5TH SEMI-ANNUAL ENVIRONMENT & SOCIAL SAFEGUARD MONITORING REPORT

(Reporting Period: July - December, 2020)

North Eastern Region Power System Improvement Project (NERPSIP)

(The World Bank Project ID - P127974 & Loan No. 8631-IN)

Prepared & Submitted by

Power Grid Corporation of India Ltd.

(Environment and Social Management Department)

REF: SEMI ANNAUAL REPORT-5 /2021/1 **8 March, 2021**

ABBREVIATIONS		
ADC	–	Autonomous District Council
APDCL	–	Assam Power Distribution Company Limited
AEGCL	–	Assam Electricity Grid Corporation Ltd.
APs	–	Affected Persons
CBIS	–	Capacity Building & Institutional Strengthening
CEA	–	Central Electricity Authority
CPTD	–	Compensation Plan for Temporary Damages
CPIU	–	Central Project Implementation Unit
CF	–	Conservator of Forest
DC	–	District Collector
DM	–	District Magistrate
DFO	–	Divisional Forest Officer
DPN	–	Department of Power Nagaland
E&S	–	Environmental and Social
EHV	–	Extra High Voltage
EIA	–	Environment Impact Assessment
ESMD	–	Environment & Social Management Department
ESPPF	–	Environment and Social Policy & Procedures Framework
EMP	–	Environmental Management Plan
FCA,1980	–	Forest (Conservation) Act, 1980
FEAR	–	Final Environment Assessment Report
GOI	–	Government of India
GRM	–	Grievances Redressal Mechanism
GRC	–	Grievance Redressal Committee
IA	–	Implementing Agency
IEAR	–	Initial Environmental Assessment Report
LA	–	Loan Agreement
CKT	–	Circuit Kilometers
MoEFCC	–	Ministry of Environment, Forest and Climate Change
MSPCL	–	Manipur State Power Company Limited
RMoEFCC	–	Regional Office of Ministry of Environment Forest & Climate Change
NOA	–	Notification of Award
NBWL	–	National Board for Wildlife
NO	–	Nodal Officer
NER	–	North Eastern Region
NERPSIP	–	North Eastern Region Power System Improvement Project
OPs	–	Operational Policies
PA	–	Project Agreement
PIU	–	Project Implementation Unit
POWERGRID	–	Power Grid Corporation of India Ltd.
PPEs	–	Personal Protective Equipments

PMU	–	Project Management Unit
RCE	–	Revised Cost Estimate
RoW	–	Right of Way
R& R	–	Rehabilitation and Resettlement
RRM	–	Random Rubble Masonry
SS	–	Substation
SPCU	–	State Project Coordination Unit
TPDP	–	Tribal People Development Plan
T & D	–	Transmission & Distribution (T&D)
TSECL	–	Tripura State Electricity Corporation Limited
USD	–	United States Dollar
WB	–	The World Bank

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Executive Summary

The North Eastern Region (NER) in India is endowed with rich energy resources but faces significant bottlenecks in its access and availability. To create/augment proper infrastructure/network of Transmission & Distribution (T&D) in the region, Government of India (GoI) with the financial assistance of the World Bank (WB) has planned a composite scheme viz. ***"North Eastern Region Power System Improvement Project" (NERPSIP).*** The scheme covers six North Eastern States including Meghalaya to create a robust power network by improving the intra-state transmission & distribution (33kV and above) network with required capacity building initiatives for effective utilization of assets. The GoI appointed **Power Grid Corporation of India Limited (POWERGRID),** the Central Transmission Utility of the country as the "Implementing Agency" (IA) to implement the project under Tranche-1 in close coordination with the respective State Governments/Utilities. However, the ownership of the assets shall be with the respective State Governments/ State Utilities, who will be responsible for operation and maintenance of assets once they are handed over to them upon progressive commissioning.

In order to ensure environmental and social sustainability of the project, POWERGRID assisted State Utilities in preparation and adoption of state specific **Environment and Social Policy & Procedures Framework (ESPPF)** based on the key principles of **Avoidance, Minimization & Mitigation.** In line with the provisions of ESPPF as well as frameworks agreed with Bank, various E & S safeguard documents such as **Initial Environment Assessment Reports (IEARs), Compensation Plan for Temporary Damages (CPTDs) and Final Environment Assessment Reports (FEARs)** etc. are prepared/being prepared and publicly disclosed. The present Semi-Annual Safeguard Monitoring report enlisting details of compliance of various E & S safeguard measures for period July-December, 2020 is being submitted to Bank as part project agreement agreed with the Bank.

The Project components include construction of about 1401 km of new 220 kV/132 kV EHV lines & 34 nos. of associated 220 kV/132/66/33 kV substation, 2051 km of 33 kV distribution lines & 85 nos. associated 33/11 substations along with various augmentation/extension of existing substations and reconductoring of line works spread across all six States i.e. Assam, Meghalaya, Manipur, Tripura, Mizoram & Nagaland. The total project cost is Rs. 5111 Crore with financing from both GoI and Bank on 50:50 basis. The Bank is providing financial support to the tune of Rs $ 470 million (Rs 2511.165 crores) under the Loan No.-8631-IN which was signed on 28th November, 2016 and became effective from 20th February, 2017. The loan closing date is 31st March, 2023.

POWERGRID has been implementing the above project conforming to all applicable environmental and social legislations of the country as well as various conditions agreed with Bank under project & loan agreements. NER being a biodiversity rich area with very high tree density cover, routing of line and locating substation without involvement of forest and other ecologically sensitive areas posed a great challenge. However, inspite of best efforts, a total of 426.688 ha. (approx. 153.06 km) of forest in Tripura, Meghalaya, Mizoram and Manipur and 0.55 ha. Trishna Wildlife Sanctuary area in Tripura couldn't be avoided. As per regulatory requirement, clearance/permission for diversion of forest and wildlife area being obtained from Ministry of Environment, Forest & Climate Change (MoEFCC) under Forest (Conservation) Act, 1980 and Wildlife (Protection) Act, 1972 respectively.

As regard land for substations, all lands are secured either through purchase on willing-seller willing- buyer basis or already in possession of State Utilities. Since no involuntary acquisition is involved, social issues such as physical displacement, R & R etc. not envisaged in the instant project. However, for transmission line no land is acquired as per law of land but damages are compensated as per provisions of Electricity Act, 2003 and Indian Telegraph Act, 1885. POWERGRID is taking all possible efforts to avoid damage to standing crops and trees during construction of transmission lines, But in case of any damages, compensation is being paid to affected land owners/farmers for damage to standing crops/tree after due assessment of revenue authority/competent authority. Accordingly, Rs. 23.167 million were paid to 594 affected farmers/land owners till reporting period. Similarly, a total amount of Rs. 155.92 million has already been paid to 858 affected persons/land owners towards diminution of land value in line with prevailing practices/ MoP guidelines adopted by different States.

The Project doesn't envisage significant impact on environmental attributes like air, water, soil etc. As anticipated, some impact like loss of vegetation due to clearing of the Right-of-Way (RoW) for lines and temporary impacts due to small scale construction activities in substation during construction period can never been avoided completely. The project specific mitigation measures enlisted in EMP, which is also part of contract documents are being applied appropriately in different stages of project and regularly monitored for proper implementation. In addition to implementation of EMP provisions, some site specific measures related to slope protection/stabilization (viz. retaining wall, toe wall, revetment wall, stone pitching, guard wall, bio-engineering measures etc), drainage (such as cross drainage, culverts), approach road and other protection measures etc. are being undertaken/have been planned as per the site requirement/conditions and subsequent technical approval through committee.

As regard Safety, all required measures are in place including due precautions/ awareness programs as well as ensuring use of PPEs and regular monitoring which is evident from the fact that no accidents (fatal or non-fatal) including major/minor injuries were reported during the reporting period from any of the construction sites. Besides, due to ongoing COVID-19 pandemic, all guidelines/protocols of Govt. of India and State Govt in respect of Covid-19 are being mandatorily followed. All necessary measures like proper sanitization, use of PPEs, social distancing norms etc. are followed religiously at each active sites.

The two-tier grievance redress mechanism has been addressing/resolving the concerns and grievances of the complainant effectively. All concerns/grievances of affected persons/public including minor ones are also recorded and regularly tracked for early resolution within stipulated timeframe. It has been observed that most of these complaints are minor in nature which were also resolved instantly and there have been no court case or major complaints registered till date. As of December 2020, only of 4 cases out of total 24 complaints remain open/are being negotiated.

Public consultation & information dissemination is an indispensable part of project cycle. As stated in ESPPF, public consultation using different technique like Public Meeting, Small Group Meeting, informal Meeting are being carried out during different activities starting from planning to implementation stage. In case of Autonomous District Council (ADC) area, consultations are also being held with the respective village councils for identification of the landowner and obtaining their consent for the RoW. Besides, gender issues have also been addressed to the extent possible during such consultation process. Till reporting period, a total of 3939 persons participated in safeguard consultation process including 891 female participants, which is approx. 22.62% of total participants.

POWERGRID approach of project implementation in close co-ordination with respective State Utilities involving selection of optimum route before design stage, proper implementation of EMP and monitoring mechanism throughout project life cycle supported by strong institutional arrangement has considerably nullified the adverse impacts arising out of project activities. Besides, direct or indirect benefits of the Projects like the employment opportunity, improved & uninterrupted power supply, improvement in infrastructure facilities, improved business opportunity outweigh the negligible impacts of the project.

SECTION-1: INTRODUCTION

1.1 Introduction

The North Eastern Region (NER) in India is endowed with rich energy resources but faces significant bottlenecks in its access and availability. The per capita power consumption of NER is one third of the national average. To create/augment proper infrastructure/network of Transmission & Distribution (T&D) in the region, Government of India (GoI) with the financial assistance of the World Bank (WB) has planned a composite scheme viz. **"North Eastern Region Power System Improvement Project" (NERPSIP).** The scheme covers six North Eastern States (Assam, Meghalaya, Manipur, Tripura, Nagaland & Mizoram) to create a robust power network by improving the intra-state transmission & distribution (33kV and above) network with required capacity building initiatives for effective utilization of assets. The GoI appointed **Power Grid Corporation of India Limited (POWERGRID),** the Central Transmission Utility of the country as the "Implementing Agency" (IA) to implement the project under Tranche-1 in close coordination with the respective State Governments/Utilities. However, the ownership of the assets shall be with the respective State Governments/ State Utilities, who will be responsible for operation and maintenance of assets once they are handed over to them upon progressive commissioning. POWERGRID is also facilitating in building the institutional capacity of the state departments and utilities to continue managing the rehabilitated networks in an efficient manner.

The total project cost is Rs. 5111 Crore with financing from both GoI and Bank on 50:50 basis. The Bank is providing financial support to the tune of Rs $ 470 million (Rs 2511.165 crores) under the Loan No.-8631-IN which was signed on 28th November, 2016 and became effective from 20th February, 2017. The loan closing date is 31st March, 2023. The remaining financing including capacity building will be met through Govt. of India funding. Details of State wise funding is placed below;

State	World Bank	Government of India		Total
	Project Cost (Rs in Cr.)	Project Cost (Rs in Cr.)	Capacity Building (Rs in Cr.)	
Assam	729.485	729.485	14.83	**1473.803**
Manipur	213.690	213.690	14.83	**442.213**
Meghalaya	381.050	381.050	14.83	**776.933**
Mizoram	150.965	150.965	14.83	**316.763**
Nagaland	357.290	357.290	14.83	**729.413**
Tripura	678.685	678.685	14.83	**1372.203**
Sub Total	2511.165	2511.165	89	**5111.33**
Total	**2511.165**	**2600.165**		

In order to ensure Environmental and Social (E&S) sustainability of the project, POWERGRID assisted all State Utilities in preparation and adoption of state specific **Environment and Social Policy & Procedures Framework (ESPPF)** based on the key principles of **Avoidance, Minimization & Mitigation,** that will serve as management framework for identification, assessment and management of environmental and social concerns at both organizational as well as project levels. In line with the ESPPF and Loan agreement with Bank, various E & S safeguard documents such as **Initial Environment Assessment Reports (IEARs), Compensation Plan for Temporary Damages**

(CPTDs) and Final Environment Assessment Reports (FEARs) etc. are prepared/being prepared and publicly disclosed. The present Semi-Annual Safeguard Monitoring report covering the detail status of compliance of various E & S safeguard indicators for period July- December 2020 is being submitted to Bank as per agreed framework.

1.2 Project Description

The state wise scope of works proposed under Tranche-1 transmission scheme is given below:

	Transmission/ Sub-transmission (132kV & above)			Distribution (33kV)		
	Line (Km)	**New S/s (No.)**	**Total MVA (New & Aug.)**	**Line (Km)**	**New S/s (No.)**	**Total MVA (New & Aug.)**
Assam	233	11	1644	479	16	240
Manipur	254	2	160	131	13	229.4
Meghalaya	225	4	940	263	11	135
Mizoram	143	3	125	5	1	6.3
Nagaland	285	5	245	76.5	10	190
Tripura	261	9	1306.5	1096	34	450.5
Total	**1401**	**34**	**4420.5**	**2051**	**85**	**1251.2**

1.3 Progress and Implementation Schedule

The details of package wise award status and physical progress of project implementation till December'20 as well as completion schedule is provided below:

Sl. No	Package No.[1]	Lines/Substations Scope covered under Pkg.	Date of Award	Schedule Compl. as per NOA	Anticipated/ Revised Date of Completion	Physical Progress (in%) as on 31 Dec.'20
ASSAM						
1	TW 02	1 no. 220 kV Line (50 km)	10 Oct' 17	Apr'20	Mar'21	55%
2	TW 04	1 no. 132 kV line (36 km)	8 Sept'17	Mar'20	Mar'21	50%
3	TW 05	1 no. 132 kV line (53 km)	1 Sept'17	Mar'20	Mar'21	55%
4	TW 07	1 no. 220 kV (33 km) & 7 nos. 132kV line (53 km)	30 May'18	Nov'20	Mar'21	10%
5	P 01	Pile foundations	18 Sept'17	Mar'20	Mar'20	65%
6	SS 01	2 nos. new 132/33 kV, 2 nos. Ext. & 1 no. Aug of 132/33 kV substation	12 Aug'16	Aug'19	Mar'21	62%
7	SS 02	1 no. new 220/132 kV & 3 nos. of new 132/33 kV and 2 nos. Ext. of substation.	12 Aug'16	Aug'19	Mar'21	60%
8	SS 03	2 nos. new 132/33 kV, 2 nos. Ext. & 1 no. Aug of 132/33 kV substation.	12 Aug'16	Aug'19	Mar'21	55%

[1] Other three packages i.e. OPGW live line stringing (OPGW 01), Transformer (TR1) and Tele Equipment have also been awarded but not included in the above list as these are not directly relevant.

9	SS 04	3 nos. new substations (1no. 220/132/33kV & 2 nos132/33kV) and 1 no. Extn. of 132/33 kV substation	6 May'16	Mar'19	Mar'21	50%
10	DMS 01	4 nos. new 33/11kV substation & 7 nos. 33 kV lines (119 km).	20 Oct'16	Jun'19	Dec'21	60%
11	DMS 02	3 nos. new 33/11kV substation & 11 nos. 33 kV lines (146 km)	23 Dec'16	Jul'19	Mar'21	60%
12	DMS 03	5 nos. new 33/11kV substation & 9 nos. 33 kV lines (134 km)	23 Dec'16	Sept.'19	Mar'21	55%
13	DMS 04	4 nos. new 33/11kV substation & 11 nos. 33 kV Underground cable lines (80 km)	8 July'16	Sept'19	Dec'20	50%
MANIPUR						
14	TW 06	4 nos. 132 kV line (85 km) & renovation of 1 no. existing 132 kV line (91 km) and stringing of 2nd circuit in exi. 132kV line (78 km)	31 May'18	Nov'20	Nov'20	50%
15	SS 01	1 no. new 132/33kV & 2 nos. Ext./Aug. of substations.	3 Jan'18	July'20	Nov'20	30%
16	SS 02	2 nos. Ext. & 2 no. Aug. of 132/33 kV substation.	8 Dec'17	Jun'20	Dec20	55%
17	SS03	1 no. new 132/33 kV & 1 no. Ext & 1 no. Aug. of 132/33 kV substation.	3 Jan'18	July'20	Nov'20	30%
18	DMS 01	7 nos. new 33/11kV substation & 7 nos. 33 kV lines (68 km)	3 Mar'17	Dec'19	Dec'20	69%
19	DMS 02	2 nos. new 33/11kV substation & 2 nos. 33 kV lines (20 km)	16 Dec'16	Sep'19	Commissioned	100%
20	DMS 03	2 nos. new 33/11kV substation & 2 nos. 33 kV lines (23 km)	18 Mar'16	Dec'18	Commissioned	100%
21	DMS 04	2 nos. new 33/11kV substation & 2 nos. 33 kV lines (20 km)	18 Mar'16	Dec'18	Commissioned	100%
MEGHALAYA						
22	TW 01	1 no. 220kV line (122 km)	29 Jun'16	Jun'19	Mar'21	50%
23	TW 02	2 nos. 132kV line (103 km)	29 Jun'16	Jun'19	Dec'20	80%
24	SS 01	2 nos. new & 1 no. Ext. of 132/33 kV substation.	12 Aug'16	Aug'19	Dec'20	62%
25	SS 02	2 nos. new 1 no. Ext. of 220/132 kV substation	6 Jun''16	Jun'19	Dec'20	70%
26	DMS 01	4 nos. new 33/11kV substation & 4 nos. 33 kV	13 July'16	Apr'19	Mar'21	73%

		lines (56 km)				
27	DMS 02	3 nos. new 33/11kV substation & 6 nos. 33 kV lines (63 km)	27 May'16	Feb'19	Sep'20	73%
28	DMS 03	4 nos. new 33/11kV substation & 7 nos. 33 kV lines (79 km)	17 May'16	Feb'19	Sep'20	74%
TRIPURA						
29	TW 01	4 nos.132 kV lines (87 km)	12 June'17	Feb'20	Mar'21	15%
30	TW 02	5 nos.132 kV lines (112 km)	12 June'17	Feb'20	Jun'21	20%
31	TW 03	5 nos.132 kV lines (62 km)	12 June'17	Feb'20	Mar'21	35%
32	SS 01	4 nos. new 132/33 kV substation.	4 Nov'16	Nov'19	Mar'21	60%
33	SS 02	2 nos. new & 1 nos. Ext. and 2 nos. Aug. of 132/33 kV substation.	4 Nov'16	Nov'19	Mar'21	60%
34	SS 03	3 nos. new & 1 no. Ext. & 3 nos. Aug. of 132/33 kV substation.	4 Nov'16	Nov'19	Mar'21	55%
35	DMS 01	7 nos. new 33/11kV substation & 9 nos. 33 kV lines (121 km)	20 Feb'17	Nov'19	Mar'21	36%
36	DMS 02	6 nos. new 33/11kV substation & 11 nos. 33 kV lines (181 km)	20 Jan'17	Oct'19	Mar'21	36%
37	DMS 03	5 nos. new 33/11kV substation & 11 nos. 33 kV lines (137 km)	20 Feb'17	Nov'19	Dec'20	32%
38	DMS 04	10 nos. new 33/11kV substation & 17 nos. 33 kV lines (198 km)	20 Jan'17	Oct'19	Dec'20	39%
39	DMS 05	6 nos. new 33/11kV substation & 9 nos. 33 kV lines (128 km)	20 Feb'17	Nov'19	Dec'20	38%
MIZORAM						
40	TW 01	3 nos.132kV lines (84 km)	20 Sept'17	Mar'20	Dec'21	15%
41	SS 01	1 no. new & 1 no. Ext. of 132/33 kV substation.	2 Nov'17	May'20	Dec'21	15%
42	SS 02	3 nos. new 132/33kV & 1 no. new 33/11 of substation. 1 no. 132kV line (50 km) & 1 no 33kV line (5 km)	13 Oct'17	Apr'20	Dec'21	22%)
NAGALAND						
43	TW 01	1 no. 220kV line (92 km)	20 Sept'17	Mar'20	Mar'21	35%
44	TW 05	1 no. 132kV line (28 km)	21 Sept'17	Mar'20	Mar'21	40%
45	TW 06	5 nos. 132kV lines (165 km)	31 May'18	Nov'20	Mar'21	30%
46	SS 01	2 nos. new 132/33 kV substation.	5 Dec'17	Jun'20	Nov'20	35%
47	SS 02	1 no. new 132/33 kV & 3 nos. ext. of substation.	30 Nov'17	May'20	Nov'20	30%
48	SS 03	1 no. new 132/33 kV & 1 no. ext. (220/132 kV) of	14 Dec'17	Jun'20	Dec'20	35%

		substation				
49	SS 04	1 no. new & 1 no. ext. of 132/33 kV substation	13 Dec-17	Jun'20	Dec'20	45%
50	DMS 01	2 nos. new 33/11kV substation & 3 nos. 33 kV lines (2.5 km)	12 Feb'18	Nov'20	Nov'20	40%
51	DMS 02	3 nos. new 33/11kV substation & 5 nos. 33 kV lines (59 km)	11 Jan'18	Oct'20	Oct'20	40%
52	DMS 03	3 nos. new 33/11kV substation & 2 nos. 33 kV lines (5 km)	22 Sep'16	Jun'19	Dec'20	80%
53	DMS 04	2 nos. new 33/11kV substation & 1 no. 33 kV lines (10 km)	22 Sep'16	Jun'19	Oct'20	80%

SECTION-2: COMPLIANCE TO E & S COVENANTS OF LOAN AGREEMENTS

The various safeguard covenants specified in the agreed Loan Agreement and Project Agreement under the subject loan have been complied and detail of compliance status against such covenants is presented in below;

Description of Covenants	Reference	Status of Compliance
Loan Agreement (LA)		
The Borrower shall make its best efforts to ensure that the Participating States: (a) carry out their responsibilities under the SS-ESPPFs, IEARs, RAPs, EMPs, CPTDs and/or TPDPs (the "Safeguards Documents") prepared, and/or to be prepared and publicly disclosed, as required, by the Project Implementing Entity and/or the Respective Power Utilities/ Departments, as the case may be, pursuant to paragraph 2 of Section I.E. of the Schedule to the Project Agreement, in each case in a manner and in substance satisfactory to the Bank; (b) ensure that the Respective Power Utility/Department complies with the applicable Safeguard Documents as well as any related obligations set forth in the respective Implementation/ Participation Agreement; and (c) refrain from taking any action which would prevent or interfere with the Project Implementing Entity's and/or the Respective Power Utility/Department's, implementation of the Safeguard Documents, including any amendment, suspension, waiver, annulment and/or voidance of any provision of such documents, whether in whole or in part, without the prior written agreement of the Bank.	LA, Schedule-2, Section-I (D)	These covenants are complied with or being complied as part of Project Agreement & Separate Agreements with IA & State Utilities.
Project Agreement (PA)		
The Project Implementing Entity shall: (a) carry out the Project in accordance with the SS-ESPPFs, IEARs, EMPs, the RAPs, CPTDs and TPDPs prepared, and/or to be prepared in form and substance satisfactory the Bank, pursuant to paragraph 2 of this sub-section, in accordance with the objectives, policies, procedures, time schedules, compensation arrangements and other provisions set forth in the SS-ESPPFs	PA, (Schedule), Section- I, E, Para 1	Complied/Being Complied. RAPs and TPDPs not applicable. All others safeguard documents prepared/being prepared. For details refer **Table-1**.

Description of Covenants	Reference	Status of Compliance
(together, the "Safeguard Documents"), in each case in a manner and in substance agreed with the Bank; (b) make its best efforts to ensure that the Participating States and their respective Power Utilities/ Departments carry out their responsibilities under their respective Implementation/ Participation Agreements in accordance with the objectives, policies, procedures, time schedules, compensation arrangements and other provisions set forth in their respective SS-ESPPFs, IARs, EMPs, RAPs, CPTDs and TPDPs; and (c) refrain from taking any action which would prevent or interfere with the implementation of the Safeguard Documents by any of the Participating States, their Respective Power Utilities /Departments and/or the Project Implementing Entity itself, including any amendment, stay, suspension, waiver, annulment and/or voidance of any provision of the Safeguard Documents, whether in whole or in part, without the prior written agreement of the Bank.		Being complied. No such safeguard issues encountered till reporting period. Will be complied if such situation warrants.
With respect to each transmission line, substation or distribution network to erected/built be or augmented under Component A of the Project, the Project Implementing Entity shall refrain from commencing any civil works or undertaking any activities ancillary thereto, until and unless: (a) the proposed activities/civil works have been screened by the Project Implementing Entity (in coordination with the respective SPCU), in accordance with the guidelines, standards and procedures set forth in the SS-ESPPF of the Participating State in which the asset will be located; (b) the respective IEAR(s), EMP(s), RAP(s), CPTD(s) and/or TPDP(s), as required for such transmission line, substation or distribution network, pursuant to the respective IEAR(s), EMP(s), RAP(s), CPTD(s) and/or TPDP(s), as required for such transmission line, substation or distribution network, pursuant to the applicable SS-ESPPF has/have been prepared and submitted to the Bank for distribution network, pursuant to the	PA, (Schedule), Section- I, E, Para 2	Complied/ Being complied. Complied/Being Complied. For details refer **Table-1**.

