2 GRC, if grieved 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 grieved party of the proposed resolution in writing.
 - a. Grieved party can accept the proposed solution, which is duly recorded.
 - b. Grieved party may not accept the proposed solution, which is duly recorded.
10. The grieved 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	Pkg	Name of EPC Contractor	Sub-Projects	Focal point / Nominated Official	Contact number (Mobile and WhatsApp)	Communication Address
Mirza	Kamrup (R)	L	M/s APAR Industries Ltd.	*220 kV, D/C Sarusajai-Kukurmara Transmission line- 24 km (approx.)	Mr. Priyam Das, AM	7002176019 (W+C)	O/o The DGM, 400kV Kukurmara Grid, AEGCL, Mirza 781125
Bongaigaon	Kokrajhar			*132 kV D/C Salakati – Dhaligaon Transmission Line- 21 km (Approx) *132 kV S/C Gauripur-Gossaingaon Line – 62 km (approx.)	Sri Rajib Das, AM	8011925974	O/o The DGM, Bongaigaon T&T Circle, AEGCL (ASEB), Dhaligaon, Chirang, 783385 Assam.

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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	Assam Electricity Grid Corporation Ltd, (AEGCL) First Floor, Bijuli Bhawan Guwahati-781001	Website: www.aegcl.co.in Mail Id: gm.eap@aegcl.co.in
2.	Project Director(EAP) Projects, AEGCL	Deputy Chairman		
3.	Dy. General Manager (EAP), PMU, AEGCL	Member		
4.	E & S Safeguard Specialist, PMU, AEGCL	Member		
5.	Project Related AGMs(EAP), AEGCL	Members		
6	Joint Secretary (Power, Electricity), GoA	Member	GoA, Power (Electricity Dept.), Assam Secretariat, Dispur, Guwahati-781006	dy.secy.powe@gmail.com
7	Team Leader, Environment Expert and Social Expert, PMC	Members	2B, Saroj Enclave, K.C Patowary Road. Ulubari, Guwahati-781007	hemant.bhave@feedbackinfra.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 contact⁵ for further needful action or the matter should be informed to AIIB immediately.

⁵ Dedicated contact number for the project at site level will be provided in due course of time

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Grievance Register

Grievance Register	
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	

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16 SUMMARY & CONCLUSION

The project scope involves replacement of existing old conductor by HTLS conductor.

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 – L is replacement of existing old conductor by HTLS conductor 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 HTLS 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 old conductor by HTLS conductor.

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

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 29th Sept. 2022 to gather baseline information of the environmental and social profile.

The present ESIA - ESMP report focuses only for augmentation of 3 nos. transmission lines by HTLS conductors (Package- L). 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 conductor by HTLS conductor 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 conductor by HTLS conductor 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 2,07,71,100** 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.

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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 HTLS 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.

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PHOTOGRAPHS OF HTLS LINE



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APPENDIX – I: Details of Public Consultation at the adjoining villages of proposed HTLS lines

Site/Location: 220 kV, D/C Sarusajai- Kukurmara Transmission line- 24 km (approx.), **Village-** Deochotal, **Circle/Block** – Kamrup, **District** –Kamrup (M)

Date of Consultation: 29th Sept. 2022

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

S.No.	ISSUES	PARTICIPANTS' COMMENTS AND SUGGESTIONS	OPINION,
SOCIAL			
1.	Have you heard about the Project or Do you have any information about the project?	Yes, Electrical department is replacing existing conductor by HTLS conductor.	
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?	Not 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	

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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 conductor by HTLS conductor.
17.	If you are from indigenous people/tribal do you expect any impacts from projects on your culture, territory, and livelihood impacts?	No
ENVIRONMENT		
1	Protected areas (national park, protected forest, religiously sensitive sites, historical or archaeological sites), if any	No protected wildlife area falls in the proposed HTLS 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 HTLS 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 conductor by HTLS conductor.
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.

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Date: - 29.09.2022

List of Participants

Name of the Project: Assam Intra state Transmission System Enhancement project
 Package - L: Augmentation of 3 nos. T/L by HTLS conductors.
 Location: Deochotal village.

Sl No	Name	Age	Sex (M/F)	IP (Y/N)	Education	Occupation	Project Affected (Y/N)	Signature
1.	Sunil Chetrai	26	M	N	9 th	Driver	N	
2.	Biswajit Teron	30	M	Y	11 th	B.	N	
3.	Shankar Ranghal	45	M	Y	10 th	B	N	
4.	Romun Fongcho	36	M	Y	16 th	Service	Y	
5.	Rashmi Rangchal	55	F	Y	-	B	N	
6.	Anupam Day	38	M	N	10 th	B	N	
7.	Bandana Fongcho	27	F	Y	8 th	B	N	
8.								
9.								
10.								

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APPENDIX-II: 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.

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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 AIIB 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

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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:

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.