Description of Covenants	Reference	Status of Compliance
applicable SS-ESPPF has/have been prepared and submitted to the Bank for review; and the Bank has notified the Project Implementing Entity and/or the Participating States in writing of its no objection thereto; (c) the foregoing Safeguard Documents have been publicly disclosed by the Project Implementing Entity and the Participating States (through it Respective Power Utility /Department), in local language(s) at the relevant Project's sites, at least thirty (30) days prior to the award of the contract for the related works.		Complied/Being Complied. All approved safeguard reports stand disclosed publicly on website of POWERGRID & State Utilities. Below is the link to access such reports; https://www.powergridindia.com/ner-agreements-and-mous
Prior to commencing any civil works for any transmission line, substation or distribution network under Component A of the Project, the Project Implementing Entity shall ensure that: (a) all necessary governmental permits and clearances for such civil works for such transmission line, substation or distribution network shall have been obtained from the competent governmental authority lies and submitted to the Bank; (b) all pre-construction conditions imposed by the governmental authority lies under such permit(s) or clearance(s) shall have been complied with/fulfilled; and (c) all resettlement measures for the respective transmission/distribution substation, set forth in the applicable RAP shall have been fully executed, including the full payment of compensation for the land prior to displacement and/or the provision of relocation assistance to all APs, as per the entitlements provided in the SS-ESPPF and/or the applicable RAP.	PA, (Schedule), Section- I, E, Para 3	Complied/ Being complied. Refer in **Table- 2** for details of forest/ wildlife clearances along with their present status.
Prior to commencing any civil works under a transmission line, the respective CPTD plan including the compensation and payment schedule thereunder shall have been agreed with the Bank.	PA, (Schedule), Section- I, E, Para 4	Complied/Being complied. Out of 18 CPTDs, 17 CPTDs have already been disclosed on website. For CPTD status please refer **Table-1.**
The Project Implementing Entity shall ensure that each contract for civil works under the Project includes the obligation of the relevant contractor to comply with the relevant Safeguard Documents applicable to such civil works commissioned/awarded pursuant to said contract.	PA, (Schedule), Section- I, E, Para 5	Complied/Being complied

Description of Covenants	Reference	Status of Compliance
The Project Implementing Entity shall: (a) maintain monitoring and evaluation protocols and record keeping procedures agreed with the Bank and adequate to enable the Project Implementing Entity and the Bank to supervise and assess, on an ongoing basis, the implementation of/compliance with the Safeguards Documents, as well as the achievement of the objectives thereof; (b) furnish to the Bank, throughout the period of Project implementation quarterly reports, assessing compliance with the Safeguard Documents, monitoring the efficacy of the social and environmental management measures, and evaluating the results of the mitigation or benefit enhancing measures applied; and (c) unless otherwise agreed with the Bank, engage independent consultants with qualification and experience, and under terms of reference agreed with the Bank, in order to: (i) carry out by no later than: (A) one hundred twenty (120) days as of completion of Stage-I clearances under the Forest (Conservation) Act, 1980 if the activities involve designated forest land; or (B) six (6) months after the contractors' completion of the detailed survey for final placement/route alignment for any civil works, in the case of activities not involving designated forest land, a final environmental assessment report ("FEAR") setting forth the actual impact of Project activities, the results of stakeholders consultations, the clearances obtained and status of compliance with any conditions attached therewith, and the mitigation processes/measures taken or set in place to minimize or avoid any negative environmental impact of Project activities, all in accordance with the processes and requirements set forth in the respective SS-ESPPF(s) and IEAR(s); and (ii) thereafter, within fifteen (15) days of completion of each such FEAR: (A) submit such reports to the Bank for consideration and disclosure by the Bank, and (B) thereafter publicly disclose such reports in a similar fashion as the disclosure of the Safeguard Documents.	PA, (Schedule), Section- I, E, Para 6	Complied/ Being complied. Quarterly Progress Reports including updates on safeguards indicators & forest clearances being submitted to the Bank on a regular basis. The instant report is a comprehensive report exclusively on E & S safeguard issues which has been prepared at every six months and submitted to Bank as per agreed framework. Being Complied. Independent Agencies/ Consultants for FEAR already appointed for all 6 States. For details refer **Table-1** For details of FEAR status refer **Table-1.**

Description of Covenants	Reference	Status of Compliance
The Project Implementing Entity shall make its best efforts to ensure that each participating State has established by no later than three (3) months after the Effective Date, and thereafter maintains and operates throughout the period Project of implementation, a grievance redress mechanism as incorporated in SSESPPF and agreed by the Bank for the handling of any stakeholder complaints arising out of the implementation of Project activities.	PA, (Schedule), Section- I, E, Para 7	Complied/ Being complied. HQ and Site Level GRC have been constituted by all State Utilities. However, representation from local administration & Panchayat /village council for Site Level GRC yet to be nominated by Tripura, Nagaland and partly for Assam & Meghalaya.
In the event of any conflict between any of the provisions of any of the SSESPPFs, IEAR(s), EMP(s), RAP(s), CPTD(s) and/or TPDP(s), on the one hand, and any of the provisions of this Agreement or the Loan Agreement, on the other hand, the provisions of this Agreement and the Loan Agreement shall prevail.	PA, (Schedule), Section-I, E, Para 8	No such event occurred till reporting period. Will be complied if such situation warrants.

Table – 1: Status of preparation & disclosure of E & S Safeguard Documents

State	SS-ESPPF (Date of Disclosure)	Status of Safeguard Documents (Date of Approval/Disclosure)			
		Subprojects District & Brief Scope of works	**IEAR**	**CPTD**	**FEAR**
Assam	29th June 2015	**Dhemaji** 1 no. 132kV & 2 nos. 33kV line, 1 no. each 132/33kV & 33/11kV substation	13th May 2015	22th June 2018	M/s Green Circle Inc., Vadodara appointed as Independent Consultant for FEAR preparation in Dec'18. Consultant has submitted Draft reports on 10th May'19, 21st Oct' 19 & 7th Apr.'20, 2nd Aug. 20 but were not accepted by Bank/ POWERGRID due to very poor-quality report. Now, Consultant has submitted revised reports on 5th Jan.'21 which are under review of Bank.
		Tinsukia & Dibrugarh 1 no. each 220kV & 132 kV and 4 nos. 33 kV line, 2 nos. 132/33kV & 3 nos. 33/11 kV substation	8th July 2015	3rd Oct. 2018	
		Kamrup 2 nos. 132kV & 11 nos. 33 kV Underground line, 2 nos. 132/33 kV &	20th July 2015	N.A. (UG lines only)	Identification of Independent Agency under progress. However, considering competency/

		5 nos. 33/11 kV substation			understanding level of the Independent Consultants already engaged, POWERGRID requested Bank to let it undertake the preparation of these reports in-house.
		Kamrup Rural, Udalguri & Sonitpur 1 no. 220 kV, 5 nos.132 kV & 12 nos. 33 kV line, 1 no. 220/132kV, 3 nos. 132/33 kV & 5 nos.33/11 kV substation	14th July 2015	18th Jan 2021	
		Golaghat, Nagaon, Jorhat, Sibsagar & Karbi-Anglong 2 nos.132kV & 8 nos. 33kV line, 2 nos. each 132/33kV & 33/11 kV substation	27th July 2015	30th Nov 2020	
Manipur	17thAugust 2015	**Imphal West, Senapati & Bishnupur** 2 nos.132kV & 5 nos. 33kV line, 1 no.132/33kV & 5 nos. 33/11kV substation	15th June 2015	30th Nov 2020	M/s R S Envirolink Technologies Pvt. Ltd. has been appointed as consultant in June 20. Preliminary work like literature review/ baseline data/map preparation etc. has been already carried out by Agency & field visit currently under progress.
		Imphal East, Churachandpur, Thoubal & Tamenglong Strg. of 2 nos.132 kV & reno. 1 no.132kV & 7 nos.33kV line, and 5 nos. 33/11 kV substation	23rd July 2015		
		Imphal West, Imphal East & Tamenglong 1 no. 132kV & 3 nos. 33kV line, 1 no. 132/33 kV, 3 nos. 33/11kV substation	8th Jan. 2015		
Meghalaya	29th June, 2015	**West Garo Hills & South West Garo Hills** 1 no. 132kV & 6 nos. 33kV line, 1 no. 132/33kV & 3	5th May 2015	22nd Jun 2018	20th Nov'19

		nos. 33/11kV substation			
		Ri-Bhoi and East Khasi Hills 1 no. 220kV & 5 nos. 33kV line, 1 no. 220/132/33kV & 4 nos. 33/11kV substation	7th July 2015	30th Nov 2020	Draft FEAR report submitted to Bank on 10th Dec. 20 for approval .
		East Jaintia Hills (1 no. 132kV & 4 nos. 33kV line, 1 no. 132/33kV & 4 nos. 33/11kV substation)	15th Jun 2015	19th Oct. 2018	Identification of Independent Agency under progress.
Tripura	17th June, 2015	**Gumti & South Tripura** 5 nos. 132kV & 4 nos 132/33 kV substation)	15th Apr 2015	29th Dec. 2018	M/s Green Circle Inc., Vadodara appointed as Independent Consultant for FEAR preparation in Dec 2018. Although the Consultant has submitted draft reports for both Tripura/ Mizoram in Oct./Nov, 2020 (after repeated reminders and default notices from POWERGRID) but same were not considered for review due to in-adequate & poor quality report.
		West Tripura, South Tripura, Sepahijala & Khowai (4 nos.132kV & 24 nos.33kV line, 3 nos. 132/33kV & 1[illegible] nos. 33/11kV substation)	18thJuly 2015	3rd Sept. 2018	
		Dhalai, North Tripura & Unakoti (2 nos.132kV & 8 nos 33kV line, 1 no. 132/33kV & 6 nos. 33/11kV substation)	13th July 2015	15th Oct. 2018	
		Gumti & South Tripura (19 nos. 33kV line, 1 no. 132/33kV & 14 nos. 33/11kV substation)	27th July 2015	To be submitted	
Mizoram	7th July, 2015	**Lunglei & Lawngtlai** (2 nos. 132kV & 1 no. 33kV line, 1 no. each 132/33kV & 33/11kV substation)	17 June 2015	30th Nov 2020	
		Mamit 1 no. 132kV & 33kV line,	26 July 2017	18th Jan 2021	

		3 nos. 132/33kV substation)			
Nagaland	10th July, 2015	**Tuensang & Longleng** (1 no. 132kV & 33kV line, 1 no. 132/33kV substation	13 May 2015	30th Nov 2020	Both FEARs cleared by Bank and also stand disclosed on 17th Aug. 2020.
		Mokokchung, Kohima, Dimapur, Phek, Wokha, Zunheboto, Mon 6 nos.132kV & 10 nos 33kV line, 4 nos. 132/33kV & 9 nos. 33/11kV substation	27th July 2015		

SECTION-3: COMPLIANCE STATUS WITH ENVIRONMENT MANAGEMENT PLAN

3.1 Implementation of Environmental Management Plan

The instant project is being implemented as per approved Initial Environment Assessment Reports which have been prepared based on framework agreed under SS-ESPPFs and Bank Operational Policies (OP 4.01: Environmental Assessment). Accordingly, a total of 19 nos. of IEARs along with Environmental Management Plans (EMP) enlisting various mitigation measures were prepared and subsequently disclosed to ensure that all the identified/ possible environment impacts due to the instant project intervention are minimized to the extent possible. The EMP describes detailed site-specific mitigation measures including monitoring indicators with responsibility allocation in different stage of project cycle i.e. pre-construction, construction, and operation & maintenance phase. For ensuring proper and effective implementation of various measures of EMP even by associated contractors, EMP has also been made part of contract condition/document. Additionally, budget provisions of Rs. 203.73 Crores has been included in cost estimate apart from additional requirement of Rs.20 Crores proposed under Revised Cost Estimate (RCE) for site specific measures identified during course of project implementation. The total E & S management cost is approximately 4.45 % overall project cost.

Further, monitoring the implementation of environmental mitigation measures is required to ensure that these are undertaken in accordance with provisions of IEA/EMP and as per relevant contract conditions. A summary of E & S mitigation measures and monitoring requirements vis-à-vis compliance status is given in **Appendix-1**.

3.1.1. Status of required clearances, permits and approvals

It is an established fact that power transmission projects activities are non-polluting in nature and do not involve disposal of any pollutant in land, air, water or any large scale excavation resulting in soil erosion and its contribution towards environmental pollution is minimal. Due to this transmission projects were kept out of the purview of different pollution laws as well as exempted from the requirement of environmental clearance under Environment Impact Assessment (EIA) Notification of 1994 and 2006. However, the major environment regulations applicable to instant project is prior approval under Forest (Conservation) Act, 1980 from Ministry of Environment, Forests and Climate Change (MoEFCC) wherever the line is passing through notified forest area. Similarly, permission of National Board for Wildlife (NBWL) is a statutory requirement under Wildlife (Protection) Act, 1972 for all non-forest activities in protected areas (National Parks, Wildlife Sanctuary, Tiger Reserve etc.).

Accordingly, all necessary approval/permits in respect to above applicable environment laws and regulations are being complied. The status of forest and wildlife clearance for various subprojects till reporting period is presented below in **Table-2.**

Table- 2: Details of Package Wise Forest/Wildlife Clearance Status

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
	ASSAM			
TW02	220 kV D/c Tinsukia-Behiating	55	Nil	
TW04	132 kV S/c Dhemaji-Silapathar	36	Nil	
TW05	132 kV S/c Rupai-Chapakhowa	53	Nil	

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
TW07	220 kV D/C Rangia-Amingaon	33	Nil	
	132 kV D/c Amingaon-Hazo	16		
	LILO 132 kV S/c Rangia-Rowta	10		
	LILO132kVS/c Kamalpur-S'gram	1		
	LILO132kVS/c K'pur-Khamakhya	1		
	LILO 132kV S/c Golaghat-Bokajan at Sarupathar	5		
	132 kV D/c Sonabil-Tezpur	15		
	LILO 132 kV S/c Jorhat-Nazira	5		
DMS01	33 kV Silapathar - Silapathar-II	35	Nil	
	33 kV Silapathar - Silapathar	5		
	33 kV Samaguri - Hathimurah-2	30		
	33 kV Tezpur - LGM Hospital	7		
	33 kV Tezpur- Parowa	7		
	33 kV Tezpur - Dolabari	5		
	33 kV Shankardeo Nagar-Mailo	30		
DMS02	33 kV Behiating - Bogibil	10	Nil	
	33 kV Behiating - Dibrugarh	15		
	33 kV Dibrugarh - Romai	17		
	33 kV Chapakhowa – C'khowa	10		
	33 kV Sarupathar -Barapathar	12		
	33 kV Sarupathar - Sarupathar	5		
	33 kV Sarupathar - Sariajhan	20		
	33 kV Teok -Teok	5		
	33kV Teok - Kakojaan	15		
	33kV Teok - Zangi	15		
	33kV Teok - Pragati	22		
DMS03	33kV Tangla - Harsingha	12	Nil	
	33kV Tangla - Paneri	20		
	33kV Tangla - Kalaigaon	20		
	33kV Tangla -Khairabari	10		
	33kV Tangla - Tangla	10		
	33kV Hazo - Sesa	15		
	33kV Hazo - Ramdiya	12		
	33kV Hazo -Domdoma-hazo	10		
	33kV Hazo - Mukalmuwa	25		
DMS04	33kV(UG Cable) GMC-GS Road	14	Nil	
	33kV (UG) GMC -GMC-2	10		
	33kV (UG) GMC-Tarun Nagar	10		
	33kV (UG) GMC- Arya College	12		
	33kV (UG) GMC- GMC	5		
	33kV (UG) GMC- Ullubari	10		
	33 kV (UG) P'bazar-Chabipool	4		
	33kV (UG) Paltanbazar-P'bazar	2		
	33kV (UG) Paltanbazar-J' field	5		
	33kV (UG)Paltanbazar-F'bazaar	4		
	33kV (UG) P'bazar – Ullubari	4		
	MANIPUR			
TW06	Renovation of 132kV Y'bam-Karong-Kohima	91	Nil	

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
	LILO132 kV S/c Y'bam -Karong	6		
	LILO 132kVD/c Kongba-Kakching	16		
	Stringing (2nd Ckt.) of 132 kV D/c Yaingangpokpi – Kongba	45		
	Strg.132kV Kakching-Kongba	33		
	132 kV D/c Imphal – Nin'khong	34		
	132 kV S/c Rengpang-Tamenglong	29	56.833/ Un-classed Forest	Stage-I approval obtained on 30.01.20. Payment of Rs 7.5 Cr towards compensatory levies has been deposited.
SS3	132/33 kV Tamenglong		1.831/ Un-classed Forest	Forest proposal submitted on 29.05.19. However, DFO raised certain queries on 16.07.19 which are being complied.
DMS01	33kV Andro-Yairipok	15	Nil	
	33kV M'sangei-Pishum(UG+OH)	10		
	33kV Mongsangei -Hiyangthang	4		
	33kV Iroisemba - Takyel	7		
	33kV Top Khongnangkhong-Porompat	7		
	33kV Iroisemba-Lamphel	10		
	33kV LILO Y'bam-Noney at Keithelmanbi	15		
	33/11kV Top Khongnangkhong substation		0.283 Reserve Forest (RF)	Forest proposal submitted on 20.02.18. Proposal forwarded to DFO on 19.10.18 which is under formulation stage.
DMS02	33kV Moirang- Kwakta	10	Nil	
	33kV Nambol - Leimapokpam	10		
DMS03	33kV Sanjenbam -Porompat	3	Nil	
	33kV Khoupom - Thangal	20		
	33/11kV Porompat substation		0.27 Reserve Forest (RF)	Stage-I & Stage-II (final) approval obtained on 18.02.17 & 30.05.17 respectively.
DMS04	33kV Napetpalli - Sanjenbam	10	Nil	
	33 kV LILO Copur-Singhat at Tuiliphai	10		
MEGHALAYA				
TW01	220 kV D/c Byrnihat-Mgap-New Shillong	122	45.09/ Forest as per dictionary meaning	Forest proposal submitted on 27.03.19.NOC for Mawngap New Shillong section as non-forest area issued by DFO East Khasi Hills. For balance Killing-Mawngap section NOC is likely to be issued by DFO East Khasi Hills as the area is found to be private land.

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
TW02	LILO132kV MLHEP-Khliehriat at Mynkre	34	11.566/ Forest as per dictionary meaning	Forest proposal submitted on 23.01.19. Proposal forwarded to RMoEFCC, Shillong on 29.06.20. However, RMoEFCC has raised certain observations on both the proposals on 15.07.20. Compliance of RMoEFCC observations under process at Nodal Office/ PCCF Meghalaya.
	132 kV D/c Phulbari-Ampati	49.633	Nil	
DMS01	33kV Mynkre - Mynkre	6	Nil	
	33kV Mynkre - Rymbai	15		
	33kV Mynke - Lumshnong	10		
	33kV Mynkre - Latykre	25		
DMS02	33kV Phulbari-Rajballa Bhaitbari	10		
	33kV Phulbari - Chibinang	6		
	33kV Tikrila - Raksambre	35		
	33kV Phulbari-Phulbari	6		
	33kV LILO Tikrila-Phulbari	6		
DMS03	33kV New Shillong - Mawpat	25	Nil	
	33kV SE Falls - Mawpat	10		
	33kV New Shillong -N. Shillong	6		
	33kVN.Shillong- Mawryngkneng	26		
	33kV LILO Jowai-L'krem	4		
	33kV Jongksha-Mawkynrew	8		
	TRIPURA			
TW01	132 kV D/c Bagafa-Belonia	14	2.5118/ Un-classed	Stage-I & Stage-II (final) approval obtained on 30.10.18. & 07.06.19 respectively.
	132 kV D/c Udaipur-Bagafa	32	26.7732/ RF	Stage-I & Stage-II (final) approval obtained on 09.04.18 & 06.06.19 respectively.
	132 kV S/c Bagafa-Satchand	40	9.1503/ RF	Stage-I & Stage-II (final) approval obtained on 12.10.18. and 24.08.20.
	132kV S/c S'room-S'chand at S'room	1	Nil	
	132kV S/c S'room-S'chand at S'chand	1	Nil	
TW02	132 kV D/c Rabindranagar-Belonia	40	74.9493 / RF	Stage-I & Stage-II (final) approval obtained on 12.04.19 & 22.06.20 respectively.
	132 kV D/c Rabindranagar-Rokhia	24	21.1896 / RF	Stage-I & Stage-II (final) approval obtained on 28.06.18 & 07.06.19 respectively.

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
	132 kV D/c Belonia-Sabroom	42	25.5204 RF	Stage-I & Stage-II approval obtained on 28.06.18 & 05.08.20 respectively.
	LILO 132kV S/c Sj'nagar-Rokhia at Gokulnagar	5	Nil	
TW03	LILO 132kV S/c Ambassa-P.K.Bari at Manu	4	Nil	
	132 kV D/c Kailashahar-Dharamnagar	24	14.3586 /RF	Stage-I & Stage-II approval obtained on 10.04.18 & 07.06.19 respectively.
	LILO132kV 79 Tilla-Dhalabil at Mohanpur	2	Nil	
	132 kV D/c Udaipur-Amarpur	30	22.0482 /RF	Stage-I & Stage-II approval obtained on 10.04.18 & 29.08.19 respectively.
	132 kV Manu-Manu	2	Nil	
DMS01	33kV Dalak - Jatanbari	8.537	2.705/ Unclassified Govt. Forest (UGF)	Proposal resubmitted on 07.01.21 and presently under formulation with DFO.
	33kV LILO T'mukh-Silachari at Karbook	6	Nil	
	33kV LILO Jolaibari-Bagafa at M'pur	16		
	33kV Dalak- Amarpur	15		
	33kV Belonia - Chittamara	8		
	33kV Garjee to Chittamara	20		
	33kV Udaipur to Maharani	8		
	33kV Garjee-Maharani	20		
	33kV Amarpur-Chechua	16		
DMS02	33kV Sabroom - Manughat	10	Nil	
	33kV Manughat - Srinagar	20		
	33kV Satchand - Srinagar	22		
	33kV Tapping point of Belonia-Hrishyamukh to Srinagar	25		
	33kV Rupaichari - Sabroom	12		
	33kV Satchand - Rupaichari	10		
	33kV Rajnagar - Ekinpur	20		
	33kV LILO S.Nagar-Takarjala at Gabardi	4		
	33kV LILO Belonia-Rajnagar at Barpathari	10		
	33kV Jolaibari - Satchand	18		
	33kV Jolaibari - Silachari	30	18.19/ UGF & RF	Forest proposal resubmitted on 04.11.20. Presently under formulation with respective DFOs.
	33/11 kV Ekinpur Substation		0.1962 /RF	Stage-I & Stage-II approval obtained on 02.04.20 &

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
				20.10.20 respectively.
	33/11 kV Barpathari Substation		0.2209 (Forest & Trishna WL) / RF	**Forest:** Stage-I approval obtained on 04.03.20. Compliance report submitted by State on 20.11.20. Now the proposal is pending at RMoEF, Shillong for Stage-II clearance. **Wildlife:** National Board for Wildlife (NBWL) permission obtained on 17.12.19.
DMS03	33kV Gokul Nagar-Golaghati	15	Nil	No Forest involved
	33kV Gokul Nagar-Durganagar	15		
	33kV G'Nagar-Tapping at Madhupur-Jangalia	1		
	33kV Rajnagar-Nidaya	20		
	33kV Takarjala- Golaghati	15		
	33kV Madhupur-Durganagar	14		
	33kV Kathalia-Nidaya	12		
	33kV Melagarh-Nalchar	10		
	33kV Bishramganj-Nalchar	10		
	33kV Bishramganj-Jangalia	15		
	LILO B'ghat-Jangalia at S'kote	04		
	33/11 kV Nidaya Substation		0.3299 (Forest & Trishna WL) /RF	**Forest:** Stage-I approval obtained on 16.03.20. Compliance report submitted by State on 24.11.20. Now the proposal is pending at RMoEFCC, Shillong for Stage-II clearance. **Wildlife:** National Board for Wildlife (NBWL) permission obtained on 17.12.19.
DMS04	33kV Mohanpur -Barkathal	14	Nil	
	33kV Lembucherra -Bamutia	6		
	33kV Champak Nagar-ADC HQ	9		
	33kV Dhalabil –Khowai	8		
	333kV Jirania -ADC HQ	5		
	33kV Hezamara -Simna	22		
	33kV Hezamara -Barkathal	12		
	33kV Durjoynagar -Bamutia	14		
	33kV Ampura - Khowai	16		
	33kV Mohanpur -Hezamara	16		
	33kV Jirania -Champak Nagar	8		
	Chechua to Taidu	20		
	LILO Agartala -Mohanpur at Lembucherra	4		
	LILO Khayerpur -Jirania at	8		

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
	Ranirbazar			
	LILO Ambassa-Teliamura at Mungiakami	2		
	33kV Hezamara -Dhalabill	22	10.448/ UGF & RF	Proposal resubmitted on 04.11.20 and presently under formulation with respective DFOs.
	33kV Teliamura - Taidu	12	5.0948/ UGF	Proposal resubmitted on 20.10.20 and presently under formulation with respective DFOs.
DMS05	33kV Manu - Dhumachhera	25	Nil	
	33kV Manu - 82 mile	21		
	33kV Manu-Tapping of C. Manu-Manu	4		
	33kV P.K.Bari - 82 mile	13		
	33kV Kalaisahar-Tilla Bazar	14		
	LILO C'manu-Manu at Chailengta	8		
	LILO Salema-Kamalpur at D. Chowmohani	14		
	33kV J'Nagar-Dhumachhera	20	21.3339/ UGF & RF	Proposal resubmitted on 04.11.20 and presently under formulation with DFO.
	33kV Ambassa-Jawhar Nagar	13	0.9972/ UGF & RF	Proposal submitted on 07.07.20. After formulation DFO forwarded the proposal to CF on 30.12.20.
	MIZORAM			
TW02	132kV S/c Lungsen-Chawngte	39		No forest involved.
	132kVS/c Chawngte-S.Bungtlang	45		
	132kV S/C Lunglei-Lungsen	0.5	Nil	
SS02	132kV S/c West Phaileng-Marpara	50	104.77 / Forest as per dictionary meaning/ RF	**Forest:** In principle approval for Stage-I has been obtained on 15.01.21. **Wildlife:** Proposal recommended by Standing Committee of NBWL in the meeting held on 03.07.20.
DMS01	33kV Lungsen-Lungsen	5	Nil	
	33kV West Phaileng- W.Phaileng	0.1		
	NAGALAND			
TW01	220 kV S/c N. Kohima-Wokha-M.chung	92	Nil	No forest involved
TW05	132 kV D/c Kohima- New Secretariat Complex	28	Nil	
TW06	132 kV S/c Wokha-Zunheboto-M'chung	97	Nil	
	132 kV S/c Tuensang-Longleng	36	Nil	

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
	LILO of 132 kV S/c Kohima-Workha at New Kohima	15	Nil	
	LILO of 132 kV S/c Mo'chung-Mariani at Longnak	1	Nil	
	LILO 132 kV D/c Kohima-Meluri at Pfutsero	16	Nil	
DMS01	33kVM'chung-Mariani to Longtho	0.5	Nil	No forest involved
	LILOM'chung-Mariani at Longnak	2		
	33kV Longleng -Longleng Town	5		
DMS02	33kV M'chung-M'chungTown PH	12	Nil	
	33kV M'chung-M'chung TH Area	16		
	33kV Zu'boto- Zunheboto South	4		
	33kV Suruhuto -Akuloto	18		
	33kV Pughoboto -Torogonyu	4		
DMS03	33 kV New Kohima -Zhadima	1	Nil	
	33 kV Pfutsero - Pfutsero	4		
DMS04	33 kV Nagarjan-Padam Pukhri.	10	Nil	
Total		**3019.27**	**426.688**	

3.1.2. Status of corrective actions/agreed milestones from previous missions/field visits

Till reporting period (up to December 20), total four implementation support missions have been completed. During last mission (4th mission from November 25 to December 31, 2019), mission team including environment and social specialists undertook field visits to selected sites in Assam (Site visits photographs placed as **Plate-1**) to review the ground level implementation of safeguard measures.

Plate 1: Mission Team Visit to Sites during 4th Implementation Support Mission

Visit to 220/132kV Behiating substation

Visit to Pile Foundation work of 132kV Rupai-Chapakhowa line

Based on the above sites visit and subsequent discussion/ meeting with IA, six participating States, Ministry of Power (MoP), Central Electricity Authority etc. Bank has proposed some corrective actions/ milestones agreed in their Aide Memoire issued on 22nd January 20. The status of agreed actions pertaining to E & S aspects are summarized below in **Table- 3**.

Table- 3: Status of agreed actions related to E & S Safeguards

S.N	Actions	Responsible	Present Status
1.	CPTD: Making land and crop compensations in respect of eligible cases	POWERGRID	POWERGRID has already prioritized compensation payment towards land/surface damages where tower foundation /erection/ stringing under progress after due assessment by Revenue Authority (refer **Table- 8)**. Further, number of pending cases and non-eligible cases along with detailed justification has been provided in same **Table - 8**. As regard compensation against RoW/ Corridor, same shall be initiated commensurate with the progress in stringing work.
2	CPTD: (i) Providing detailed explanations on distinguishing eligible vis-à-vis non-eligible compensation cases; (ii) bring to the fore, and highlight case by case the issues and challenges (if any) being encountered in respect of drawing TLs/ DLs;	POWERGRID	
3.	CPTD: initiate compensation payment processes for corridor / ROW in Assam and Manipur	POWERGRID	
4	Expediting identification/ handing over of alternative land - Tarun Nagar S/S (Assam) - Takyel DMS S/S (Manipur) Sekerkote, Tillabazar and Ranirbazar (Tripura) -Share details of action taken w.r.t. site location at Romai and Bogibil DMS S/S (Assam) to address sub-lease issue	APDCL MSPCL TSECL POWERGRID APDCL	Tarun Nagar land handed over in Feb, 2020. Alternate land for Takyel yet to be handed over. APDCL to expedite the matter with the State Revenue Authority for regularization/ownership transfer of land in their name. During meeting with APDCL & AEGCL on 21.12. 20, Chairman, APDCL assured that the matter shall be resolved soon.
5	Forest and/ or Wildlife clearance for 33 kV S/S at Nidaya, Barpathri and Ekinpur (Tripura)	POWERGRID TSECL	Stage-I forest clearances & wildlife permissions for 33 kV substation at Nidaya & Barpathri and Stage-II clearance for Ekinpur have already been obtained. For details refer **Table-2**.
6	Addressing observations from field visit (refer Annex IV)	POWERGRID	Being complied.
7	Appointment of consultants for preparation of Final Env. Assessment Report for sub-projects in Manipur	POWERGRID	M/s R S Envirolink Technologies Pvt. Ltd. has been appointed as consultant in June 20.
8	Expediting and sharing Final Environmental Assessment Report for other sub-projects (only one has been finalized and cleared by Bank till date)	POWERGRID / Consultants	Two more FEARs of Nagaland have been cleared by Bank. However, POWERGRID has already raised the issue related to competency /understanding level of Independent Consultants and allow POWERGRID prepare these reports in-house. Bank informed that it will discuss with Regional E & S Safeguards Adviser and convey its decision to POWERGRID accordingly.

9	Sharing Initial Environmental Assessment Report (IEAR) for planned 8 new lines across Assam and Tripura	POWERGRID / Consultants	Draft IEAR for Assam (additional scope) already shared with Bank in 4th Feb'20. The revision of IEAR based on the observations received from Bank on 14th Feb.'20 couldn't be completed due to ongoing pandemic situation and change in scope of work. As regard IEAR for Tripura, same shall be prepared/ shared once the detailed surveys of proposed lines are completed.
10	Filling up vacancy for field officer (ESM) in Manipur	POWERGRID	Sh. Bhisma Jyoti Chutia has been appointed as EO for Manipur w.e.f. June'20.
11	Project/ Site level GRC – Nominations from Local Administration	All States (except Mizoram & Manipur)	No progress so far. Support from Bank is required for expediting notification of same by the respective State Utilities.
12	Revising the draft CPTDs (based on feedback already shared by Bank team) – Joint meeting to be held	POWERGRID /Bank	Joint meeting was scheduled in 3rd week of March. However, in view of outbreak of corona virus joint meeting yet to be held.

It is also worth mentioning that most of the observations made by the Bank in their previous implementation support mission such as expediting the compensation payment in respect of tree, crop & land, finalization of independent agency for conducting FEAR, expediting Forest and/ or Wildlife clearance proposals, implementation of site specific management and mitigation measures for substations, filling up vacancies for field officer (ESM) in Manipur and Meghalaya etc. were either complied and/or being complied, wherever such actions are of continuous nature. However, certain action such as nominations from Local Administration for Site Level GRC and handing over of some substations lands are yet to be complied fully by the respective State Utilities/Govt.

3.1.3. Status of implementation of site-specific mitigation measures

As already explained, the subprojects are being implemented as per provisions enlisted in Environment Management Plans (EMP) to minimize/mitigate the identified impacts associated with each subproject component to the extent possible. The EMP contains mitigation measures including monitoring indicators with responsibility allocation in different stages of project cycle. For ensuring proper and effective implementation of various measures by contractors/sub-contractors engaged in construction, it has also been made part of contract condition/bidding document. The summarized status of EMP compliance is presented in **Appendix-1**.

In addition to implementation of EMP provisions, some site-specific measures related to slope protection/stabilization (viz. retaining wall, toe wall, revetment wall, stone pitching, guard wall, bio-engineering measures etc), drainage (such as cross drainage, culverts),

approach road and other protection measures etc. are being undertaken/have been planned as per the site requirement/conditions and subsequent technical approval through committee. Further, rain water harvesting system which is an integral part of substation design will also be implemented based on the site condition/requirement. The details of such measures which are already under implementation/ approved for implementation are presented in **Table-4**. Some photographs of site-specific measures implemented at different sites are placed as **Plate -2**. For others sites also similar procedure shall be followed and status of site specific measures will be updated as per work progress.

It may be noted that to implement such site-specific measures at appropriate time, adequate budgetary provisions has been made through Revised Cost Estimate (RCE) or as additional quantity against Bill of Quantity (BoQ). Accordingly, requirement of approach road has already been worked out for various substations and provision of Rs. 20 crore has been included in the RCE. Similarly, apart from implementation of retaining wall/revetment wall, Unequal Leg Extension (ULE) other slope protection measures like stone pitching, bio-engineering measures etc. are also being explored & will be executed as per the site requirement.

Table-4 : Status of implementation of Site-specific Mitigation Measures

Sl. No	Name of Substation /Line	Required Approach Road (length in meter)	Type of Slope Protection/ Stabilization / bio-engineering Measures	Other measures (rainwater harvesting/ cross/ outer drainage etc.
		**** Planned, ** Under Implementation,*** Completed***		
ASSAM				
1	132/33 kV GMC	100**		Outer peripheral drain* & box culvert***
2	132/33 kV Silapather	128**		
3	132/33 kV Sarupathar	10*		
4	220/132 kV Amingaon	200**	RRM Wall***	
5	132/33kV Chapakhowa	20**		
6	132/33 kV Hazo		RRM Wall**	
7	132/33 kV Tangla	33**		
8	132/33 kV Tezpur New	100*	RRM Wall**	Outer drainage*
9	132/33 kV Teok	17**	RRM Wall**	
10	33/11 kV Harsingha	62*	RRM Wall**	
11	33/11 kV GS Road		RRM Wall***	
12	33/11 kV Mailo	105**		
13	33/11 kV Chabipool		RRM Retaining Wall**	Box culvert***
14	33/11 kV Dibrugarh Electrical SD-3		RRM Wall***	
15	33/11 kV Silapathar II	15**	RRM Wall**	
16	33/11 kV Sesa		RRM Wall***	
17	33/11 kV Ramdiya		RRM Wall***	

18	33/11kV D'doma- hazo		RRM Wall***	
19	33/11 kV Arya College			Box culvert***
MANIPUR				
20	132/33kV Tamenglong	215*	Boundary Wall**	
21	33/11 kV Takyel			
22	33/11 kV Lamphel			
23	33/11 kV Top Khongnangkhong	23***	RRM Wall**	
24	33/11 kV Porompat		Boundary Wall***	Outer drainage***
25	33/11 kV Andro	25*	RRM Wall**	
26	33/11 kV Hiyangthang	41.7*	RRM Wall***	Crossing*
27	33/11kV Keithelmanbi	290***	Boundary Wall***	
28	33/11 kV Kwakta	05*	Boundary Wall***	
29	Aug.of 33/11 kV Ukhrul		Retaining Wall**	
30	33/11 kV Tuilaphai	84**	Boundary Wall***	
31	33/11 kV Sanjenbam	22.5**	Retaining Wall*	
32	132/33kV Gamphajol	120*	Retaining wall**	
33	Pishum(GIS)		RRM**	
MEGHALAYA				
32	220/132/33 kV New Shillong	20*	Retaining Wall** Stone Pitching* & Grass with bamboo grids*	Rain Water Harvesting**
33	132/33 kV Mynkre	25*	RRM Wall*	
34	132/33 kV Phulbari	10*	Rev., RRM Wall** & Grass with bamboo grids*	Outer drainage*
35	33/11 kV Rymbai		RRM Wall**	Outer drainage*
36	33/11 kV Latyrke		RRM Wall***	Outer drainage*
37	33/11 kV Rajballa-Bhaitbari		Revetment RRM Wall**&Grass with bamboo grids*	Outer drainage*
38	33/11 kV Chibinang		RRM Wall**	Outer drainage*
	33/11 kV Raksambre		RRM Wall***	Outer drainage**
39	33/11 kV Mawpat		RRM Wall***	-
40	33/11 kV New Shillong		RRM Wall***	
41	33/11 kV Mawkneng		RRM Wall***	
42	33/11 kV Mawkynrew		Stone Pitching***	
43	220 kV D/c Byrnihat-Mawngap-New Shillong line		RRM Wall- Total 57** (8***) & ULE : 100*, 54** & 7***)	
44	LILO of 132 kV MLHEP-Khliehriat Line at Mynkre		RRM & Revetment Wall-Total 28*(5***) & ULE: 35***	

Plate 2 : Implementation of Site Specific Measures

ASSAM

RRM Wall at 33/11 kV Domdoma Hazo,

RRM Wall at 132/33 kV Hazo New,

MANIPUR

RRM Wall at 33/11kV Hiyangthang

RRM Wall at 33/11kV Top-Khongnangkhong

MEGHALAYA

RRM wall at LILO of 132 kV MLHEP-Khliehriat Line at Mynkre

Retaining Wall at 200 kV New Shillong Section at AP 76

Sl. No	Name of Substation /Line	Required Approach Road (length in meter)	Type of Slope Protection/ Stabilization / bio-engineering Measures	Other measures (rainwater harvesting/ cross/ outer drainage etc.
		* Planned ** Under Implementation,*** Completed		
MEGHALAYA				
45	33/11 kV Mynkre			Outer drainage**
46	220 kV Byrnihat (Killing) Bay Extension			Outer drainage**
TRIPURA				
47	132/33kV Bagafa	50**	Retaining Wall*	01 No. recharge pit in each substation*
48	132/33kV Belonia	115**	Retaining Wall*	
49	132/33kV Satchand		Retaining Wall**	
50	132/33kV Gokulnagar		Retaining Wall***	
51	132/33kV Mohanpur	250*	Retaining Wall**	
52	132/33kV Manu		Retaining Wall*	
53	132/33kV Amarpur		Retaining Wall*	
54	132/33kV Ambassa (Extn.)	150*		
55	132/33kV Sabroom		Retaining Wall*	
56	33/11kV Golaghati		RRM Wall***	
57	33/11kV Durganagar	500*		
58	33/11kV Nidaya	200*		
59	33/11kV Simna	200*		
60	33/11kV Jawaharnagar	25*		
61	33/11kV 82 Mile	5*		
62	33/11kV Dhumachhara	5*		
NAGALAND				
63	132/33kV Secretariat Complex Kohima	900**	RRM & Retaining Wall***	
64	132/33 kV Longnak		Retaining Wall**	
65	132/33 kV Longleng	500**		
66	132/33 kV Pfutsero	100*	Retaining Wall*	
67	132/33 kV Zunheboto	80*	Retaining Wall*	
68	Ext. of 132/66/33 kV Mokokchung		RRM & Retaining Wall***	
69	Ext of 132/33kV Wokha		RRM & Retaining Wall***	
70	33/11 kV Longtho	700*		
71	33/11 kV Longleng		RRM Wall*	
72	33/11kV Pfutsero	55*	RRM Wall***	
73	Aug. of 33/11kV Bosta		Retaining Wall***	
74	Aug. of 33/11kV Chakabhama		Retaining Wall***	

TRIPURA

RRM Wall at 132/33kV Manu	Retaining Wall at 132/33 kV Belonia

MIZORAM

RCC retaining wall at 33/11 kV S. Bungtlang	RRM Wall at 33/11 kV South Bungtlang

NAGALAND

ULE Tower foundation at AP-170/0 of 132 kV 132 kV S/C West Phaileng-Marpara Line	Completed Retaining Wall at 132/33kV New Secretariat complex Substation

Sl. No	Name of Substation /Line	Required Approach Road (length in meter)	Type of Slope Protection/ Stabilization / bio-engineering Measures	Other measures (rainwater harvesting/ cross/ outer drainage etc.
		* Planned, ** Under Implementation,*** Completed		
NAGALAND				
75	Aug. of 33/11kV Torogonyu		Retaining Wall*	
76	Aug. of 33/11kV Tseminyu		Retaining Wall*	
77	220 kV S/c N. Kohima-Wokha-M.chung		ULE : Total 233*	
78	132 kV D/c Kohima- New Secretariat Complex		Revetment Wall - 2* and ULE - (Total 14*	
79	132 kV S/c Wokha-Zunheboto-M'chung		ULE - Total 101*	
80	132 kV S/c Tuensang-Longleng		ULE - Total 77*	
81	LILO of 132 kV S/c Kohima-Wokha at New Kohima		ULE - Total 14*	
82	LILO 132 kV D/c Kohima-Meluri at Pfutsero		Revetment Wall - 6* and ULE - 8*	
MIZORAM				
83	132/33 kV Lungsen		Retaining Wall* Stone Pitching*	Cross drainage* Outer drainage*
84	132/33 kV West Phaileng	80*	Retaining Wall*	Cross drainage**
85	132/33 kV Marpara	130*	Retaining Wall* Grass with bamboo grids*	Cross drainage*
86	33/11kV S. Bungtlang	200*	Retaining Wall**	Cross drainage*
87	Aug. of 132/33 kV Lunglei		Retaining Wall* Stone Pitching*	Cross drainage*
88	132 kV Lungsen-Chawngte		Unequal Leg Extension (ULE)- 76*	
89	132 kV Chawngte-S.Bungtlang		ULE- 56 *	
90	132 kV West Phaileng-Marpara		ULE- 159**	

3.1.4. Occupational Health and Safety

Safety of workers as well as of residents of areas close to the project activities is always a challenge mostly during project execution stage. In the instant project also, occupational health & safety has been given top priority and all health and safety issues and their management aspects have made integral part of project through contract conditions/contract specific safety plan. All the subprojects are being executed as per the

approved safety plan and regularly monitored by dedicated Safety personnel. Further, strict compliance of various contractual aspects to work and safety regulations, workmen's compensation, insurance, safety standard/plan etc. by the contractor(s) are ensured.

The compliance of safety guidelines/checklists including work permits, height use of PPEs and other safety precautions are regularly monitored by site in-charge. Mock drill such as fire safety, victim rescue/Cardio-Pulmonary Resuscitation, first aid etc. are conducted periodically to enhance the preparedness level of the workforce. Availability of First aid facilities and/or ambulance at work site is ensured to face any eventuality. Safety induction & awareness programme including HIV/AID are also conducted at every active site. Safety film for transmission project developed by POWERGRID have been translated in local languages[2] like Assamese, Manipuri, Bengali, Khasi & Nagamese, Mizo apart from English & Hindi and is shown to workers regularly. Additionally, every day before start of work tool box talk is held which also include safety aspects/instruction. Photographs/ documents related to safe work practices including safety awareness are placed as **Plate- 3**. It is heartening to note that till December'20 no accidents (fatal or non-fatal) including major/minor injuries were reported from any of the construction sites.

Plate-3 : Safe Work Practices in different States/Sites during reporting period

ASSAM

Above (From L to R) : Tool box talk at 132/33 kV Tezpur & Fire Fighting training at 220/132 kV Behiatang, Below (From L to R): Health checkup & HIV-AIDS awareness program for workers in 132 kV Rupai-Chapakhowa line

[2] Also available on POWERGRID's website http://www.powergridindia.com/ner-agreements-and-mous

MANIPUR

Safety Training at 33/11 kV Top Khongnangkhong

World Environment Day Awareness Program at 33 kV Monsangei- Hiyangthang Line

MEGHALAYA

Safety briefing on Excavation, First aid, PPEs in 220 kV D/c Byrnihat-Mawngap-New Shillong

Safety Training at 220/132 KV New Shillong (GIS) substation

NAGALAND

Toolbox talk at 132/33 kV Longnak, Substation

Fire Mock during of National Safety Week Celebration 132/33 kV Longnak

TRIPURA

Training on Work at Height at 132/11 Sabroom Substation

MIZORAM

Safety Briefing and PEP Talk at 132/33 kV West Phaileng Substat

Barricading of Excavated Tower Pit Area of 132 kV West Phaileng-Marpara Line

SPML

EMERGENCY CONTACT NUMBER

(Bagafa Site)

Sl no.	Contact Person	Contact Number
1	Site In-charge	7320837473/7640939793
2	HR & Admin Dept.	8837410576/9089088668
3	Safety Dept.	7874398415
4	Security	
5	Hospital /Ambulance	03823262248
6	Police	03823262231
7	Fire	03823262244

Above: Display of Safety Poster, Emergency numbers and First Aid Kits at all active Site
Below : Regular Medical Health Check-up and HIV/AID Awareness at different Sites

The amenities for worker's including occupational health, safety and hygiene at work site is the responsibility of contractors/sub-contractor(s), who is also abide by various provisions related to worker welfares in contractual agreements and EMP. Moreover, as per contract agreement contractor and his sub-contractors shall abide at all times by all applicable existing labour enactments and rules made thereunder, regulations notifications and byelaws of the State or Central Government or local authority and any other labour law (including rules), regulations bye laws that may be passed or notification that may be issued under any labour law. Accordingly, it is ensured that all contractors employed are operating with valid labor license as per provision under section – 12(1) of the Contract Labour (Regulation & Abolition) Act, 1970 and also certified under Section-7(3) of the Building and Other Construction Workers (Regulation of Employment and Condition of Service) Act, 1996 from Ministry of Labour & Employment. Besides, the contractors have obtained requisite insurance policy as per provisions of Employee Compensation Act, 1923 for its employed workforce.

State	Name of Contractor	Package	Approved Worked force	Worked force(max.) Employed
Assam	M/s Neccon Power & Infra Ltd	SS-01-03, DMS-01	340	220
	M/s JV Techno & Seiyuan	SS-04	100	70
	M/s T & R (India) Ltd	TW-01	100	30
	M/s Meher Foundation & Civil Engg. Pvt. Ltd	P - 01	30	10
	M/s Power Mech Projects Ltd	TW-02 & 05	110	60
	M/s Teems India Pvt. Ltd	TW-04	60	25
	M/s Simplex Infra. Ltd.	TW-07	100	-
	M/s Sterling & Wilson Pvt. Ltd.	DMS-02 & 03	300	110
Meghalaya	M/s Neccon Power & Infra Ltd	DMS-01-03, SS-01	215	118
	M/s Techno Electric & Engineering Co. Ltd.	SS-02	100	82
	M/s Unique Stru. & Towers Ltd.	TW-01 & 02	400	310
Tripura	M/s. SPML	SS-01, 02 & 03	300	64
	M/s. TEEMS on behalf of M/s. EMC Limited	TW-01, 02 & 03	300	56
Manipur	M/s Win Power Infra Pvt. Ltd	DMS -01 & 02	60	30
	M/s Siddhartha Engg. Ltd.	DMS -03 & 04	50	20
	M/s Sterling & Wilson Pvt. Ltd.	SS-01 & 03	360	30
	M/s Shyama Power India Ltd.	SS-02 & TW-06	200	50
Mizoram	M/s KSA Powerinfra Pvt. Ltd	SS-01, TW-01	100	45
	M/s Sterling & Wilson Pvt. Ltd	SS-02	119	58
Nagaland	M/s Sterling & Wilson Pvt. Ltd.	DMS-03 & 04	200	50
	M/s Shyama Power India Ltd.	TW-01,05,06 & SS-03	400	220
	M/s Techno Power Ente. Ltd	DMS-01 & 02	75	50
	M/s Power Mech. Projects Ltd.	SS-02 & 04	100	35
	M/s Techno Electric & Engineering Co. Ltd	SS-01	100	45

It is pertinent to mention that actual number of manpower employed at each site/package varies significantly from time to time depending upon the work requirements as well as availability of contract labour. The detail of state wise approved manpower obtained by different contractors along with maximum no. of workers employed on any day during the reporting period is provided in the table below; Further in every active site, it is ensured that the construction contractor must provide necessary accommodation arrangements along with uncontaminated water for drinking, sanitation, cooking, washing & other health & hygienic conditions through regular monitoring as per provisions of contract agreement and EMP. Some photographs of worker facilities provided at different sites are placed as **Plate- 4.** Besides, the workforce are regularly instructed to respect local people, tradition, culture and not to indulge in any activities with local through strictly controlling entry of outsiders in non- working hours is ensured to avoid any conflict with the local people.

Plate -4 : Worker Facilities at Construction Sites

ASSAM

CRB temporarily used as Labour Camp at 132/33 kV Tezpur New

Worker Camp at 132/33 kV Teok

Eco-Friendly Bio Toilet at 33/11 kV Sesa

MIZORAM

Worker Camp at 132/33 kV West Phaileng

Worker Camp at 132/33 kV Marpara S/s

NAGALAND

Worker Camp & Toilet Facility at 132/33 kV Longnak

MANIPUR

Worker Camp & Bio Toilet at 33/11 kV Keithelmanbi

Besides, the COVID-19 pandemic outbreak has not only created unprecedented situation all over world but also impacted every aspects/ activities including project implementation. Since such pandemic is a totally unforeseen/ unexpected impacts associated with such events/situations have not been specifically included in existing EMPs which were prepared long back. However, the existing safety plan and other contract conditions particularly related to labours do have provisions to deal with such extraordinary situations.

It is pertinent to mentioned that Govt. of India has enforced The Disaster Management Act, 2005 and Epidemic Diseases Act, 1897, w.e.f March,2020 in whole of India which empower the GoI & State governments to take special measures and prescribe regulations in an epidemic to control the spread of the virus. Provisions of these acts which are also enforceable on all provide that all the protocols of Govt of India and State Govt in respect of COVID-19 are to be mandatorily followed. Individual protocols also required necessary permission from Govt. Therefore, POWERGRID and all its contractors are duty bound to follow the instructions of government including closing of all construction activities during lockdown and the guidelines issued after detailed assessment regarding unlock which allows work to start with certain conditions. Based on this, POWERGRID Corporate Safety Cell has also prepared a detailed guideline / plan to be followed at all its establishments, Construction sites and O&M during resumption of work in COVID-19 situation and site officials/contractors directed for ensuring strict implementation of the said guidelines. Besides, POWEGRID has provided food relief/ex-gratia payment to stranded workers and also financial assistance for improvement of health infrastructure/other medical facility/equipments. Some photographs of COVID specific measures related to health & hygiene, sanitization, availability of PPEs and adherence to social distancing norms including daily awareness on COVID during Tool Box Talk etc. followed at different sites are placed as **Plate-13.**

3.1.5. Environmental awareness and training

Knowledge about environmental problem in general and environmental issues associated with project in particular not only enhances the environmental sensitivity of the project staff but also helps in compliance with safeguard issues associated with the project. Accordingly, Environmental and Social Management trainings have been made an integral part of the Capacity Building & Institutional Strengthening (CBIS) Framework.

Till reporting period, specialized E & S training program one each for Nagaland, Mizoram, Assam and Tripura State has been conducted under CBIS and the same has been planned in other remaining States in near future. In additional to above, a three days training programme exclusively for its project personnel associated with construction and safeguards management at site under NERPSIP was organized at PAL Manesar, Gurgaon on 11-13 December, 2018**.** During such programs subject experts from leading organizations like the World Bank, ADB, MoEFCC and domain experts from university/ research institutes interacted with the participants and gave them a clear insight about the relevant environmental and social issues. Apart from project specific E & S safeguard matters these trainings also covered topics like engagement with indigenous people & gender issues with special reference to NER and best international practices. Some photographs and training modules for such programs are placed as **Plate- 5.** Details of training programs conducted till reporting period is provided below in **Table-5**.

Table-5: Details of Training program under NERPSIP Capacity Building

Sl.	Topic of Training Program	Place & Date	Participants Level	Total Mandays
1	E & S aspects of projects and System Planning & STU Management under NERPSIP	Conference Hall DPN, Kohima, Nagaland 23 & 24 April' 18	Middle Management	42
2.	E & S aspects of T and Distribution Projects under NERPSIP	Aijal Club, Aizawl, Mizoram 23 & 24th May'18,	-Do-	36
3	Env. & Soc. aspects of T & D Projects under NERPSIP	Pragna Bhavan, Agartala, Tripura 4 & 5th Sept'18	All levels	54
4	E & S Safeguard Management of NERPSIP	PAL Manesar, Gurgaon 11-13th Dec' 2018	Middle management	69
5	Environment Safeguard Management in T& D Projects	Employee Development Centre (EDC), Misa (Assam) 6 & 7th May 2019	Manager and Jr. Engg. level of AEGCL/APDCL	60
6	Environmental and Social Aspects in Project Management	Guwahati, Assam 6 & 7th May 2019	Middle Management including Site Officials	48
7	Environment Safeguard Management in T& D Projects	EDC, Misa (Assam) 23rd May 2019	Technician of MePTCL	15
8	Environment Safeguard Management in T& D Projects	EDC, Misa (Assam) 12 & 13th June 2019	Technician of AEGCL/APDCL	40

Plate 5 : E & S Training Programme

E & S Safeguard Management of NERPSIP, 11-13th Dec' 2018, PAL Manesar (Gurgaon)

E & S Safeguard Management of NERPSIP Guwahati, Assam 6 & 7th May 2019

Training program on "Environment and Social aspects of Transmission and Distribution Projects under NERPSIP"
Date : 4th & 5th September, 2018
Venue : Pragna Bhawan, Agartala

Day/ Date	9.15 9.30 Hrs.	9.30 Hrs. -11.00 Hrs.	TEA BREAK	11.15 Hrs.-12.45 Hrs.	LUNCH BREAK	13.45 Hrs. – 15.15 Hrs.	TEA BREAK	15.30-17.00 Hrs.
Day 1 04.09.18	Inauguration & Keynote Address	Environmental and Social Policy & Procedures Framework (ESPPF) - A Recap **S.K. Kar POWERGRID**		World Bank E & S Safeguard Requirements for T & D Projects **K. Khumujam World Bank**		Ensuring EHS compliance as per Environment Management Plan (EMP) **K. Khumujam World Bank**		Environmental Laws vis-a-vis Transmission Line Projects with special emphasis to Forest and Wildlife Clearance process **Suvendu Kar POWERGRID**
Day 2 05.09.18		Forest & Bio-diversity issues in Developmental Projects and their Management **Dr. Sabyasachi Dasgupta, Tripura University**		Forest & Bio-diversity issues in Developmental Projects and their Management **Dr. Sabyasachi Dasgupta, Tripura University**		RoW Compensation and Diminution of Land Value due to placing of Transmission Line/Tower **R. Ranjan POWERGRID**		Discussion & Feedback

Training Modules

TRAINING PROGRAMME ON ENVIRONMENT & SOCIAL SAFEGUARD MANAGEMENT OF NERPSIP
Venue: POWERGRID Academy of Leadership (PAL), Manesar, Gurugram
Date: 11th -13th December, 2018

DATE/ TIME	9.30-9.45	9.45 -11.30	TEA BREAK	11.45 -13.00	LUNCH BREAK	14.00 - 1530	TEA BREAK	15.45 - 17.00
Day-1	Registration	Program Inauguration/ Light of Lamp and Inaugural Address by Chief Guest *Sh. H. S. Sohal, IFS PCCF & CVO, EIL*		WB Policies vis-a-vis E & S Management in Transmission Projects *Sh. G. Joshi Sr. Env. Specialist, World Bank*		Global Best practices in managing E & S issuses in T & D Projects & Case Study *Sh. K. Khumujam Env. Consultant World Bank*		Gender Issues and Policy Framework of WB *Ms. Sangeeta Kumari Sr. Soc. Specialist & Gender Expert, WB*
Day-2	10.00 -11.30			11.45 -13.00		14.00 - 1530		15.45 - 17.00
	Engaging with Indigenous People (Tribal) & aaddressing Gender Issues with special reference to NER States *Sh. R. Swarankar, Former Sr. Social Specialist ADB*			Environmental laws of India vis-à-vis Forest & Wildlife Clearance *Sh. S.S.Singh General Manager (ESM)*		Engineering/Design Measures to meet safeguard e.g. - Slope stabilization including bio-engg measures - Bird Guards - Innovative Towers - Wildlife/Elephant protection *Sh. Vinay General Manager (Engg.)*		RoW Compensation and Diminution of Land Value due to placing of Transmission Line/Tower *Sh. R. Ranjan Manager (ESM)*
Day-3	10.00 -11.00			11.15-12.30		13.30- 14.30		
	Environmental and Social Policy & Procedures Framework (ESPPF) - An Overview *Sh. S.K. Kar Manager (ESM)*			EMP Implementation, Monitoring & Reporting Frameworks as per WB requirements e.g. Preparation of E & S Safeguard Documents e.g. IEAR/ FEAR/ CPTD Report *Sh. S.K. Kar Manager (ESM)*		Panel Discussion, Valedictory & feedback		

3.1.6 Non-compliance notices issued to contractors/subcontractors

Contractors/subcontractors play a significant role in ensuring compliance with safety and environment provisions applicable to project, considering their role in actual implementation of the project activities at ground level. Additionally, most of the workforce assigned at sites are also directly under the control of contractors/subcontractors. In view of this, they have also been made accountable to compliance with safety and environment provisions by incorporating the project EMP and other contract clauses specifically aiming at safeguard compliance including safety as part of the contract documents.

POWERGRID's site officials ensure that these contract clauses are always complied by the site contractors/ subcontractors. Any incidence of deviation/non-compliance of the applicable contract conditions result in issuance of notice/letter to concerned contractor/ subcontractor for necessary compliance and further improvement. Besides, POWERGRID Regional Safety, Shillong conducts periodic safety check/audit in all active sites and strict compliance of observations made during audit is ensured from respective contractor/sub-contractor. Sample copy of such notice/memo issued and corresponding compliance submitted by the respective contractor/ subcontractor is placed as **Appendix-2.** It may be noted that most of these notices/memoes are related to inadequate worker facilities like labor camp, toilet, drinking water etc., non-availability/use of PPEs, compliance to safety audits, slow progress of EMP/other protection measures like boundary/ retaining/ revetment wall, drainage etc, deployment of designated safety officer and lapses in renewal of insurance under workmen compensation policies. However, repeated violations may result in penalties, termination of contractor and debarment from future association with POWERGRID. It is pertinent to mention that penalties have already been imposed in total 2 cases (one each in Assam & Mizoram) against non-compliance of EHS conditions by Contractors (Copy of sample letter enclosed as **Appendix- 2a**). Details of state-wise memo/notice issued related to compliance of health, safety and environment measure till reporting period is given in **Table- 6.**

Table-6: State wise nos. memo/notice/penalties issued to contractors/ subcontractors related to health, safety and environment measures

State	Total Nos. Obs./ Notice issued till date		Total Obs./Notice issued during reporting period		Total Penalties, if any
	Regional Safety	Site Officials	Regional Safety	Site Officials	
Assam	15	19	1	-	1
Meghalaya	7	19	1	4	Nil
Tripura	4	29	-	3	Nil
Manipur	10	20	-	-	Nil
Nagaland	2	33	0	2	Nil
Mizoram	1	32	-	5	1

SECTION-4: SOCIAL SAFEGUARD

4.1 Social Compliance

4.1.1 Substation Land:

The land requirement for construction of substation generally varies from 0.3 acres (for 33 kV) to 10 acres (220 kV) depending upon voltage levels and no. of bays. As per provisions in ESPPF, land for substation can be secured through adoption of following three methods;

i) Purchase of land on willing buyer & Willing Seller basis on negotiated rate;
ii) Voluntary Donation; and
iii) Involuntary Acquisition.

Moreover, all land donations and direct purchases will be subject to a review/ approval by a broad based committee comprising representatives of different sections including those from the IA and State Utilities. It may be noted that in the instant case land for all the proposed substations are secured either through purchase on willing-seller willing- buyer basis or already in possession of State Utilities. It may be noted that no land is secured through Involuntary Acquisition and no social issues such as physical displacement; R & R are envisaged in the instant project. Wherever required, consent from ADC/VDC is also obtained. However, due to non-finalization of earlier identified land and technical constraints location of some substations land have been changed from that envisaged in IEARs (for details refer **Appendix-3**). Details of land secured for transmission and distribution substations (220/132/33kV or 33/11kV) including area, number of owners, compensation thereof are provided in **Table-7**.

Table-7: Details of Land Secured for proposed substations

Sl. No	Name of Substation	Area (acres)	Type of Land (Govt./ Pvt.)	No. of Land Owner	Total Cost of Land (Rs Million)	Method of Securing Land/ Remarks, if any
ASSAM						
1	220/132 kV Behiating	7.31	AEGCL Existing Land	N.A	N.A	N.A
2	132/33 kV GMC	0.83				
3	132/33 kV Silapathar	7.27				
4	132/33 kV Paltanbazar	0.63				
5	132/33 kV Sarupathar	7.27				
6	220/132 kV Amingaon	8.0				
7	132/33kV Chapakhowa	7.31	Pvt.	2	25.519	Direct Purchase through Willing Buyer Willing Seller basis on negotiated rate
8	132/33 kV Hazo	6.25	Pvt.	1	28.479	
9	132/33 kV Tangla	8.26	Pvt.	12	42.600	
10	132/33 kV Tezpur New	7.27	Pvt.	3	14.080	
11	132/33 kV Teok	7.27	Pvt.	2	52.979	
12	33/11 kV Harsingha	0.74	APDCL Land	N.A	N.A	N.A
13	33/11 kV Hathimurah-2	0.96				
14	33/11 kV Mailo	1.9				
15	33/11 kV GS Road (GIS)	0.41				
16	33/11 kV GMC-2	0.83				

Sl. No	Name of Substation	Area (acres)	Type of Land (Govt./ Pvt.)	No. of Land Owner	Total Cost of Land (Rs Million)	Method of Securing Land/ Remarks, if any
17	33/11 kV Tarun Nagar	1.03	Govt.	N.A.	****	
18	33/11 kV Arya College	0.13	Govt.	N.A.	0.969	
19	33/11 kV Chabipool	0.36	Govt.	N.A.	6.600	
20	33/11 kV Romai	0.66	Pvt.		0.024/yr	Land on long term lease of 20 years
21	33/11 kV Bogibil	0.66			0.024/yr	
22	33/11 kV Dibrugarh Electrical SD-3	0.66		N.A.	9.355	Direct Purchase on negotiated rate
23	33/11 kV Silapathar II	0.66		1	1.018	
24	33/11 kV Sesa	0.66		1	3.785	
25	33/11 kV Ramdiya	0.50		2	1.580	
26	33/11kV D'doma- hazo	0.50		1	2.399	
27	33/11 kV LGM hospital	0.33		1	1.950	
MANIPUR						
1	132/33 kV Gamphajol	2.96	Pvt.	1	2.790	Direct Purchase on negotiated rate
2	132/33 kV Tamenglong	4.44		1	1.900	
3	33/11 kV Takyel	0.59	Govt.	N.A.	****	Alternate land finalized but yet to be handed over to POWERGRID
4	33/11 kV Lamphel	0.37	Govt.	N.A.	****	
5	33/11 kV Top Khongnankhong	1.97	Govt.	N.A.	****	
6	33/11 kV Porompat	1.97	Govt.	N.A.	0.197	
3	33/11 kV Andro	0.50	Pvt.	1	0.335	Direct Purchase on negotiated rate
5	33/11 kV Hiyangthang	0.73	Pvt.	1	4.424	
8	33/11kV Kaithelmanbi	0.74	Pvt.	1	0.697	
9	33/11 kV Kwata	0.31	Pvt.	1	1.008	
10	33/11 kV Leimapokam	0.63	Pvt.	1	0.955	
12	33/11 kV Thangal	0.612	Pvt.	1	0.522	
13	33/11 kV Sanjenbam	0.62	Pvt.	3	1.029	
14	33/11 kV Tuliaphai	0.494	Pvt.	1	0.465	
15	33/11 kV Pishum (GIS)	0.249	Govt.	N.A.	****	
MEGHALAYA						
1	220/132kV Mawngap	10.77	MePTCL Land	N.A	N.A	N.A
2	220/132kV N. Shillong	6.214	Pvt.	2	30.148	Direct Purchase on negotiated rate
3	132/33 kV Mynkre	16.40		1	22.003	
4	132/33 kV Phulbari	12.5		1	32.877	
5	33/11 kV Mynkre	0.49		1	1.133	
6	33/11 kV Rymbai	1.26		1	0.981	
7	33/11 kV Lumshnong	0.36		1	1.248	

Sl. No	Name of Substation	Area (acres)	Type of Land (Govt./ Pvt.)	No. of Land Owner	Total Cost of Land (Rs Million)	Method of Securing Land/ Remarks, if any
8	33/11 kV Latyrke	0.34		1	1.689	
9	33/11 kV Rajb'Bhaitbari	0.66		1	0.244	
10	33/11 kV Chibinang	1.65		1	0.612	
11	33/11 kV Raksambre	0.66		1	0.492	
12	33/11 kV Mawpat	0.30		1	5.993	
13	33/11 kV New Shillong	1.0		Community land	3.496	
14	33/11 kV Maw'kneng	0.61		1	0.220	
15	33/11 kV Mawkynrew	1.18		1	1.600	
TRIPURA						
1	132/33kV Rabin'nagar	2.5	TSECL Land	NA	NA	NA
2	132/33 kV Gokulnagar	3.5				
3	132/33 kV Belonia	3.0				
4	132/33 kV Bagafa	3.7				
5	132/33 kV Sabroom	1.64				
6	132/33 kV Mohonpur	4.0				
7	132/33 kV Satchand	2.02				
8	132/33 kV Manu	2.18				
9	132/33 kV Amarpur	3.34	Pvt.	1	5.936	Direct Purchase on negotiated rate
10	33/11 kV Khowai	0.49	TSECL Land	NA	NA	NA
11	33/11 kV Simna	0.59				
12	33/11 kV Barkathal	0.59				
13	33/11 kV Bamutia	0.59				
14	33/11 kV Lembucherra	0.74				
15	33/11kV Champaknagar	0.68				
16	33/11 kV Ranirbazar	0.74				
17	33/11 kV ADC H.Q.	1.18				
18	33/11 kV Chittamara	0.62				
19	33/11 kV Golaghati	0.49				
20	33/11 kV Durganagar	0.40				
21	33/11 kV Maharani	0.89				
22	33/11 kV Nidaya	0.61				
23	33/11 kV Nalchar	0.46				
24	33/11kV Jawhar Nagar	1.97				
25	33/11 kV Chailengta	0.74				
26	33/11 kV Dhumacherra	1.38				
27	33/11 kV 82 Mile	0.74				
28	33/11 kV Tilla Bazar	1.58				
29	33/11 kV Srinagar	1.46				
30	33/11 kV Chechua	0.41				

Sl. No	Name of Substation	Area (acres)	Type of Land (Govt./ Pvt.)	No. of Land Owner	Total Cost of Land (Rs Million)	Method of Securing Land/ Remarks, if any
31	33/11 kV Rupaichari	0.62				
32	33/11 kV Ekinpur	1.03				
33	33/11 kV Gabardi	0.67				
34	33/11 kV Barpathari	0.74				
35	33/11 kV Karbook	0.59				
36	33/11 kV Muhuripur	0.99				
37	33/11 kV Dalak	1.38				
38	33/11 kV Mungiakami	1.15				
39	33/11 kV Durga Chowmohani					
40	33/11 kV Garjee	0.79				
41	33/11 kV Sekerkote	0.70	Govt. Land (Health Dept.)		0.315	
42	33/11 kV Taidu	0.73	Pvt.	1		Land willingly donated by owner
43	33/11 kV Manughat	0.80	Pvt.	1	0.657	
MIZORAM						
1	132/33 kV Lungsen	3.16	PEDM Land	N.A	N.A	N.A
2	132/33 kV W. Phaileng	3.92				
3	132/33 kV Marpara	4.34				
4	South Bungtlang	0.58				
NAGALAND						
1	132/33kV Secretariat Complex Kohima	3.4	DPN Land	N.A	N.A	N.A
2	132/33 kV Longnak	4.7	Pvt.	1	2.700	Direct Purchase on negotiated rate
3	132/33 kV Longleng	8.1	Pvt.	7	0.458	
4	132/33 kV Pfutsero	4.94	Pvt.	1	5.812	
5	132/33 kV Zunheboto	14.64	Pvt.	6	2.781	
6	33/11 kV Longtho	1.04	DPN Land	N.A	N.A	N.A
7	33/11kV Longleng Town	0.52				
8	33/11kV Mokokchung Power House	0.15				
9	33/11kV Mokochung Hospital Area	0.20				
10	33/11kV Zunheboto South Point	0.76				
11	33/11kV Lalmati	0.33				
12	33/11kV Chiephobozou	0.37				
13	33/11kV Tizit	0.15				
14	33/11kV Pfutsero	0.19	Pvt.	1	0.757	Direct Purchase on negotiated rate
15	33/11kV Wokha	0.47	Pvt.	1	3.10	
16	33/11kV Padampukhri	0.74	Pvt.	1	4.536	

4.1.2. CPTD Preparation and Implementation Status

As per existing law, land for tower/pole and right of way is not acquired and agricultural activities are allowed to continue after construction activity. However, the law[3] stipulates that the licensee shall have to pay full compensation to all interested for any damages sustained during the execution of work.

Moreover, land requirements for erecting tower/ poles for transmission/ distribution lines are just minimal. All it requires is to place the foot, four of which warrants an area of 4-6 sq. ft. Thus, the actual impact is restricted to 4 legs of the tower. Further, line alignments are done in such a way so as to avoid settlements and / or structures and hence no relocation of population on account of Transmission Line (TL)/ Distribution Line (DL) is envisaged. Most of the impacts are temporary in nature in terms of loss of standing crops/trees and other damages for which compensation is paid to the affected persons/land owner/ community for all damages including cost of land for tower base and/ or RoW corridor to its land owner without acquiring it. Thus, compensations are made for;

(i) standing crops;
(ii) trees, if any;
(iii) land cost of tower footings and RoW Corridor (if applicable) ;
(iv) other assets like well and
(v) any other damages/ effects.

In order to capture such temporary damages likely to be caused during implementation of projects and payment of compensation thereof, project specific Compensation Plan for Temporary Damages (CPTD) have been prepared and subsequently disclosed after approval by the Bank for implementation. CPTD includes entitlement matrix, detailed procedure along with timeframe for compensation disbursement and responsibility with respect to various process/activities which will be implemented during the project execution. The project wise CPTDs are being prepared matching with completion of detailed survey of TLs/DLs corresponding to scope covered in respective IEARs. The status of CPTD preparation and its disclosure as of now is already presented in **Table- 1.**

4.1.3. Compensation for Tree/crop damages:

Following cardinal principles of avoidance, minimization of State- Specific ESPPF and Bank's Safeguard Policies, State Utilities/ POWERGRID has selected and finalized the routes of transmission line with due consideration of the avoidance or minimization of impacts toward temporary damages on crops/ trees/ structures, if any coming in the Right of Way (RoW) during construction. Similarly, the route of all the 33 kV distribution lines are mostly selected /finalized along the existing roads (PWD roads/Village roads etc.) involving minimum habitated areas and also through agricultural and barren lands wherever possible. Further, regular field visits and public consultations helped in developing the measures towards minimizing negative social impacts, if any.

During project implementation also, due to inherent flexibility in phasing construction activity in lean period or rescheduling the construction activity in cropped area for some period to facilitate crop harvesting, temporary impacts associated with Transmission Lines are further minimized to a great extent. However, if it is unavoidable and is likely to affect project schedule, compensation is given at market rate for standing crops in

[3] *As per the present provision in the Electricity Act, 2003 read with relevant provisions of Indian Telegraph Act, 1885 all the damages without acquisition of subject land accrued to person while placing the tower and line are to be compensated.*

consultation with revenue department and affected person based on assessment of actual damages. The process of tree/crop compensation is depicted in **Figure 1**. In the instant project also all possible measures are taken to avoid damages to crop/trees through taking up the construction activities during lean period or post-harvest season. As per the prevailing norms farming activity is allowed after the construction work is completed. However, compensation for the loss of crops/trees/any structure paid to Affected Persons (APs) for the area of damage to mitigate the impacts probably 3 times i.e. during foundation work, tower erection & stringing as per the prevailing situation. A sample case of compensation process including notice to AP, compensation assessment & payment to affected persons is placed as **Appendix-4** for better understanding. Details of line wise compensation paid for Tree & Crop damages till reporting period is given below in **Table- 8.**

4.1.4 Land Compensation for RoW:

Ministry of Power (MoP), Govt of India issued guidelines for payment of compensation towards damages in regard to Right of Way for transmission lines on October 15, 2015, stipulating payment of 85% of land value for tower base area (between four legs) and compensation towards diminution of land value in the width of Right of Way (RoW) corridor subject to a maximum of 15% of land value. However, these guidelines are subject to adoption by state governments for its implementation in respective states.

Out of six participating states, till date Assam, Meghalaya, Manipur and Mizoram States have already adopted the MoP guidelines. It may be noted that Assam and Manipur have adopted same compensation provisions i.e. land compensation @85% for tower base and 15% towards line corridor vide State Govt. notification dated 10th March 2017 and 28th March 2018 respectively whereas Mizoram Govt. vide its notification dated 01.05.2019 has specified provisions for land compensation @100% for tower base and no compensation for line corridor. Similarly, Govt of Meghalaya vide its notification dated 15.12.20 stipulates compensation land compensation @100% for tower base and @ 15% maximum for corridor area. However, as per provision of said notification tower area shall be measured from edge of one pit to other pit (instead legs of legs) and in case of retaining wall, the measurement are to be taken from outer wall. Besides, the land shall be permanently vest with the Government. In the remaining States, who have not adopted the MoP guidelines till date the existing practice of 100% land cost for tower base are being implemented.

The process of land compensation begins with identification of land owners, verification of land records etc. However, actual process starts only after fixation of land rates by the concerned DC/DM. Accordingly, payment of land compensation is made to the respective land owners to the extent of land area coming under tower/corridor as per the norms in addition to normal crop and tree damages. The status of land compensation paid till reporting period is given in **Table- 8**.

Figure 1: Tree/Crop Compensation Process

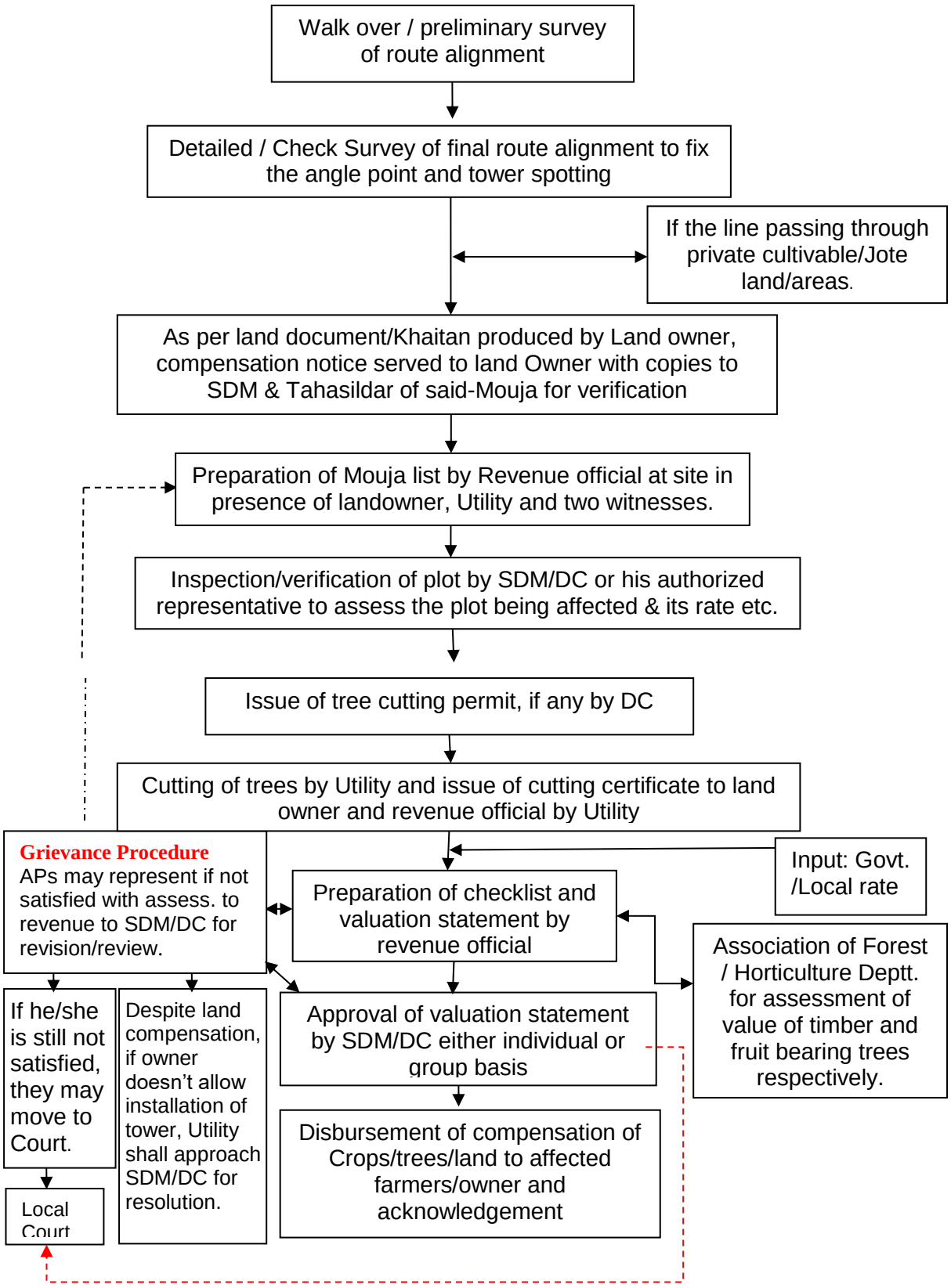


Table - 8: Status of Land, Tree & Crop Compensation

Sl. No.	Name of the Line	Land compensation										Tree/Crop Compensation				No. of Pending cases/non-eligible cases with details thereof (e.g. Govt land/title disputes/ any other reasons)
		Foundation Completed	Total Affected Persons	Compensation already paid to Affected Persons	Compensation for APs under progress	Total Compensation paid for Tower Base	Stringing Completed	Total Affected Persons in RoW Corridor	Compensation already paid to Affected Persons in RoW Corridor	Compensation for APs for RoW Corridor under progress	Total Compensation paid for RoW Corridor	Total Affected Persons	Compensation already paid to APs	Compensation for APs under progress	Total Compensation paid for Tree & Crop damages	
		(No.)	(No.)	(No.)	(No.)	(Rs. Million)	km	(No.)	(No.)	(No.)	(Rs. Lakh)	(No.)	(No.)	(No.)	(Rs. Million	
Assam																
1	220 kV D/c Tinsukia-Behiating	125	113	65	48	1.29	Stringing not started yet					97	97	–	2.62	10 nos. tower location in Govt. land
2	132 kV S/c Dhemaji-Silapathar	67	60	34	26	1.22						Nil	Nil	Nil	Nil	6 nos. tower location in Govt land
3	132 kV S/c Rupai-Chapakhowa	140	82	64	18	0.55						121	121	0	3.83	26 nos. tower location in Govt. land & 9 cases pending for title disputes.
4	33 kV Tezpur- Parowa	Nil	Nil	Nil	Nil	Nil						17	17	-	0.16	
Sub Total Assam		**332**	**255**	**163**	**92**	**3.06**						**235**	**235**	**0**	**6.62**	
Meghalaya																
1	220kVD/c Byrnihat-Mawngap-N.Shillong	248	248*	157*	91*	58.28	Not Started	Compensation @100% for tower base &@ 15% max. for corridor area as per Govt. Meghalaya recent notification 15.12.20 regarding adoption of MoP guidelines				30	30	-	2.64	
2	LILO132kV MLHEP-Khliehriat	88	82*	78*	4*	6.13	25.83					2	1	1	0.05	
3	132 kV D/c Phulbari-Ampati	177	177	177*	0*	15.78	49.89					61	61	0	0.9	
Sub Total Meghalaya		**513**	**507**	**412**	**95**	**80.19**	**75.72**					**93**	**92**	**1**	**3.59**	
Manipur																
1	132 kV D/c Imphal – Nin'khong	105	124	93	31	46.94	21.192	Stringing not started yet				Nil	Nil	Nil	Nil	
2.	132 kV S/c Rengpang-Tamenglong	36	30	-	-	-	-					30	0	24	0	Compensation issue related to dwellers in forest area without any ownership documents.

Sl. No.	Name of the Line	Land compensation										Tree/Crop Compensation				No. of Pending cases/non-eligible cases with details thereof (e.g. Govt land/title disputes/ any other reasons)
		Foundation Completed	Total Affected Persons	Compensation already paid to Affected Persons	Compensation for APs under progress	Total Compensation paid for Tower Base	Stringing Completed	Total Affected Persons in RoW Corridor	Compensation already paid to Affected Persons in RoW Corridor	Compensation for APs for RoW Corridor under progress	Total Compensation paid for RoW Corridor	Total Affected Persons	Compensation already paid to APs	Compensation for APs under progress	Total Compensation paid for Tree & Crop damages	
																Matter taken with Chief Secretary, Manipur
Sub Total Manipur		**141**	**154**	**93**	**31**	**46.94**	**21.192**					**30**	**Nil**	**24**	**Nil**	
Nagaland																
1	132 kV D/c Kohima-New Sec. Complex	32	32	28	4	2.82	Not Applicable as State Govt. has not adopted MoP Guidelines					32	29	3	0.176	
2	LILO 132 kV D/c Kohima-Meluri at Pfutsero	10	11	11	0	1.00						11	11	0	0.884	
3	220 kV S/c N.Kohima-Wokha-M.chung	128	128	82	46	14.41						128	82	46	0.74	
4	LILO132kV S/c M'chung-Mariani at Longnak	5	6	6	0	2.45						5	5	0	0.007	
5	LILO 132kVS/c Kohima-Wokha at N Kohima	29	29	29	0	3.477						29	29	0	3.69	
Sub Total Nagaland		**204**	**206**	**156**	**50**	**24.157**						**205**	**156**	**49**	**5.497**	
Tripura																
1	LILO132kV Ambassa-PKBari	5	5	0	5			Not Applicable as State Govt. has not adopted MoP Guidelines				6	5	1	0.670	
2	132 kV D/c Bagafa-Belonia	17	3	0	3							20	5	15	0.101	
3	132 kV S/c Bagafa-Satchand	11	8	0	8							11	5	3	0.589	
4	132kV Sabroom-Satchand at Sabroom	7	7	1	6	0.011	1.311					20	9	11	0.775	
5	132kV Sabroom-Satchand at Satchand	8	5	1	4	0.010						6	1	4	0.005	
6	132 kV D/c Udaipur-Bagafa	41	21	9	10	0.045						39	20	6	1.962	
7	132 kV D/c R'nagar-Rokhia	22	5	0	4							4	0	4	0	
8	LILO 132kV S/c Sj'nagar-Rokhia at G'nagar	11	14	14	0	1.098						17	17	0	1.908	
9	LILO132kV 79Tilla-Dhalabil	6	5	5	0	0.085						9	9	0	0.091	
10	132 kV D/c Udaipur-Amarpur	38	7	0	7	0						9	2	7	0.024	

Sl. No.	Name of the Line	Land compensation										Tree/Crop Compensation				No. of Pending cases/non-eligible cases with details thereof (e.g. Govt land/title disputes/ any other reasons)
		Foundation Completed	Total Affected Persons	Compensation already paid to Affected Persons	Compensation for APs under progress	Total Compensation paid for Tower Base	Stringing Completed	Total Affected Persons in RoW Corridor	Compensation already paid to Affected Persons in RoW Corridor	Compensation for APs for RoW Corridor under progress	Total Compensation paid for RoW Corridor	Total Affected Persons	Compensation already paid to APs	Compensation for APs under progress	Total Compensation paid for Tree & Crop damages	
11	132 kV Manu-Manu	11	4	4	0	0.328						12	11	1	0.360	
12	132 kV D/c Belonia-Sabroom	5	7	0	7	0						7	1	6	0.085	
Sub Total Tripura		**182**	**91**	**34**	**54**	**1.577**	**1.311**					**160**	**85**	**58**	**6.57**	
Mizoram																
1	132kV S/c West Phaileng-Marpara	12	0	0	0	0	No compensation for line corridor (only 100% for tower base as per State Govt. notification 01.05.2019)					41	26	25	0.89	All tower locations fall under Govt. land
Sub Total Mizoram		**12**	**0**	**0**	**0**	**0**						**41**	**26**	**25**	**0.89**	
Grand Total		**1384**	**1213**	**858**	**322**	**155.93**	**98.223**					**764**	**594**	**157**	**23.167**	

**Data provided in terms of no. of locations instead of nos. of affected persons/owners as most of the land belongs to community land controlled by village council and compensation is paid directly to Village council/Headman account. For example, in case of 220 kV Killing –Mawngap-New Shillong line out of 151 tower locations for which compensations has already been paid, 45 locations falls under private ownership & remaining 106 locations falls under community land under the jurisdiction of village council (appx. 10 village councils involved) for which compensation has been paid to the concerned village council/headman.*

4.1.5 Grievance Redressal Mechanism (GRM)

Grievance Redress Mechanism (GRM) is an important mechanism for addressing/ resolving the concerns and grievances in a transparent and swift manner. Moreover, addressing grievances within stipulated timeframe has also been included as one of the important result indicator agreed under subject loan. Accordingly, Grievance Redress Committees (GRC) have been constituted both at the project/scheme level and at Corporate/HQ level for all Six participating States/Utilities (Copy of notification enclosed as **Annexure-A**).. The site/project level GRCs constituted include members from State Utilities, POWERGRID, Local Administration, Village Panchayat Members, Affected Persons representative and reputed persons from the society and representative from the autonomous districts council in case of tribal districts selected/decided on nomination basis under the chairmanship of project head. This GRC is aimed to provide a trusted way to voice and resolve environment & social concerns of the project, and to address the concerns of the affected person/community in a time bound manner without impacting project implementation.

The Corporate/HQ level GRC have been constituted and notified by all States and are headed by Director Projects/Technical of Utilities including one representative from corporate Environment Social Management Cell conversant with the environment & social issues.

Apart from above, grievance redressal is in built in crop/tree compensation process where affected persons are given a chance to place their grievances after issuance of notice by revenue officials on the basis of assessment of actual damages. Grievances received towards compensation are generally addressed in open forum and in the presence of many witnesses. Process of spot verification and random checking by the district collector/ its authorized representative also provides forum for raising the grievance towards any irregularity/complain. Moreover, State Utility & POWERGRID officials also address to the complaints of affected farmers and the same are forwarded to revenue official for doing the needful, if required

It may also be noted that concerns of public are addressed regularly through public consultation process which started from project planning to construction and will be continued in operation and maintenance also. Besides, many concerns/grievances from affected persons/public both of verbal and written nature have been recorded by Site Offices which are also regularly tracked for early resolution. However, it has been observed that most of them were minor in nature and were resolved instantly and amicably by Site Officials after discussion & deliberation with affected person/ in consultation of revenue/district officials. Details of written & verbal complaints including court cases recorded till reporting period is presented below in **Table-9.**

Table - 9: Details of Grievances/Complaints

SN	Name of the Subproject /State	Loc. No/ Village	Name of complainant	Date of complaints/ Court case	Main Issue of complaints	Status of complaint
A. Court Cases						
No Court Case has been registered so far against any subprojects under NERPSIP						
B. Written Complaints						
1	LILO 132kV Rokhia-Suraj-maninagar at Gokulnagar (Tripura)	AP-13 & 14	Villagers of Gokulnagar	05.06.18	Route diversion at location AP-13 & 14,	**Resolved** on 03.07.18. Modification in route alignment avoiding

SN	Name of the Subproject /State	Loc. No/ Village	Name of complainant	Date of complaints/ Court case	Main Issue of complaints	Status of complaint
					infringing their land intended to be used for construction of houses by marginalized people	such land has been achieved after due diligence to the satisfaction of complainants.
2	220kV New Kohima - Mokokchung via Wokha line (Nagaland)	AP-68 & 70	Mr. Shwehilo Tep	20.05.20	Land compensation for approach road	Matter **resolved** through discussion with Contractor and Land owners on 20.07.20 & 28.10.20 respectively.
3		AP-53, 54 & 83	Mr. Sotilo Tep Mr. Daniel Tep Mr. Hillo Khing	19.06.20		
4	132kV Marpara substation (Mizoram)	Substation Premises	Security Persons	18.06.20	Delay of Salary/ Payment	**Resolved** on 22.06.20. Contracting agency took necessary action and solved the issue.
5	132/33 kV Hazo (Assam)	Substation premises	Villagers of Hazo	25.09.20	Regarding boundary wall of the substation which was claimed to be constructed on the complainant's property	**Resolved** on 6.10.20 through discussion with the land owners along with APDCL team.
C.	**Verbal Complaints**					
1.	132kV S/c West Phaileng-Marpara (Mizoram)	AP-168	Sh. Bosisto Moni	13.12.18	Compensation for crop/other damages during construction	**Resolved** on 14.12.18**.** Compensation framework explained to complainant to his satisfaction.
2	33/11 kV Botsa (Ext.) substation (Nagaland)	Village Botsa	Dr. Ropfu Dolie (PHC)	01.03.18	Regarding Road Block due to construction materials	**Resolved** on 01.03.18. Within 3 hours to complainant satisfaction.
3.	33/11 kV Sechu-Zubza substation (Nagaland)	Village Zubza	Nearest Church authorities	04.06.18	Power cut due to substation construction work	**Resolved** through discussion on 04.06.18.

SN	Name of the Subproject /State	Loc. No/ Village	Name of complainant	Date of complaints/ Court case	Main Issue of complaints	Status of complaint
4.	33/11 kV Chiephobozou substation (Nagaland)	Village Chiephobozou	Visakuolie Kiewhuo (Villager)	06.06.18	Demand for road	Though matter is not under purview of POWERGRID, discussion is being held to find an amicable solution.
5.	33/11 kV Padampukhri substation (Nagaland)	Village Padampukhri	Nearby Residents	18.07.18	Unpleasant sound due to construction	**Resolved** on 29.07.18. Noise reduction measures implemented & no further complaint received.
6.	33/11 kV Botsa (Ext.) (Nagaland**)**	Village Botsa	Villagers	28.12.18	Fencing of the substation boundary	**Resolved.** Fencing work completed in July'19.
7.	132/33 kV Lunglei (Ext.) substation (Mizoram)	Khawiva	Officials of Khawiva Power Project	06.03.19	Storage of soli near to Nala passes beside substation	**Resolved** on 13.03.19.SDO PMD-I, Khawiva suggested alternative storage/ disposal site for excavated soil.
8	132 kV D/c Kohima-New Sec. Complex Line (Nagaland)	Village Zhadima	Neizolie Loueii (land owner)	13.01.19	Compensation related issue (for trees & Land)	Issue **resolved** on 18.01.19 (both cases) through meeting/ discussion. Compensation framework explained to complainant to their satisfaction.
9			Concerned land owners of Loc.No.01-28 of Zhadima village	06.06.19		
10			Land Owners at AP- 19-20	08.11.19	Compensation towards Approach road	Matter **resolved** on 11.11.19 through discussion with Contractor and Land owners.
11	220 kV D/C Killing-Mawphlang-New Shillong Transmission line (Meghalaya)	Mawphlang	AP 1-3	10.08.19	Realignment of line route	**Resolved**. Meeting held under Joint Secretary Power on 4.10.19. Minor realignment along with making 3 nos. tower multi-circuit has been proposed.
12		Nongthymai	Land Owners	18.02.20	Land Owner disagreed to give NOC for construction works due to	DC, Ri-Bhoi has been intimated & matter has already taken up with the concerned forest & horticulture dept. for furnishing the latest rates of Trees & Crops.

SN	Name of the Subproject /State	Loc. No/ Village	Name of complainants	Date of complaints/ Court case	Main Issue of complaints	Status of complaint
13	132kV Kohima – Wokha (Nagaland)	Phezha AP-01	Medosao Semou	21.10.19	RoW issue (demand for higher compensation)	Discussion/ negotiation under progress in consultation with local authority.
14	220kV New Kohima-Mokokchung via Wokha (Nagaland)	Ehunny, AP-113 to 121	Village council of Ehunnu	08.11.19	Compensation towards Approach road	Matter **resolved** on 22.12.19 through discussion with Contractor and Land owners.
15	220kV New Kohima - Mokokchung via Wokha line (Nagaland)	AP-116	School authorities of Phugoboto	25.03.20	Construction of tower nearby School area	**Resolved** on 22.04.20. Modification in route alignment avoiding such land has been achieved after due diligence to the satisfaction of complainants.
16	132kV D/c West Phaileng-Marpara (Mizoram)	Pukzing Vengthar	Local Task Force	06.06.20	Not allowed to enter the village as part Covid-19 preventive measures by the task force	**Resolved** on 08.06.20. Matter informed to DC, Mami & SDO/West Phaileng and relevant permission obtained.
17	33 kV line Lungsen–Lungsen (Mizoram)	Lungsen	Local Task Force	09.06.20	Not allowed to enter Outside Labourers in the village as part Covid-19 preventive measures	**Resolved** on 10.06.20. Matter discussed with local VCP, Lungsen relevant permission obtained
18	LILO of 132kV Kohima-Wokha (Nagaland)	AP-03	Khro clan community	14.11.20	Objection due to many existing power lines in that particular area.	Discussion/ negotiation under progress in consultation with local authority.
19	132kV S/c West Phaileng-Marpara (Mizoram)	AP-139	Sh. Lalrintluanga	28.10.20	Land owner demanding to shift tower location from his land.	Issue **resolved** on 08.12.20. Joint site inspection carried out on 03.12.20, convinced the owner and notice issued.

4.1.6 Details of Stakeholder Consultation

Public consultation/ information dissemination is a continuous process starting with the project conception and continues during project implementation and even during O&M stage. As stated in ESPPF, public consultation using different technique like Public Meeting, Small Group Meeting, informal Meeting are being carried out during different activities of project cycle. In the instant project, many consultations with stakeholders and utility were organized during development of State- Specific ESPPFs, environment assessment & preparation of IEAR and land securing process. Both formal and informal consultations meeting were organized which is also integral part of IEARs. During survey also, Utilities & POWERGRID site officials meet people and inform them about the routing of transmission and distribution lines.

During the construction every individual, on whose land tower is erected and people affected by RoW, are being consulted. Further, in case of Autonomous District Council areas consultations are being held with the respective village councils for identification of the landowner and obtaining their consent for the RoW (refer **Plate- 8**). Besides, as per agreed framework, gender issues have also been addressed to the extent possible during such consultation process. Sample photographs depicting safeguard consultation at different stages of project cycle is placed as **Plate-6**. The state-wise details of public participation including percentage of females participated in the safeguard consultation meetings till December '20 is presented in **Table-10**.

Table -10: Details of Public Consultation & Gender Participation

Consultation Period	Person Attended			State-wise Details
	Total	Male	Female	
Till June 16	1548	1160	388	Assam: 169 (22 female), Manipur: 273 (86 female), Tripura: 461(178 female), Meghalaya: 259 (28 female), Nagaland: 182(27 female) & Mizoram: 204 (47 female)
July- Dec' 16	390	299	91	Assam: 88 (12 female), Manipur : 68 (30 female), Tripura: 80 (25 female), Meghalaya: 50 (5 female), Nagaland: 52 (15 female) & Mizoram: 52 (4 female)
Jan'-Jun'17	203	143	60	Assam: 88(37 female), Manipur: 59 (8 female), Meghalaya: 7 (4 female) & Mizoram: 49 (11 female)
July- Dec' 17	376	275	101	Assam: 281 (61 female), Tripura : 77 (38 female) & Nagaland: 18 (2 female)
Jan-June' 18	226	154	72	Manipur: 152 (63 female), Nagaland: 74 (9 female)
July- Dec' 18	272	244	28	Tripura : 50 (11 female) Manipur: 27 (12 female), Nagaland: 195 (5 female)
Jan- June'19	256	227	29	Manipur:58(14 female), Nagaland: 98 (1 female), Tripura 60(10 female), Meghalaya 40 (4 female)
July- Dec.'19	335	296	39	Tripura : 27 (09 female), Meghalaya 44 (6 female), Nagaland: 198 (19 female), Mizoram: 66 (5 female)
Jan-Jun.'20	175	127	48	Assam: 25 (6 female), Tripura: 30(9 female), Meghalaya: 44 (13 female), Nagaland: 76 (20 female)
July- Dec.'20	130	95	35	Meghalaya: 44 (12 female), Nagaland: 86 (23 female)
Total	**3939**	**3048**	**891 = 22.62%**	

Plate 6: Stakeholders Consultation during reporting period.

Meeting held at Pongo village regarding NOC for construction of 132kV Tuensang to Longleng Line on 22.09.20 (Nagaland)

Consultation with Land owner regarding rerouting of location (TW-05) in 220kV New Kohima -Mokokchung line on 23.08.20 (Nagaland)

Meeting with Villagers for construction of 33 kV Line (Yurembam-Noney to Keithelmanbi (Manipur)

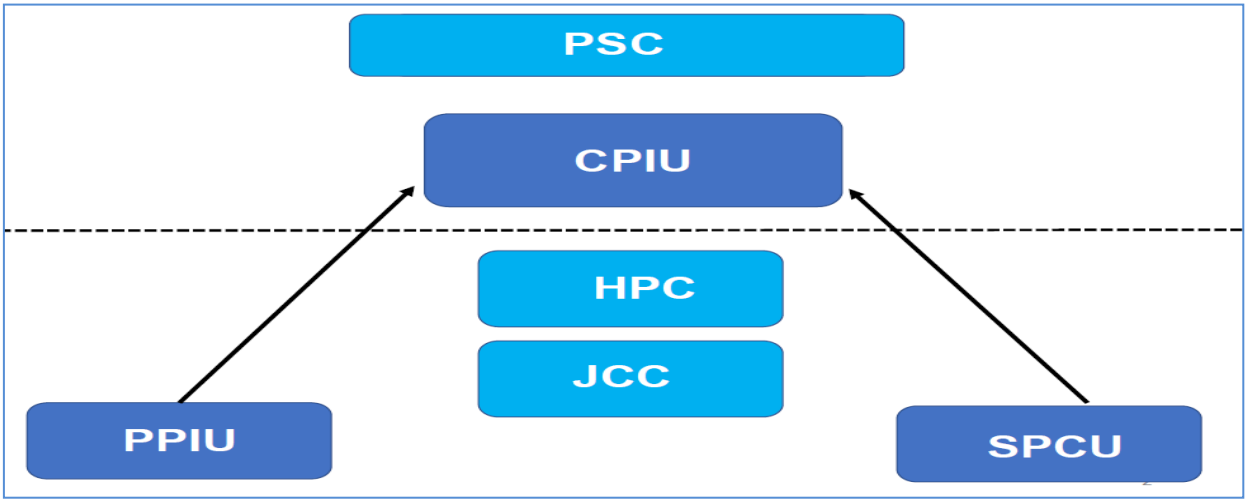
Meeting with landowners/ affected persons on 02.05.20 for 33 kV Manu-Manu line (Loc. 10/0) (Tripura)

Meeting with land owner and village Headmen on 25.11.20 under Nongpoh section for 220 kV D/c Byrnihat-Mawngap-New Shillong TL (Meghalaya)

Meeting with locals and village Headmen on 18.11.20 under New Shillong section for 220 kV D/c Byrnihat-Mawngap-New Shillong TL (Meghalaya)

SECTION-5: ANY OTHER ISSUES (MANAGEMENT & MONITORING

Environmental monitoring is a continuous process throughout the Project life cycle starting from site selection to construction and maintenance state. As Implementing Agency (IA) POWERGRID endeavors to implement the project in close coordination with the respective state power utilities and departments. POWERGRID has been implementing the project based on the Implementation/Participation agreements that were signed separately between POWERGRID and the Power utilities. However, the ownership of the assets shall be with respective State government or State Utilities, which upon progressive commissioning shall be handed over to them for taking care of Operation and Maintenance of assets. The arrangement for monitoring and reviewing of project from the perspective of environment and social management forms part of overall arrangements for project management and implementation environment. Following implementation arrangement has been proposed at different levels for smooth implementation of this project; Flow chart showing institutional arrangement for ESPP implementation & monitoring is placed below.



The Field In-Charge reviews the progress on daily basis and periodic review by higher management including review by Heads of SPCU and CPIU undertaken wherein apart from construction issues the environmental aspects of the projects are discussed and remedial measures taken wherever required. Besides, Periodic Contractor's Review Meeting (CRM) are being held by officials of PIU with Contractors at field offices, State Head Quarters (PIU location) and with CPIU at Guwahati for better co-ordination and resolution any pending issues. The World Bank mission team also visits various sites every six months to review the progress status including ground level implementation of safeguard measures. Any observation/agreed action plan suggested by the Bank in the Aide Memoire is religiously complied in time bound manner. Additionally, review meeting among MoP, GoI, The Bank, State Governments., Utility and IA being held periodically to maintain oversight at the top level and also to debottleneck issues that require intervention at GoI/ State Government level. Due to such strong institutional support structure coupled with monitoring mechanism in place, no major non-compliance was observed/reported during the implementation of projects till date.

SECTION-6: CONCLUSION

As it is vivid from the preceding sections that though the project has been classified as Category “A” in view of rich bio-diversity of North Eastern states of the country, through concerted efforts right from project planning stage itself major and significant environmental impacts have been avoided. Through careful route selection Forest involvement in the project has been limited to 426.688 ha or approx. 153.06 km, (which is just 4.42% of total line length of 3,460km of proposed TL/DL), including 105.32 Ha of protected area i.e. Trishna Wildlife Sanctuary & Buffer zone of Dampa Tiger Reserve. Moreover, with the condition of raising the compensatory afforestation on double the area and measures like extended tower to reduce tree felling will further mitigate the likely loss of vegetation. Similarly, with the implementation of measures suggested in Biodiversity Impact Assessment Study for the Wildlife Area involved, the impacts on Dampa Wildlife Sanctuary will be negligible. However, some environmental impacts are anticipated, mostly during construction period which are being mitigated successfully by implementing the EMP and site-specific measures as discussed in the previous sections. POWERGRID approach of project implementation involving selection of optimum route before design stage, regular consultation with local population, obtaining all applicable regulatory clearances/ permissions, proper implementation of EMP and monitoring mechanism throughout project life cycle supported by strong institutional arrangement has considerably nullified the adverse environmental impacts arising out of project activities.

Similarly, it is worth mentioning that all efforts have been made to minimize the social impacts associated with the project. The endeavor to minimize the social impacts started right from the selection of land for the proposed substations. Out of total 254.529 acres of land required for the proposed 129 substations, 120.619 acres of land is encroachment free Government land having no Project Affected persons (PAPs) and was handover to POWERGRID by State Utilities without creating any adverse social issues. The balance 133.91 acres of private land required for 44 nos. of substations was secured either through donation or was purchased through willing buyer- willing seller basis on negotiated rate without invoking land acquisition act, thus, there are no Project Affected Persons even for this private land. However, total 69 persons willingly sell their land measuring 133.91 acres of private land without any undue pressure. Further, steps like constitution of a well-defined Grievance Redress Mechanism (GRM), regular consultation with local population, members of ADC/VDC (wherever applicable) and obtaining the prior consent of Affected Persons before starting the work not only ensured smooth execution of the project but also greatly reduced social risks associated with the project and improved the image of the organization.

In view of aforesaid, it may be noted that all possible measures have already been taken not only towards mitigation of adverse environmental and social impacts leftover after exhausting the options of avoidance and minimization but also to safeguard the interest of PAPs. Moreover, remaining State governments are also persuaded for enhancing the compensation as per MoP guidelines on RoW compensation. Besides, direct or indirect benefits of the subprojects like the employment opportunity, improved & uninterrupted power supply, improvement in infrastructure facilities, improved commercial/economic activities will not only ensure the overall development of the project area but will also outweigh any leftover negative impacts (though unlikely) of the project.

ENCLOSURES

Appendix -1: Compliance of Environment Management Plan (EMP)

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
Pre-construction								
1	Location of overhead line towers/ poles/ underground distribution lines & alignment & design	Exposure to safety related risks	Setback of dwellings to overhead line route designed in accordance with permitted level of power frequency and the regulation of supervision at sites.	Tower location and overhead /underground alignment selection with respect to nearest dwellings	Setback distances to nearest houses – once	Implementing Agency (IA)/ Survey Agency *(Sec-III. 3.6, 3.8 & 4.1 of Contract Agreement)*	Part of overhead lines tower/ poles/ laying of underground cable sitting survey and detailed alignment survey and design	Complied/Being Complied. Route alignment criterion is part of survey contract wherein all statutory Electrical clearance as stipulated under CEA's regulations, 2010 (Measures related to safety & electric supply) is considered/ensured.
2	Equipment specifications and design parameters	Release of chemicals and gases in receptors (air, water, land)	PCBs not used in substation transformers or other project facilities or equipment.	Transformer design	Exclusion of PCBs in transformers stated in tender specification - once	IA	Part of tender specifications for the equipment	Complied. As per technical specification of transformer, PCB is not used or non-detectable level (i.e. less than 2mg/kg) as per IEC 61619 or ASTM D4059
			Processes, equipment and systems not to use chlorofluorocarbons (CFCs), including halon, and their use, if any, in existing processes and systems should be phased out and to be disposed of in a manner consistent with the requirements of the Government	Process, equipment and system design	Exclusion of CFCs stated in tender specification – once	IA	Part of tender specifications for the equipment	Complied. CFC free equipments are being procured.
					Phase out schedule to be prepared in case still in use – once		Part of equipment and process design	Not Applicable

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
3	Transmission /Distribution line design	Exposure to electro-magnetic interference	Line design to comply with the limits of electromagnetic interference from overhead power lines	Electromagnetic field strength for proposed line design	Line design compliance with relevant standards – once	IA	Part of design parameters	Complied. Designed as per guidelines of ICNIRP and ACGIH and checked by CPRI & M/s PTI, USA
4	Substation location and design	Exposure to noise	Design of plant enclosures to comply with noise regulations.	Expected noise emissions based on substation design	Compliance with regulations - once	IA	Part of detailed siting survey and design	Complied. Transformers with maximum noise emitting level of 75 dB and DG set with proper enclosures is specified in tender specification/ design criteria
		Social inequities	Careful selection of site to avoid encroachment of socially, culturally and archaeological sensitive areas (i. g. sacred groves, graveyard, religious worship place, monuments etc.)	Selection of substation location (distance to sensitive area).	Consultation with local authorities/ autonomous councils -once		Part of detailed siting survey and design	Complied/Being Complied. Part of substation site finalization/route alignment criteria
5	Location of overhead line towers/poles/ laying of underground distribution line & alignment and design	Impact on water bodies	Avoidance of such water bodies to the extent possible. Avoidance of placement of tower inside water bodies to the extent of possible	Tower/pole location and overhead/ underground line alignment selection (distance to water bodies)	Consultation with local authorities– once	IA/ Survey Agency *(Sec-II. 2.2 i of Contract agreement)*	Part of tower/pole sitting survey and detailed underground /overhead line alignment survey and design	All due care taken during survey to avoid placing of tower/pole on water bodies. However, in spite of best efforts, placing of some towers (approx. 11 nos.) on rivers couldn't be avoided in case of 132kV Rupai- Chapakhowa and Rangia-Amingaon line due to locational constraints/ wide river crossing span.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
		Social inequities	Careful route selection to avoid existing settlements and sensitive locations	Tower/pole location and overhead/ underground line alignment selection (distance to nearest dwellings or social institutions)	Consultation with local authorities/ autonomous councils and land owners – once	IA/ Survey Agency *(Sec-II. 2.2 i of Contract agreement)*	Part of detailed tower/pole sitting and overhead/ underground alignment survey and design	All socially sensitive areas including habitated areas avoided for TLs (refer **Plate – 7**). However, distribution lines due to their functional mandate are bound to pass through habited areas.
			Minimise impact on agricultural land	Tower location and overhead/ underground line alignment selection (distance to agricultural land)	Consultation with local auth./ autonomous councils and land owners – once			Though major sections of proposed lines are routed through agricultural field in order to avoid impact on environmentally/socially sensitive areas, every efforts including consultation with local authorities/ autonomous councils and land owners (refer **Plate – 8**) undertaken to minimize impacts on agricultural land/produce to the extent possible.
			Careful selection of site and route alignment to avoid encroachment of socially, culturally and archaeological sensitive areas (i. g. sacred groves, graveyard, religious worship place, monuments etc.)	Tower/pole location and overhead/ underground line alignment selection (distance to sensitive area)	Consultation with local authorities/ autonomous councils -once			As explained in the preceding section, all such areas avoided during survey stage itself following the cardinal principle of ESPPF.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
6	Involuntary acquisition or permanent land acquisition for substation.	Social inequities	Compensation and R&R measures as per provision of RFCTLARRA,2013[4]	Compensation and monetary R&R measures implementation before possession.	As per provisions of Act.	State Govt.	Prior to award/start of substation construction.	No involuntary acquisition of land involved in instant case. Please refer **Table-7** for details securing of substations land.
7	Line through protected area/ precious ecological area	Loss of precious ecological values/ damage to precious species	Avoid siting into such areas by careful site and alignment selection (National Parks, Wildlife Sanctuary, Biosphere Reserves/ Biodiversity Hotspots)	Tower/pole location & overhead/ underground line alignment selection (distance to nearest designated eco protected / sensitive areas)	Consultation with local forest authorities - once	IA/ Survey Agency *(Sec-II. 2.4, 2.1 (i) of Contract agreement)*	Part of detailed siting and alignment survey /design	Through careful route selection involvement of forest/protected areas avoided to the maximum extent. However, given the magnitude of project and peculiarity of terrain, minimum involvement of forest/ protected area couldn't be avoided as per details provided in **Table- 2.**
			Minimize the need by using existing RoW wherever possible	Tower/pole location and overhead/ underground line alignment selection	Consultation with local authorities and design engineers - once		Part of detailed sitting and alignment survey /design	During survey, every efforts made to utilize already available corridor wherever, possible.
8	Line through identified Elephant corridor / Migratory bird	Damage to the Wildlife/ Birds and also to line	Study of earmarked elephant corridors to avoid such corridors, Adequate ground clearance, Fault clearing by Circuit Breaker, Barbed wire wrapping on towers, reduced spans etc., if applicable	Tower/pole location and overhead/ underground line alignment selection. Minimum/ maximum ground clearance	Consultation with local forest authorities – once. Monitoring – quarterly basis	IA/ Survey Agency *(Sec-II. 2.4, 2.1 (i) of Contract agreement)*	Part of detailed sitting and alignment survey /design and Operation	Through careful route selection, all known Elephant corridors have been avoided completely in consultation with forest authorities. However, during survey forest authority informed that Elephant sightings were reported in some section (AP60-AP75) of 132 kV Phulbari-Ampati line & 220kV Byrnihat-Mawngap-

[4] In the instant subproject no fresh land acquisition (permanent) is involved hence this clause shall not be applicable.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
								New Shillong (total 8 tower locations from AP 07/0 to AP 13/0) and therefore, provisions of tower extensions of 6m /9 m have been made so as to ensure unhindered passage of elephants.
			Avoidance of established/ identified migration path (Birds & Bats). Provision of flight diverter/reflectors, Bird guard, elevated perches, insulating jumper loops, obstructive perch deterrents, raptor hoods etc.[5], if applicable	Tower/pole location and overhead/ underground line alignment selection	Consultation with local forest authorities - once		Part of detailed sitting and alignment survey /design and Operation	All such identified/ established birds migratory path have been avoided completely through adopting careful route selection technique. However, as part compliance to forest/wildlife clearance, bird diverters shall be installed in lines wherever such condition is imposed in forest/wildlife clearance by MoEFCC.
9	Line through forestland	Deforestation and loss of biodiversity, edge effect	Avoid siting of line by careful site and alignment selection Minimise the need by using existing towers, tall towers and RoW, wherever possible	Tower/pole location and overhead/ underground line alignment selection (distance to nearest protected or reserved forest)	Consultation with local authorities – once Consultation with local authorities and design engineers – once	IA/ Survey Agency *(Sec-II. 2.4, 2.1 (i) of Contract agreement)*	Part of detailed sitting and alignment survey/design	As explained above, proposed line routes of TL/DL have been finalised by taking consideration of minimum impact on forest area after consultation with forest authorities and/or village councils in case of private /community forest. However, applicable forest clearance under Forest (Conservation)

[5] As per International/National best practices and in consultation with concerned forest/wildlife Authority

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			Measures to avoid invasion of alien species	Intrusion of invasive species	Consultation with local forest authorities - once			Act, 1980 have been obtained/ are presently under various stages of approval process at State Govt/ RMoEFCC level (for details refer **Table-2**). As far as invasion of alien species is concern, it is noteworthy that actual damage/tree felling is minuscule and limited 3m strip below each conductor and not in whole RoW. Hence, chance of invasion of alien species is not envisaged. Moreover, compensatory afforestation scheme is prepared by forest authority taking local species into consideration which is also integral part of forest proposal. The afforestation activity in forest land is the sole responsibility of forest deptt and user agency has no role in selection of species /afforestation activity in forest except depositing compensatory cost levied by forest deptt. For details on forest clearance please visit: http://forestsclearance.nic.in/Online_Status.aspx
			Obtain statutory clearances from the Government	Statutory approvals from Government	Compliance with regulations – once for each subproject			
			Consultation with autonomous councils wherever required	Permission/ NOC from autonomous councils	Consultation with autonomous councils – once during tower placement			

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
10	Lines through farmland	Loss of agricultural production/ change in cropping pattern	Use existing tower or footings wherever possible	Tower/pole location and overhead/ underground line alignment selection	Consultation with local authorities and design engineers – once	IA/ Survey Agency *(Sec-II. 2.4, 2.1 (i) of Contract agreement)*	Part of detailed alignment survey and design	While passing through agricultural land construction activities are scheduled mostly during lean period so that damage to standing crop is avoided. However, full compensation as per assessment of revenue authorities is paid to land owner/farmer in case of inevitable damages.
			Avoid sitting new towers on farmland wherever feasible	Tower/pole location and overhead/ underground line alignment selection	Consultation with local authorities and design engineers – once		Part of detailed sitting and alignment survey /design	
11	Noise related	Nuisance to neighbouring properties	Substations sited and designed to ensure noise will not be a nuisance	Noise levels	Noise levels to be specified in tender documents – once	IA	Part of detailed equipment design	Most of the proposed substations are located away from habitated area. Moreover, noise control measures already part of tender specification/ design criteria such as Transformers with maximum noise emitting level of 75 dB and DG set with proper enclosures.
12	Interference with drainage patterns/ Irrigation channels	Flooding hazards/ loss of agricultural production	Appropriate sitting of towers to avoid channel interference	Tower/pole location and overhead/ underground line alignment selection (distance to nearest flood zone)	Consultation with local authorities and design engineers – once	IA	Part of detailed alignment survey and design	The actual blockage of ground surface is limited to area covered by tower footing only and that also up to a maximum of 3m depth. Hence, chances of inference with drainage pattern/ irrigation channel are remote.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
13	Escape of polluting materials	Environmental pollution	Transformers designed with oil spill containment systems, and purpose-built oil, lubricant and fuel storage system, complete with spill cleanup equipment.	Equipment specifications with respect to potential pollutants	Tender document to mention specifications – once	IA	Part of detailed equipment design /drawings	Complied. Part of detailed equipment deign/drawing. As per approved design provision of pit (capacity of 20% of transformer oil volume) below each transformer and a sump of capacity of 200% of oil volume of largest transformer is provided.
			Substations to include drainage and sewage disposal systems to avoid offsite land and water pollution.	Substation sewage design	Tender document to mention detailed specifications – once	IA	Part of detailed substation layout and design /drawings	Complied. Part of detailed substation layout and design/drawings. Sample photos of integrated drainage & sewage disposal measures is placed as **Plate-8.**
14	Equipments submerged under flood	Contamination of receptors	Substations constructed above the high flood level(HFL) by raising the foundation pad	Substation design to account for HFL (elevation with respect to HFL elevation)	Base height as per flood design- once	IA	Part of detailed substation layout and design /drawings	Complied. Part of detailed substation layout and design/drawings
15	Explosions /Fire	Hazards to life	Design of substations to include modern firefighting equipment	Substation design compliance with fire prevention and control codes	Tender document to mention detailed specifications – once	IA	Part of detailed substation layout and design /drawings	Complied. Part of detailed substation layout and design/drawings.
			Provision of fire fighting equipment to be located close to transformers					
Construction								
16	Equipment layout and	Noise and vibrations	Construction techniques and	Construction techniques	Construction techniques &	IA	Construction period	Complied/ Being Complied.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
	installation		machinery selection seeking to minimize ground disturbance.	and machinery	machinery creating minimal ground disturbance- once at the start of each construction phase	(Contractor through contract provisions) (Sec-IX. PC 22.4.3.5, 22.4.1 of *Contract agreement*)		Use of low noise producing equipments /machineries by construction contractor is ensured through compliance contract condition
17	Physical construction	Disturbed farming activity	Construction activities on cropping land timed to avoid disturbance of field crops (within one month of harvest wherever possible).	Timing of start of construction	Crop disturbance – Post harvest as soon as possible but before next crop – once per site	IA (Contractor through contract provisions) (Sec-II. 2.5 of *Contract agreement*)	Construction period	Complied/ Being Complied. As already explained, construction activities on farm/agricultural land are being undertaken mostly lean/post-harvest period so that damage to standing crop is avoided. However, full compensation as per assessment of revenue authorities is paid to land owners/farmers in case of inevitable damages. (refer **Table – 8** for details).
18	Mechanized construction	Noise, vibration & operator safety, efficient operation	Construction equipment to be well maintained.	Construction equipment – estimated noise emissions	Complaints received by local authorities – every 2 weeks	IA (Contractor through contract provisions) (Sec-IX.PC 22.4.3.6)	Construction period	Complied/ Being Complied. Proper maintenance of construction equipments by construction contractor is ensured through compliance of referred contract conditions.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
		Noise, vibration, equipment wear and tear	Turning off plant not in use.	Construction equipment – estimated noise emissions and operating schedules	Complaints received by local authorities – every 2 weeks	IA (Contractor through contract provisions)	Construction period	Noise levels are being monitored in all active sites regularly and all readings are found to be well within permissible limits (**refer Plate-10**). Till date, only one complained received from resident near Padampukhri substation site for which necessary measures were undertaken and no further complaint received (refer **Table-9**).
19	Construction of roads for accessibility	Increase in airborne dust particles	Existing roads and tracks used for construction and maintenance access to the line wherever possible.	Access roads, routes (length and width of new access roads to be constructed)	Use of established roads wherever possible – every 2 weeks	IA (Contractor through contract provisions) (Sec-II. 2.8)	Construction period	Complied/ Being Complied. Most of the sites are easily accessible and existing roads/paths are used for construction activities. However, at few sites, there was a need to strengthen existing paths/construction of approach road (refer **Table-4** for details**)** in order to carry heavy equipments/ machineries.
		Increased land requirement for temporary accessibility	New access ways restricted to a single carriageway width within the RoW.	Access width (meters)	Access restricted to single carriage –way width within RoW – every 2 weeks	IA (Contractor through contract provisions) (Sec-II. 2.8)	Construction period	
20	Construction activities	Safety of local villagers	Coordination with local communities for construction schedules, Barricading the construction area and spreading awareness among locals	Periodic and regular reporting /supervision of safety arrangement	No. of incidents- once every week	IA (Contractor through contract provisions) (Sec-II. 2.2 iv, vi, vii & viii)	Construction period	Complied/ Being Complied. All requisite safety arrangement ensured through regular monitoring and compliance of contract conditions (refer **Plate- 11**). No accidents reported so far.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
		Local traffic obstruction	Coordination with local authority/ requisite permission for smooth flow of traffic	Traffic flow (Interruption of traffic)	Frequency (time span)- on daily basis	IA (Contractor through contract provisions)	Construction period	Complied/ Being Complied. Most of the tower/pole locations are in farm/barren land. Hence, the problem of traffic obstruction is not witnessed. In case of road/ rail crossing due precaution and required permission (refer **Plate-12**) are being obtained prior to start of work. Till date only one complaint received in case of Bosta substation site which was promptly resolved (refer **Table- 9**)
21	Temporary blockage of utilities	Overflows, reduced discharge	Measure in place to avoid dumping of fill materials in sensitive drainage area	Temporary fill placement (m^3)	Absence of fill in sensitive drainage areas – every 4 weeks	IA (Contractor through contract provisions) (Sec-II. 2.6)	Construction period	Complied/ Being Complied. Most of the fill materials are being utilized either in own premises for refilling/ resurfacing or being utilized for useful purpose with due consent of the local communities.
22	Site clearance	Vegetation	Marking of vegetation to be removed prior to clearance, and strict control on clearing activities to ensure minimal clearance. No use of herbicides and pesticides	Vegetation marking and clearance control (area in m^2)	Clearance strictly limited to target vegetation – every 2 weeks	IA (Contractor through contract provisions) (Sec-II. 2.2 ix, 2.5)	Construction period	Complied/ Being Complied. Only controlled clearing of vegetation is being undertaken, if necessary and with the prior permission of competent authority

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
23	Trimming /cutting of trees within RoW	Fire hazards	Trees allowed growing up to a height within the RoW by maintaining adequate clearance between the top of tree and the conductor as per the regulations.	Species-specific tree retention as approved by statutory authorities (average and max. tree height at maturity, in meters)	Presence of target species in RoW following vegetation clearance – once per site	IA (Contractor through contract provisions)	Construction period	Complied/ Being Complied. Regulated felling in RoW is being carried out with the permission of owner and revenue authorities keeping required electrical clearance as per applicable norms (CEA's regulations, 2010 (Measures related to safety & electric supply)
		Loss of vegetation and deforestation	Trees that can survive pruning to comply should be pruned instead of cleared.	Species-specific tree retention as approved by statutory authorities	Presence of target species in RoW following vegetation clearance - once per site	IA (Contractor through contract provisions) (Sec-II. 2.2 ix, 2.5)	Construction period	Complied/ Being Complied. Actual damage/tree felling is minuscule and limited 3m strip below each conductor and not in entire RoW. However, after stringing natural vegetation is allowed to regrowth in all these cleared strips except for one strip which is kept clear of vegetation for maintenance purpose. In remaining RoW area, only pruning/ pollarding is done to maintain electrical clearance.
			Felled trees and other cleared or pruned vegetation to be disposed of as authorized by the statutory bodies.	Disposal of cleared vegetation as approved by the statutory authorities (area cleared in m^2)	Use or intended use of vegetation as approved by the statutory authorities – once per site	IA (Contractor through contract provisions)	Construction period	Complied/ Being Complied. All felled trees are handed over to concerned authority/owner for disposal. IA/State Utilities have no role in storage or disposal of felled trees/wood
24	Wood/ vegetation	Loss of vegetation	Construction workers prohibited from	Illegal wood /vegetation	Complaints by local people or	IA	Construction period	Compiled/Being complied.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
	harvesting	and deforestation	harvesting wood in the project area during their employment, (apart from locally employed staff continuing current legal activities)	harvesting (area in m^2, number of incidents reported)	other evidence of illegal harvesting – every 2 weeks	(Contractor through contract provisions) (Sec-II. 2.3)		Regular monitoring is undertaken to ensure compliance of applicable contract provisions by contractor.
25	Surplus earthwork/ soil	Runoff to cause water pollution, solid waste disposal	Soil excavated from tower footings/ substation foundation disposed of by placement along roadsides, or at nearby house blocks if requested by landowners	Soil disposal locations and volume (m^3)	Acceptable soil disposal sites – every 2 weeks	IA (Contractor through contract provisions) (Sec-II, 2.6)	Construction period	Complied/Being Complied. Approx. 90-95% of excavated soil is used for refilling/ resurfacing and rest is being disposed off along with other debris at designated location as already explained in clause no 21.
26	Substation construction	Loss of soil	Loss of soil is not a major issue as excavated soil will be mostly reused for filling. However, in case of requirement of excess soil the same will be met from existing quarry or through deep excavation of existing pond or other nearby barren land with agreement of local communities	Borrow area sitting (area of site in m^2 and estimated volume in m^3)	Acceptable soil borrow areas that provide a benefit - every 2 weeks	IA (Contractor through contract provisions) (Sec-II, 2.9)	Construction period	Complied/ Being Complied. Excess soil is not required in most of the proposed substations as excavated soil is normally sufficient for levelling and refilling work. For few substations where excess soil is required, the same has been managed from existing approved/ registered borrow/ quarry or private land/pond after taking due permission/ consent. For details of borrowed earth utilized along with location co-ordinates & applicable consent/permission etc. is placed as **Appendix-5.**

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
		Water pollution	Construction activities involving significant ground disturbance (i.e. substation land forming) not undertaken during the monsoon season	Seasonal start &finish of major earthworks (P^H ,BOD/ COD, Suspended solids, others)	Timing of major disturbance activities – prior to start of construction activities	IA (Contractor through contract provisions)	Construction period	Complied/Being complied. No construction activities undertaken during monsoon period.
27	Site clearance	Vegetation	Tree clearances for easement establishment to only involve cutting trees off at ground level or pruning as appropriate, with tree stumps and roots left in place and ground cover left undisturbed	Ground disturbance during vegetation clearance (area, m^2)	Amount of ground disturbance – every 2 weeks	IA (Contractor through contract provisions) (Sec-VII, 9.3, 10.3)	Construction period	Complied/Being Complied. Already explained at clause no. 23.
				Statutory approvals	Statutory approvals for tree clearances - once for each site			
28	Substation foundation/ Tower erection disposal of surplus earthwork/fill	Waste disposal	Excess fill from substation/tower foundation excavation disposed of next to roads or around houses, in agreement with the local community or landowner	Location and amount (m^3) of fill disposal	Appropriate fill disposal locations – every 2 weeks	IA (Contractor through contract provisions) (Sec-II, 2.6)	Construction period	Complied/Being Complied. Already explained at clause no. 21.
29	Storage of chemicals and materials	Contamination of receptors (land, water, air)	Fuel and other hazardous materials securely stored above high flood level.	Location of hazardous material storage; spill reports (type of material spilled, amount (kg or m^3) and	Fuel storage in appropriate locations and receptacles – every 2 weeks	IA (Contractor through contract provisions) (Sec-IX, PC 22.4.3.3)	Construction period	Complied/Being Complied. Regular monitoring is undertaken to ensure that such materials are stored securely at designated places only along with sufficient containment as part of

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
				action taken to control and clean up spill)				compliance of applicable contract provisions by the contractor.
30	Construction schedules	Noise nuisance to neighbouring properties	Construction activities only undertaken during the day and local communities informed of the construction schedule.	Timing of construction (noise emissions, [dB(A)])	Daytime construction only – every 2 weeks	IA (Contractor through contract provisions) (Sec-IX, PC 22.4.1)	Construction period	Complied/Being Complied. Construction activities are restricted to day time only. Further, regular monitoring is undertaken to ensure compliance of applicable contract provisions by contractor. Noise level measured in various constructions sites are found to be well with in permissible standard. (refer **Plate - 10**)
31	Provision of facilities for construction workers	Contamination of receptors (land, water, air)	Construction workforce facilities to include proper sanitation, water supply and waste disposal facilities.	Amenities for Workforce facilities	Presence of proper sanitation, water supply and waste disposal facilities – once each new facility	IA (Contractor through contract provisions) (Sec-VIII, 22.2.1, 22.2.6, 22.2.11)	Construction period	Complied/Being Complied. Regular monitoring is undertaken to ensure compliance of applicable contract provisions by contractor. Refer Section 3.1.4 and **Plate -4** for details on worker facilities in different work sites. Beside, all necessary measures are being undertaken in respect of proper sanitation, adequate availabity of PPEs (masks, globes etc) including following social distancing norms to avoid spread of virus due to COVID-19 outbreak. Sample photos of such measures is placed as **Plate -13**.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
32	Influx of migratory workers	Conflict with local population to share local resources	Using local workers for appropriate asks	Avoidance/reduction of conflict through enhancement/ augmentation of resource requirements	Observation & supervision– on weekly basis	IA (Contractor through contract provisions) {Sec-II, 2.2(iii)}	Construction period	Complied/Being Complied. Local workforces are being engaged by construction contractor based on skill in compliance to contract provisions. No incidents of conflict reported so far.
33	Lines through farmland	Loss of agricultural productivity	Use existing access roads wherever possible	Usage of existing utilities	Complaints received by local people /authorities - every 4 weeks	IA (Contractor through contract provisions) {Sec-II, 2.8 & Sec. IX, PC 22.4.2, (ii)}	Construction period	Complied/Being complied. Implementation of all proposed mitigation measures is being ensured including preservation of topsoil resulting in receipt of no complaints so far.
			Ensure existing irrigation facilities are maintained in working condition.	Status of existing facilities				
			Protect /preserve topsoil and reinstate after construction completed	Status of facilities (earthwork in m^3)				
			Repair /reinstate damaged bunds etc after construction completed	Status of facilities (earthwork in m^3)				
		Social inequities	Land owners/ Farmers compensated for any temporary loss of productive land as per existing regulation.	Process of Crop/tree compensation in consultation with forest dept.(for timber yielding tree) and Horticulture deptt.(for fruit bearing tree)	Consultation with affected land owner prior to implementation and during execution.	IA	During construction	Full compensation as per assessment done by revenue /forest authorities is paid to affected land owners/farmers. Accordingly, a total of Rs. 10.03 million & Rs 96.73 million have been paid for tree/crop and land compensation respectively to approx. 1486 affected persons till reporting period. (refer **Table- 8**)

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
34	Uncontrolled erosion/silt runoff	Soil loss, downstream siltation	Need for access tracks minimised, use of existing roads.	Design basis and construction procedures (suspended solids in receiving waters; area re-vegetated in m^2; amount of bunds constructed [length in meter, area in m^2, or volume in m^3])	Incorporating good design and construction management practices – once for each site	IA (Contractor through contract provisions) (Sec-II, 2.7)	Construction period	Complied/Being complied. Wherever needed appropriate slope protection measures such as RRM Wall, Retaining Wall, Unequal Leg Extension (ULE) Revetment, Stone Pitching along with bio-engineering measures undertaken/being undertaken as per site requirements (for details of such measures refer **Table- 2 & Plate-4**). Further as explained in clause no 19 & 22, adequate prudence has been practiced in site clearance and use of existing road/path.
			Limit site clearing to work areas					
			Regeneration of vegetation to stabilise works areas on completion (where applicable)					
			Avoidance of excavation in wet season					
			Water courses protected from siltation through use of bunds and sediment ponds.					
35	Nuisance to nearby properties	Losses to neighbouring land uses/ values	Contract clauses specifying careful construction practices.	Contract clauses	Incorporating good construction management practices – once for each site	IA (Contractor through contract provisions) {Sec-II, 2.8 & Sec. IX, PC 22.4.2, (ii)}	Construction period	Complied/Being complied. All such measures have been implemented as already explained at Clause no 17, 18, 19, 30 & 33.
			As much as possible existing access ways will be used	Design basis and layout	Incorporating good design engineering practices– once for each site			

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			Productive land will be reinstated following completion of construction	Reinstatement of land status (area affected, m^2)	Consultation with affected parties – twice – immediately after completion of construction and after the first harvest			
		Social inequities	Compensation will be paid for loss of production, if any.	Implementation of Tree/Crop compensation (amount paid)	Consultation with affected parties – once in a quarter	IA	Prior to construction	Complied/Being complied. Already explained at clause no. 33. All applicable compensation to all eligible PAPs are being paid in consultation with revenue authority and affected persons.
36	Flooding hazards due to construction impediments of natural drainage	Flooding and loss of soils, contamination of receptors (land, water)	Avoid natural drainage pattern/ facilities being disturbed/blocked/ diverted by on-going construction activities	Contract clauses (e.g. suspended solids and BOD/COD in receiving water)	Incorporating good construction management practices-once for each site	IA (Contractor through contract provisions) (Sec-II, 2.7)	Construction period	Complied/Being complied. Good construction management practices are being employed at sites to avoid blockage of natural drainage and resultant flooding. In case of river crossing foundation, a site-specific drilling waste management plan has been implemented to avoid/ minimize impact on water body.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
37	Equipment submerged under flood	Contamination of receptors (land, water)	Equipment stored at secure place above the high flood level(HFL)	Store room level to be above HFL (elevation difference in meters)	Store room level as per flood design-once	IA (Sec-II, 1.11)	Construction period	Complied/Being complied. All equipment foundations are designed above in accordance with approved substation design/layout.
38	Inadequate siting of borrow areas (quarry areas)	Loss of land values	Existing borrow sites will be used to source aggregates, therefore, no need to develop new sources of aggregates	Contract clauses	Incorporating good construction management practices – onc for each site	IA (Contractor through contract provisions) (Sec-II, 2.9)	Construction period	Complied/Being complied. Already explained at clause no. 26.
39	Health and safety	Injury and sickness of workers and members of the public	Safety equipment's (PPEs) for construction workers Contract provisions specifying minimum requirements for construction camps Contractor to prepare and implement a health and safety plan. Contractor to arrange for health and safety training sessions	Contract clauses (number of incidents and total lost-work days caused by injuries and sickness)	Contract clauses compliance – once every quarter	IA (Contractor through contract provisions) (Sec-II, 2.2 v, vii, viii & Sec-IX, PC 22.4.3.8, PC 22.4.3.24 and Safety Rules of PC 22.4.3.21)	Construction period	Complied/Being Complied with project specific safety plan and general conditions of contract which covers all applicable regulations. No major or minor accident reported till reporting period. Details on Health and Safety aspect provided in **Section 3.1.4**.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
40	Inadequate construction stage monitoring	Likely to maximise damages	Training of environmental monitoring personnel	Training schedules	Number of programs attended by each person – once a year	IA	Routinely throughout construction period	Complied/Being Complied All employees engaged in project execution including designated Environment Officers have been adequately trained. (refer **Section 3.1.5**).
			Implementation of effective environmental monitoring and reporting system using checklist of all contractual environmental requirements.	Respective contract checklists and remedial actions taken thereof.	Submission of duly completed checklists of all contracts for each site - once			Appropriate clause incorporated in contract provisions for EMP implementation. Site manager monitor and review the implementation of EMP on daily basis. Further, each State covered under the projects has been provided with a dedicated designated Environment Officers for proper monitoring and implementation of safeguards measures. .
			Appropriate contact clauses to ensure satisfactory implementation of contractual environmental mitigation measures.	Compliance report related to environmental aspects for the contract	Submission of duly completed compliance report for each contract - once			In order to comply with such provisions and further improvement, site inspections /audits are being carried out periodically and memo/ observation/notice are issued to respective contractor for necessary compliance (refer **Section-3.1.6 & Appendix-2**. for details) .

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
Operation and Maintenance								
41	Location of line towers/ poles and overhead/ underground line alignment & design	Exposure to safety related risks	Setback of dwellings to overhead line route designed in accordance with permitted level of power frequency and the regulation of supervision at sites.	Compliance with setback distances ("as-built" diagrams)	Setback distances to nearest houses – once in quarter	State Utility	During operations	Complied/Being complied. Route alignment criterion is part of survey contract which was followed thoroughly during construction and no such exposure to safety related risks is anticipated.
42	Line through identified bird flyways, migratory path	Injury/ mortality to birds, bats etc due to collision & electrocution	Avoidance of established/ identified migration path (Birds & Bats). Provision of flight diverter/ reflectors, elevated perches, insulating jumper loops, obstructive perch deterrents, raptor hoods etc., if applicable	Regular monitoring for any incident of injury/ mortality	No. of incidents- once every month	State Utility	Part of detailed siting and alignment survey /design and Operation	Complied/Being complied. The line routes don't form part of any such areas. Moreover, no incident of injury /mortality of avifauna due to construction of lines have been reported from any sites so far.
43	Equipment submerged under flood	Contamination of receptors (land, water)	Equipment installed above the high flood level (HFL) by raising the foundation pad.	Substation design to account for HFL ("as-built" diagrams)	Base height as per flood design – once	State Utility	During operations	Complied/ Being complied. Already part of detailed substation design.
44	Oil spillage	Contamination of land/nearby water bodies	Substation transformers located within secure and impervious sump areas with a storage capacity of at least 100% of the capacity of oil in transformers and associated reserve tanks.	Substation bunding (Oil sump) ("as-built" diagrams)	Bunding (Oil sump) capacity and permeability - once	State Utility	During operations	Complied/ being complied Oil sump of sufficient capacity already provided for each transformer which was also part of detailed substation design. However, no spillage of transformer oil is reported so far.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
45	SF6 management	Emission of most potent GHG causing climate change	Reduction of SF6 emission through awareness, replacement of old seals, proper handling & storage by controlled inventory and use, enhance recovery and applying new technologies to reduce leakage	Leakage and gas density/level	Continuous monitoring	State Utility	During Operations	Complied/ being complied. Regular monitoring and controlled inventory is ensured to avoid any leakage of SF6.
46	Inadequate provision of staff/workers health and safety during operations	Injury and sickness of staff /workers	Careful design using appropriate technologies to minimise hazards	Usage of appropriate technologies (lost work days due to illness and injuries)	Preparedness level for using these technologies in crisis – once each year	State Utility	Design and operation	Complied/ being complied. All safety related precautions/ systems/ plans are in place. Proper safety training for workers are being conducted on regular interval including mock drills on fire and other occupational hazards.
			Safety awareness raising for staff.	Training/awareness programs and mock drills	Number of programs and percent of staff /workers covered – once each year			
			Preparation of fire emergency action plan and training given to staff on implementing emergency action plan					
			Provide adequate sanitation and water supply facilities	Provision of facilities	Complaints received from staff /workers			- do-
47	Electric Shock Hazards	Injury/ mortality to staff and public	Careful design using appropriate technologies to minimise hazards	Usage of appropriate technologies (no. of injury	Preparedness level for using these technology in	State Utility	Design and Operation	Complied/ being complied. Used of technology like tripping line/substation in

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			Security fences around substations	Maintenance of fences	Report on maintenance – every 2 weeks			milliseconds in case of any hazards. Boundary and Security fences are maintained at each substation. Sufficient barriers with warning sinages are maintained at appropriate places of line/substation. Further, regular awareness/ mock drill on electrical safety and other occupational hazards are being undertaken.
			Barriers to prevent climbing on/ dismantling of transmission towers	Maintenance of barriers				
			Appropriate warning signs on facilities	Maintenance of warning signs				
			Electricity safety awareness raising in project areas	Training /awareness programs and mock drills for all concerned parties	Number of programs and per cent of total persons covered –once each year			
48	Operations and maintenance staff skills less than acceptable	Unnecessary environmental losses of various types	Adequate training in O&M to all relevant staff of substations & transmission/distribution line maintenance crews.	Training/awareness programs and mock drills for all relevant staff	Number of programs and per cent of staff covered – once each year	State Utility	Operation	Being complied. Regular trainings are being imparted to staffs engaged in O & M activity based on their skill at regular interval
			Preparation and training in the use of O&M manuals and standard operating practices					
49	Inadequate periodic environmental monitoring.	Diminished ecological and social values.	Staff to receive training in environmental monitoring of project operations and maintenance activities.	Training/ awareness programs and mock drills for all relevant staff	Number of programs and per cent of staff covered – once each year	State Utility	Operation	Complied/ being complied.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
50	Equipment specifications and design parameters	Release of chemicals and gases in receptors (air, water, land)	Processes, equipment and systems using cholofluorocarbons (CFCs), including halon, should be phased out and to be disposed of in a manner consistent with the requirements of the Govt.	Process, equipment and system design	Phase out schedule to be prepared in case still in use – once in a quarter	State Utility	Operations	Complied/ Being complied. Already part of equipment specification (CFC Free)
51	Transmission / distribution line maintenance	Exposure to electromagnetic interference	Transmission/distribution line design to comply with the limits of electromagnetic interference from overhead power lines	Required ground clearance (meters)	Ground clearance - once	State Utility	Operations	Complied/ Being complied. Designed as per guidelines of ICNIRP and ACGIH and checked by CPRI &M/s PTI, USA.
52	Uncontrolled growth of vegetation	Fire hazard due to growth of tree/shrub /bamboo along RoW	Periodic pruning of vegetation to maintain requisite electrical clearance. No use of herbicides/pesticides	Requisite clearance (meters)	Assessment in consultation with forest authorities - once a year (pre/post monsoon)	State Utility	Operations	Being complied.
53	Noise related	Nuisance to neighbouring properties	Substations sited and designed to ensure noise will not be a nuisance.	Noise levels {dB(A)}	Noise levels at boundary nearest to properties and consultation with affected parties if any - once	State Utility	Operations	Complied/ being complied. The average noise level reported at the boundary of substation is in the range of 49-52 dB which are well within permissible limit.

Appendix-2 : Sample copy of Notice/Memo to Contractor for Compliance of EHS conditions

पावर ग्रिड कारपोरेशन आंफ इंडिया लिमिटेड
(भारत सरकार का उधम)
POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)

पावरग्रिड POWERGRID

Dongtieh, Lower Nongrah, Lapaing, (Shillong)-793006
Phone: (0364) 2536178, Fax: (0364) 2536397, Email: nerts_os@yahoo.in

उत्तर-पूर्वी क्षेत्रीय मुख्यालय: प्रचालन सेवा; NERTS RHQ: Operation Services

REF: NESH/Safety/Audit/113/2020/50 Date. 24.02.2020

To,

The Project in-charge
M/s USTL
C/O.POWERGRID CORPORATION OF INDIA LTD,
132kV Powergrid Sub-Station, Khliehriat
Meghalaya- 793200

Sub: Safety Check / Audit.

Dear Sir,

Under signed has visited construction work of (LILO) 132kV MLHEP-Khliehriat Transmission Line at Khliehriat on 24.02.2020. The Safety check / Audit has been carried out along with your Safety officer / site engineers. During the Safety Check / Audit, some lapses pertaining to safety related aspects have been observed. The observations are as follows:

The observations are mentioned as under:

1. During audit it has been observed that the back stay is not provided at tower location no. 01A (DD+0) where one side stringing has been completed. The back stay shall be provided urgently.
2. Compressor machine being used at site observed without meter. The compressor m/c without meter shall be removed from working site and new compressor m/c with meter shall be provided.
3. The duly filled & signed check list (prior to start stringing activities) against each individual span shall be made available and a copy shall be submitted to POWERGRID.
4. First-Aid materials in the first aid box at site observed insufficient, the same shall be refilled.
5. Height pass, medical fitness certificate and induction training record of the fitters engaged at work site shall be submitted to POWERGRID.
6. During audit it has been observed that fall arrestor locks are not provided to each fitter, the fall arrestor lock shall be provided to each individual fitter for safe ascending & descending.
7. Also, it was observed that simultaneous locking/anchoring of both lanyard of full body safety harness is not done by fitters while working at height, the same shall be ensured to avoid fall from height.
8. Simultaneous loading of conductor i.e. Top-Top, Middle-Middle & Bottom -Bottom must be ensured during stringing and providing of back stay shall be ensured where ever required.

You are requested to look in to the matter seriously and comply the observations immediately. Failing of which, action shall be taken as per terms and condition of contract. The compliance report shall be submitted to the Regional Safety, Shillong through concern site in-charge /site engineer of POWERGRID. Further, it is requested to ensure the implementation of proper safety measures at working site to avoid any untoward incidence.

Thanking you,
Enclos: As above

24/02/2020
(Pulakesh Roy)
Regional Safety Officer Shillong.

Copy to:

1. Sr. GM (I/C AM), Shillong – For kind information
2. GM (Safety, NERPSIP), Guwahati – For kind information
3. DGM (NERPSIP), Khliehriat

Nand Kishor
24/02/20
(Safety officer)

पंजीकृत कार्यालय: बी- 19, कुतुब इन्स्टीट्यूशनल एरिया, कटवरिया सराय, नई दिल्ली- 110016, दूरभाष: 6560121, फैक्स: 011-6560039, तार: "नेटग्रिड"
Registered Office: B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi- 110016, EPBAX: 6560121, Fax: 011-6560039 Gram: "NATGRID"

Email/Fax/Courier/by Hand

Ref: USTL/20-21/TW-02/P-54B/**1182**
Dated: **25th June 2020**

Unique STRUCTURES & TOWERS LIMITED

To,
The Regional Safety officer
Shillong
Through
Dy. General Manager (NERPSIP),
Power Grid Corporation of India Limited,
Khliehriat (Meghalaya)

For your kind information & further necessary action please.
02/07/2020
Regional Safety Officer, Shillong

Sub.: - Compliance report of Safety Check/Audit of LILO 132kV D/C MLHEP - Khliehrite transmission line at Mynkre.
Ref.:- 1) Order No.CC-CS/91-NER/TWT-2469/1/G4/CA-II/5844,dtd.30.08.2016 (SERVICES)
2) Your letter no. NERPSIP/Safety/Audit/113/2019 Dated 14.11.2019
3) Your letter No.: NESH/Safety Audit/113/2020/50 date 24.02.2020

Dear Sir,
With reference above subject, we are herewith submitting safety audit report compliance of observation points during safety audit on dated 14.11.2019 and 24.02.2020 as under.

Sl No	Observations	Compliance
A	**Observation points on dated 14.11.2019**	
1	Prior to stringing checklist is not available. The check list shall be duly filled and shall be signed by the contracting agency as well as by the POWERGRID personnel for each individual span prior to start the stringing activity.	Copy of checklist is attached duly signed by us and POWERGRID for your record. **(Annexure – I)**
2	Induction training & medical health checkup for the newly engaged workers / fitters are yet to be done. The same shall be ensured prior to engage them at work.	Copy of Health checkup report is attached for your record. **(Annexure – II)**
3	Proper stringing procedure i.e. simultaneous stringing of the circuit viz. top-top, middle-middle and bottom-bottom shall be ensured	We are ensuring the same procedure will be adopted. *(Pictures attached for your information.)* **(Annexure – III)**
4	Power winch m/c is not available at site, required to be made available at working site for safe stringing activity in hilly terrain.	We will arrange winch m/c while we do stringing activity of hilly terrain section.
5	Retractable fall arrester is yet to be procured. The same shall be procured urgently.	Retractable fall arrester provided to stringing workers. Purchase document and picture attached for your record. **(Annexure –IV)**
6	During audit it has be observed that the compressor machines are being used do not have meter. Compressor machines having meter shall be made available at stringing site to ensure the proper compression of the joints.	Compressor machine replaced. *(Picture attached for your record.)* **(Annexure – V)**

Head Office :
1-A, Light Industrial Area, Bhilai-490 026 (C.G.)
Phone : 0788-4082400, 2285409, 2281606
Fax : 0788-2285574, 4082421
Email : ustlbhilai@ustl.co.in; info@ustl.co.in
CIN No. : U27310CT1985PLC002887

Regional Office
2nd floor, "Siti Centre"
26A Cantonment, G.S. Road,
Shillong - 793002, Meghalaya
Phone: 0364-2544012, Fax : 0364-2544046
Email : ustlshillong@ustl.co.in

Works Office :
Plot No. 263 to 268 & 306 to 311, Urla Industrial Area,
Raipur - 493 221 (C.G.) INDIA
Phones :0771 - 2324944, 2324945, 3295611, 4215500
Fax : 0771 - 2324450, 4215555
Email : ustlrpr@ustl.co.in

Compliance report submitted by USTL Power & Infra Ltd. For the safety non-compliance notice issued by the regional safety officer NER, RHQ-Shillong. Vide letter no. *NESH/Safety/Audit/113/2019/274 dated 14/11/2019 & 113/2020/50 dated 24/02/2020*

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STRUCTURES & TOWERS LIMITED

7	During audit it is found that Rope Grab fall arrester is not installed in the tower where work at height is under progress. Installation of the same must be ensured for safe ascending & descending of the tower	We have also provided Rope Grab fall arrester to workers and we are insuring the uses of Rope Grab fall arrestor while work at height. *(Pictures attached for your information.)* **(Annexure – VII)**
8	It is also found that hook type pulley is being used in horizontal load instead of I-type pulley. This may leads to any untoward incident / accident.	We have also provided the I-type pulley to workers and insuring the in I-type pulley will be used in horizontal load.
9	Load is given to chimney without adequate protection. Strong wooden log/plank & sand bag protection shall be given prior to given any load to the tower leg/chimney.	We have provided wooden log/plank and sand bag and we are insuring the tower leg /chimney will protracted with strong wooden log/plank & sand bag while giving load to chimney/tower leg.
10	First aid box shall be made available in each working location.	First aid Box provided to every working location.
B	**Observation points on dated 24.02.2020**	
1	During audit it has been observed that the back stay is not provided at tower location no 1A/0 (DD+0)	Back stay is placed at tower location no 1A/0 (DD+0) *(Picture attached for your record.)* **(Annexure – VI)**
2	Compressor machine being used at site observed without meter. The compressor m/c without meter shall be removed from working sit and new compressor m/c with meter shall be provided.	Compressor machine replaced *(Picture attached)* **(Annexure – V)**
3	The duly filled & signed check list (prior to start stringing activities) against each individual span shall made available and copy shall be submitted to POWERGRID	Copy of checklist is attached duly signed by us and POWERGRID for your record. **(Annexure – I)**
4	First aid material in the first aid box at is observed insufficient, the same shall be refilled.	First aid box material refilled at every working location and we are insuring the availability of Fist Aid box with sufficient material at every working location.
5	Height pass, medical fitness certificate and inductor training record of the fitters engaged at work site shall be submitted to POWERGRID.	Copy of Height pass, medical fitness certificate and induction training record is attached. **(Annexure – II)**
6	During audit it has been observed that fall arrestor locks are not provide to each fitter, the fall arrestor lock shall be provided to each individual fitter for safe ascending & descending.	We have provided arrestor locks to each fitter.

Head Office :
1-A, Light Industrial Area, Bhilai-490 026 (C.G.)
Phone : 0788-4082400, 2285409, 2281606
Fax : 0788-2285574, 4082421
Email : ustlbhilai@ustl.co.in; info@ustl.co.in
CIN No. : U27310CT1985PLC002887

Regional Office
2nd floor, "Siti Centre"
26A Cantonment, G.S. Road,
Shillong - 793002, Meghalaya
Phone: 0364-2544012, Fax : 0364-2544046
Email : ustlshillong@ustl.co.in

Works Office :
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Raipur - 493 221 (C.G.) INDIA
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Fax : 0771 - 2324450, 4215555
Email : ustlrpr@ustl.co.in

Compliance report submitted by USTL Power & Infra Ltd. For the safety non-compliance notice issued by the regional safety officer NER, RHQ-Shillong. Vide letter no. *NESH/Safety/Audit/113/2019/274 dated 14/11/2019 & 113/2020/50 dated 24/02/2020*

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STRUCTURES & TOWERS LIMITED

7	Also, it was observed that simultaneous locking/anchoring of both lanyard of full body safety harness is no done by fitters while working at height, the same shall e ensured to avoid fall from height.	We are ensuring the anchoring of both lanyard of full body safety harness will be done by every fitter.
8	Simultaneous loading of conductor i.e. Top-Top, Middle-Middle & Bottom-Bottom must be insured during stringing and providing of back stay shall be ensured where every required.	We are following the same procedure (Top-Top, Middle-Middle & Bottom-Bottom) and we will place back-stay of tower where it is required. *(Some pictures attached for your information.)* **(Annexure – III)**

Thanking you and assuring you our best services at all time.

Yours Sincerely,
for **Unique Structures & Towers Ltd.**

Ravilesh Kumar
[Project Manager - Khliehirat]

Enclosed: A/A

Copy to: 1) GM, NERPSIP, Shillong
2) USTL Bhillai Head office for information

Head Office :
1-A, Light Industrial Area, Bhilai-490 026 (C.G.)
Phone : 0788-4082400, 2285409, 2281606
Fax : 0788-2285574, 4082421
Email : ustlbhilai@ustl.co.in; info@ustl.co.in
CIN No. : U27310CT1985PLC002887

Regional Office
2nd floor, "Siti Centre"
26A Cantonment, G.S. Road,
Shillong - 793002, Meghalaya
Phone: 0364-2544012, Fax : 0364-2544046
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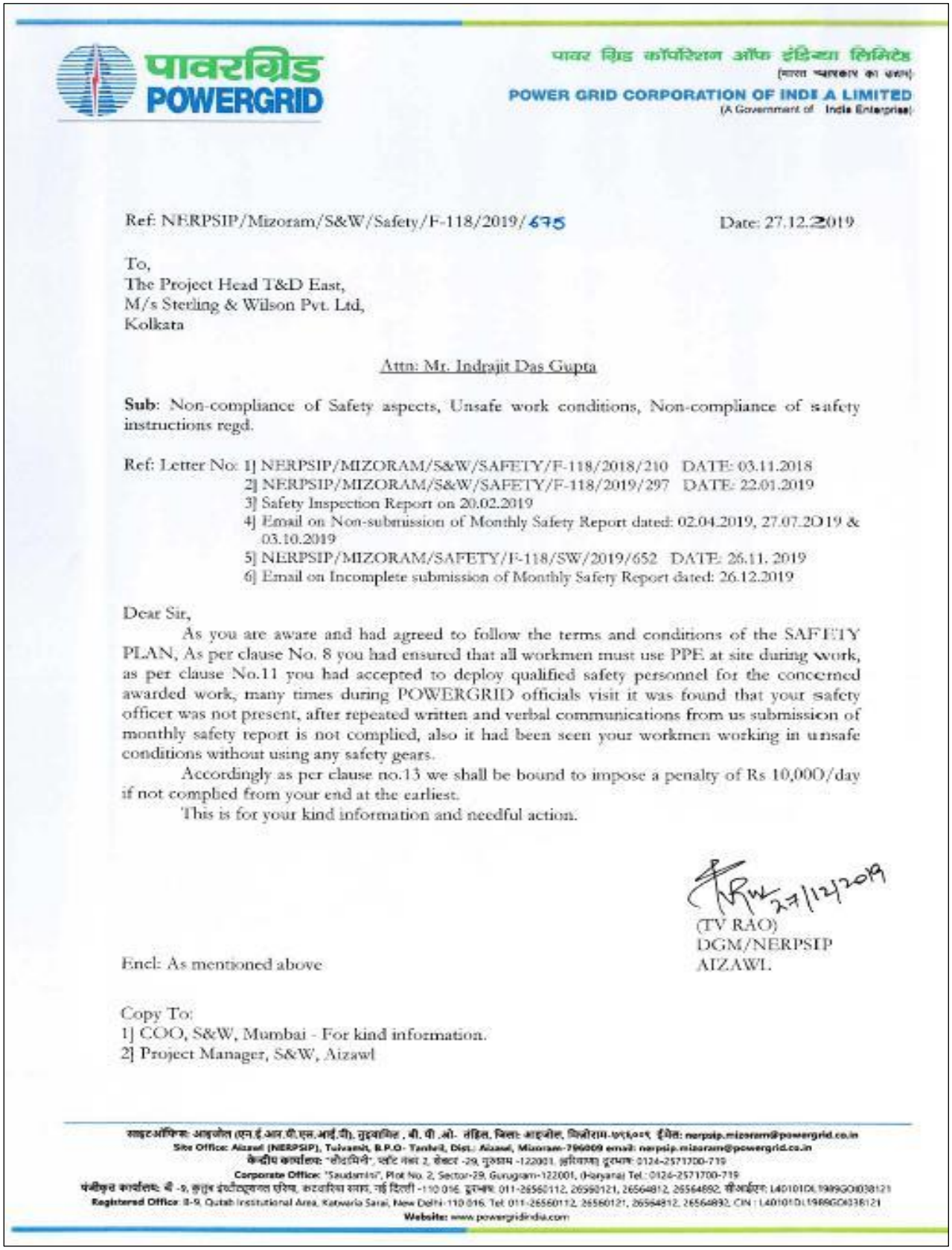
Raipur - 493 221 (C.G.) INDIA
Phones :0771 - 2324944, 2324945, 3295611, 4215500
Fax : 0771 - 2324450, 4215555
Email : ustlrpr@ustl.co.in

Compliance report submitted by USTL Power & Infra Ltd. For the safety non-compliance notice issued by the regional safety officer NER, RHQ-Shillong. Vide letter no.
NESH/Safety/Audit/113/2019/274 dated 14/11/2019 & 113/2020/50 dated 24/02/2020

Appendix-2a : Sample Copy of Penalty Notice/Memo issued to contractor for non - compliance of EHS Conditions



पावरग्रिड
POWERGRID

पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)

Ref: NERPSIP/Mizoram/S&W/Safety/F-118/2019/675 Date: 27.12.2019

To,
The Project Head T&D East,
M/s Sterling & Wilson Pvt. Ltd,
Kolkata

Attn: Mr. Indrajit Das Gupta

Sub: Non-compliance of Safety aspects, Unsafe work conditions, Non-compliance of safety instructions regd.

Ref: Letter No: 1] NERPSIP/MIZORAM/S&W/SAFETY/F-118/2018/210 DATE: 03.11.2018
2] NERPSIP/MIZORAM/S&W/SAFETY/F-118/2019/297 DATE: 22.01.2019
3] Safety Inspection Report on 20.02.2019
4] Email on Non-submission of Monthly Safety Report dated: 02.04.2019, 27.07.2019 & 03.10.2019
5] NERPSIP/MIZORAM/SAFETY/F-118/SW/2019/652 DATE: 26.11. 2019
6] Email on Incomplete submission of Monthly Safety Report dated: 26.12.2019

Dear Sir,

As you are aware and had agreed to follow the terms and conditions of the SAFETY PLAN, As per clause No. 8 you had ensured that all workmen must use PPE at site during work, as per clause No.11 you had accepted to deploy qualified safety personnel for the concerned awarded work, many times during POWERGRID officials visit it was found that your safety officer was not present, after repeated written and verbal communications from us submission of monthly safety report is not complied, also it had been seen your workmen working in unsafe conditions without using any safety gears.

Accordingly as per clause no.13 we shall be bound to impose a penalty of Rs 10,000/day if not complied from your end at the earliest.

This is for your kind information and needful action.

27/12/2019
(TV RAO)
DGM/NERPSIP
AIZAWL

Encl: As mentioned above

Copy To:
1] COO, S&W, Mumbai - For kind information.
2] Project Manager, S&W, Aizawl

साइट ऑफिस: आइजोल (एन.ई.आर.पी.एस.आई.पी), तुइवामित , पी. पी .ओ- तंहिल, जिला: आइजोल, मिजोराम-७९६००९, ईमेल: nerpsip.mizoram@powergrid.co.in
Site Office: Aizawl (NERPSIP), Tuivamit, P.P.O- Tanhil, Dist.: Aizawl, Mizoram-796009 email: nerpsip.mizoram@powergrid.co.in
केन्द्रीय कार्यालय: "सौदामिनी", प्लॉट नंबर 2, सेक्टर -29, गुरुग्राम -122001, हरियाणा दूरभाष: 0124-2571700-719
Corporate Office: "Saudamini", Plot No. 2, Sector-29, Gurugram-122001, (Haryana) Tel.: 0124-2571700-719
पंजीकृत कार्यालय: बी -9, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली -110 016, दूरभाष: 011-26560112, 26560121, 26564812, 26564892, सीआईएन: L40101DL1989GOI038121
Registered Office: B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110 016, Tel: 011-26560112, 26560121, 26564812, 26564892, CIN : L40101DL1989GOI038121
Website: www.powergridindia.com

Appendix-3 : **Details of Changes in substation location vis-à-vis locations envisaged in IEAR**				
Sl. No	**Name of Substation**	**Co-ordinate as per IEAR**	**New Location Co-ordinates**	**Reason for Change in location**
Assam				
1	220/132 kV Amingaon	26º14’11.77”N 91º42’19.99”E	26°14'10.75"N 91°39'1.58"E	Earlier land was proposed in the premises of Industrial Estate, Amingaon. However, the Industrial Estate Authority and AEGCL could not reach a common agreement. Therefore new Govt. Land has been finalized approx 5.5 km west from earlier land.
2	132/33 kV Tangla	26º40’22.34”N 91º55’48.38”E	26°39'39.32"N 91°55'17.48"E	Location changed by AEGCL due to non-finalization of earlier identified land. New location is 1.5 km south-west from earlier location in the same locality.
3	132/33 kV Chapakhowa	27º52’54.32”N 95º44’47.13”E	27°55'15.02"N 95°44'20.62"E	Earlier identified land found technically not suitable due to low lying area. New land finalized in same locality which is 4.5 km north from earlier location.
4	132/33 kV Tezpur	26º41’12.78”N 92º50’39.33”E	26°40'25.51"N 92°50'9.80"E	Location changed by AEGCL due to non-finalization of earlier identified land. New location is 1.6 km south-west from earlier location in the same locality.
5	33/11 kV Silapathar -II	Not provided	27°32'9.99"N 94°42'40.82"E	Location changed by AEGCL due to non-finalization earlier identified land. New location is approx. 900 m from earlier location.
6	33/11 kV LGM Hospital	26º37’58.45”N 92º48’44.17”E	26°38'44.26"N 92°45'35.82"E	Location changed by AEGCL due to non-finalization earlier identified land. New location is 5.5 km north-west from earlier location.
7	33/11 kV Romai	27º26’25.02”N , 95º02’17.51”E	27°25'34.67"N 95° 3'22.69"E	Location changed by AEGCL due to non-finalization earlier identified land. New location is 2.3 km south-west from earlier location.
8	33/11 kV Dibrugarh	27º27’49.21”N 94º54’20.65”E	27°28'14.89"N 94°54'56.48"	Location changed by AEGCL due to non-finalization earlier identified land. New location is 1.27 km north east from earlier location.
9	33/11 kV Domdoma-Hazo	26º14’58.61”N 91º34’18.98”E	26°16'20.13"N 91°30'13.17"E	Location changed by AEGCL due to non-finalization earlier identified land. New location is 7.3 km north west from earlier location.
10	33/11kV GS Road	26°9'47.17"N 91°46'16.39"E	26°10'4.19"N 91°45'37.22"E	The land owner & APDCL could not reach a common agreement. Therefore new land finalized within APDCL premise (approx. 1.2 kms north west of earlier location).
Meghalaya				
1	220/132/33 kV New Shillong GIS	25º36’47.90”N 91º56’38.85” E	25°37'45.08"N 91°59'34.38"E	Location changed by MePTCL due to non-finalization of earlier identified land. New land was selected/ finalized which is 5.5 km north west from earlier location.

2	132/33 KV Phulbari	Not provided	25°51'12.12"N 90° 05'6.21"E	Location changed by MePTCL due to non-finalization of earlier identified land. New land was selected/finalized in the same locality approx. 5.7 km in east direction.
3	33/11kV Rymbai	25º19’32.34”N 92º19’22.44”E	25°13'26.70"N 92°22'37.88"E	Location changed by MePDCL due to non-finalization of earlier identified land. New land was selected/ finalized which is 12.5 km from south west from previous location.
4	33/11kV Latyrke (Sutnga)	25º20’36.54”N 92º28’21.42”E	25°22'41.00"N 92°25'54.26"E	MePDCL changed the land due to dispute in identified land. New substation location is 5.6 km south east from earlier location.
5	33/11kV Lumshnong	25º10’23.7”N, 92º23’33.54”E	25°18'21.62" N 92°22'58.12"E	MePDCL changed the substation location subsequently to Byrnihat instead of Lumshnong which is 12.5 km north from earlier location.
6	33/11 kV Rajaballa Bhaitbari	Not provided	25°44'7.35"N 90° 0'16.60"E	Location changed by MePDCL due to non-finalization of earlier identified land. New land was selected/ finalized in same locality approx. 2.5 km from earlier location.
7	33/11 kV Mawkynrew	25º25’09.11”N 92º00’03.36”E	25° 24.787' N 91° 59.817' E	Location changed by MePDCL due to non-finalization of earlier identified land. New land was selected/ finalized in same locality approx. 700 m south west from earlier location.
8	33/11 kV Mawpat	25º36’40.27”N 91º57’08.12”E	25° 35.647' N 91°54.311' E	Location changed by MePDCL due to non-finalization of earlier identified land. New land was selected/ finalized which is 5 km south west from previous location.
Tripura				
1	33/11kV Manughat	22°59'45.60"N 91°38'60.00"E	22°59'53.88"N 91°38'28.28"E	New land finalized approx. 900 m towards north west as the earlier identified land was found to be a forest land.
2	33/11kV Srinagar	23°1'43.74"N 91°33'40.28"E	23° 1'24.52"N 91°33'50.99"E	New land finalized approx. 600 m towards south east as the earlier identified land was found to be a forest land.
3	33/11kV Nalchar	23°32'56.1"N 91°21'41.2"E	23°32'39.22"N 91°21'20.35"E	Earlier identified land was old Nalchar Tehsil Office & Polling booth/ station. Thus, DM Bishramganj allotted alternative land. Present location 700 mt towards south direction.
4	33/11kV Durganagar	23°39'9.83"N 91°14'8.51"E	23°40'6.92"N 91°14'59.91"E	Earlier identified land was old Durganagar Tehsil office & Polling booth/ station. Thus, DM Bishramganj allotted alternative land approx. 2.2 km northeast from earlier location.
Manipur				
1	33/11 kV Andro	24°41'59.35"N 94° 1'30.24"E	24°42'24.48"N 94° 1'34.80"E	Location changed by MSPCL due to non-finalization of earlier identified land. New land finalized in nearby locality (approx. 700 m north) adjacent to State PWD Road.
2	33/11 kV Pishum (GIS)	Not provided	24°45'5.84"N 93°56'3.63"E	Due to RoW issue location changed and new land finalized by MSPCL and handover to POWERGRID.
3	33/11 kV Leimapokpam	Not provided	24°40'55.72"N 93°50'35.45"E	New land selected/finalized by MSPCL approx. 2.5 km from earlier location.

4	33/11 kV Kwakta	Not provided	24°27'12.96"N 93°43'45.04"E	New land selected/finalized approx. 1.5 km from earlier location as land owner & MSPCL could not reach a common agreement in earlier identified land.
5	33/11 kV Porompat	24°48'24.96"N 93°59'53.25"E	24°49'18.05"N 93°59'59.00"E	Final location is 1.5 km north from earlier location.
Mizoram				
1	132/33 KV Lungsen	22°50'19.32"N 92°36'5.76"E	22°51'13.02"N 92°35'38.63"E	Earlier site proposed by PEDM has been shifted about 1.6 km towards the northwest direction due to space constraint.
2	33/11kV South Bungtlang	22°19'42.56"N 92°45'57.35"E	22°22'11.23"N 92°45'24.28"E	Earlier site proposed by PEDM has been shifted about 4.6 km towards the north direction.
Nagaland				
1	132/33 KV Kohima	24°44'31.22"N 94°06'24.94"E	24°43'55.75"N 94°5'39.64"E	Location changed due to space constraints. Final location is 1.6 km south west of earlier location.

Appendix-4 : Sample Case of Compensation Process

TRIPURA STATE ELECTRICITY CORPORATION LIMITED
(A Govt. of Tripura Enterprise)

- 315

NOTICE

Ref No. :

Date : 28 / 11 / 2020

To Gandhi Kumar Jamatia.

Sub :- Utilization of land for tower footing at Loc. No. 28/1 type of tower DA+0 in connection with "132 kv Udaipur-Bagafa S/C Transmission Line"

Dear Sir,

As per section 67 of the Electricity Act, 2003, we require a portion of your land having the area mentioned below for construction of tower footings/stinging etc. related to the above-mentioned work. The Sub-Divisional Magistrate, Udaipur will assess necessary compensation in this respect.

Sl. No.	Name of owner as per document and other	Area of land utilization	Name of present occupier and relation
1	Name :- Gandhi Kr. Jamatia	6.757 X 6.757 = 45.657 sqm	Self
2	Plot No. :- 1181/2505		
3	Khatian No. :- 414		
4	Jote No. :- —		
5	Mouza :- South Maharani		

Signature of the Power Grid Corp. of India Ltd. Name and Seal UDAIPUR

Signature of Tehsildar Name & Seal

Signature /Thumb impression of land Owner / Present Occupier Address :-

Witness :- 1. Rabi Sadhan Jamatia
2. Bijoy Bhakta Jamatia

Yours faithfully

Signature of TSECL
Senior Manager, TSECL
132 KV Sub-Station, Baneswar
Udaipur, Gomati District.

Copy to :-

1. The D.M. Gomati for kind information please
2. The Deputy General Manager, TSECL for favour of kind information.
3. The S.D.M., Udaipur for kind information. It is highly requested tio assess the said land from his kind end and inform this office for payment of compensation.
4. The Tehsildar, Matabari TK

Signature of TSECL
Senior Manager, TSECL
132 KV Sub-Station, Baneswar
Udaipur, Gomati District.

TRIPURA STATE ELECTRICITY CORPORATION LIMITED
Transmission Division, 79 Tilla, Agartala

Notice to land owner for land compensation

Annexure-I

Sl. No.	Name of Line	Tower No	Name & address of land owner	Plot no(P)/Khatian no (K)/Jote no(j)	Notice Ref.No & date	Bank details	Area of land utilization	Land value of area(in Rs) as per latest Government approved land valuation chart	Remarks
01	132kv D/C Udaipur-Eagafa	Ap-28/1	Gandhi Kumar Jamatia, S/O-Lt.Shantiranjan Jamatia, of Ajala Bari,Maharani-799116	P-1181/2505, K- 414, J- Nil	315, dtd. 28.11.2020	TGB, Maharani Branch, A/C No-8059012031615, IFSC-UTBIORRBTGB	6.757x6.757=45.657sq. M	Rs. 2844/-	Foundation work (4 leg)
02	132kv C/C Udaipur-Bagafa	Ap-46/0	Kuhiram Reang, S/O-Lt.Badhuram Reang, of Chapia Para,Tainani-799125	P- 1316, K- 262, J- Nil	316, dtd.01.12.20	TGB,Garjee Branch, A/C No-8128010019460, IFSC-UTBIORRBTGB	6.987x6.987=48.82sq. M (0.004882 Ha)	Rs. 1977/-	Foundation Work(4 legs)
03	132Kv C/C Udaipur-Amarpur	Ap-32/0	Sadhanamani Jamatia, S/O-Lilachandra Jamatia, Kurmachhara,Amarpur-799101	P- 304/1800, K- 838, J- Nil	352 dtd. 16.11.2019	—	9.918x9.918=98.367 Sq.M (0.0098367 Ha)	Rs. 7,353/-	Foundation Work(4 legs)

As assessed by SDM Udaipur.
24-12-2020
RANJIT SARKAR
MANAGER
POWERGRID
NER UDAIPUR

24/12/20
(A.ROY)
Sub-Divisional Magistrate,
Udaipur, Gomati District.

Land Compensation Assessment duly certified by SDM

GOVERNMENT OF NAGALAND
OFFICE OF THE DEPUTY COMMISSIONER
KOHIMA: NAGALAND

CIRCULAR
Dated Kohima the 12th March 2020.

NO. REV/PWR/2014/ 410 /// This is to inform all the concerned landowners for construction of **220 KV D/C New Kohima (Zhadima)– Mokokchung, Transmission line under NERPSIP Package NAG-TW-01, Kohima District,** that issue of cheques for compensation of land and surface damages shall be paid in the Office of the Deputy Commissioner, Kohima on **16th March 2020 at 11:00 AM**.

The concerned landowners are hereby informed to be present physically during the disbursal of cheques, failing which payment shall be withheld.

All affected landowners, beneficiaries are requested to bring along 4(four) recent passport size photos (not to scan), Aadhaar card/I.D Proof and Bank Passbook Xerox copy. Payment to any other representative other than the concerned person shall "NOT" be entertained.

This is issued for strict compliance by all concerned

Sd/-
(GREGORY THEJAWELIE)NCS
Deputy Commissioner
Kohima: Nagaland

NO. REV/ PWR/2014/ 410 /// Dated Kohima the 12th March 2020.
Copy to:

1. The Commissioner, Nagaland for information.
2. The Engineer, NERPSIP, Nagaland, for information and to depute a representative during disbursal of cheques to landowners.
3. The Village Council Chairman Teichüma / Chiechama / Botsa / Terogvunyu / Tseminyu/ Tesophenyu / Nsunyu / Ehunnu , for information and to be present or send a representative for identification of landowners. List of landowners enclosed.
4. The Head DB to serve the circular to all concerned and return the same.
5. Shri.
6. Office copy.

17/3/20
(KELEVITUO NISA)NCS
Revenue Officer
Kohima: Nagaland

Notice from office of DC, Kohima regarding disbursement of compensation payment to landowners

पावर ग्रिड कारपोरेशन आफ इंडिया लिमिटेड
POWER GRID CORPORATION OF INDIA LIMITED
NERPSIP, KOHIMA, NAGALAND

पावरग्रिड POWERGRID

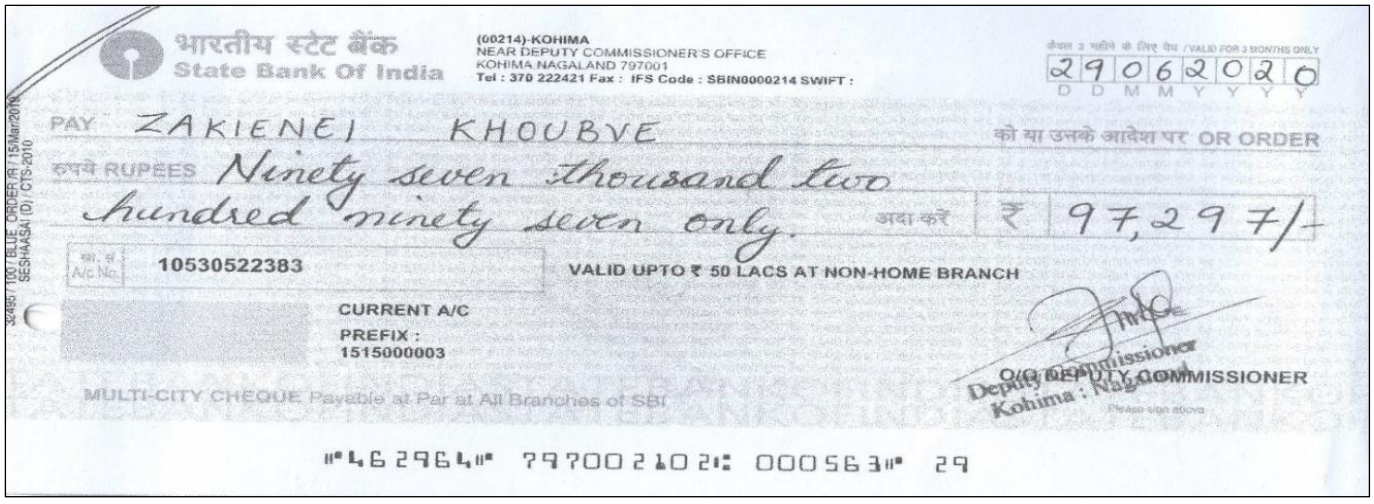
TO WHOM IT MAY CONCERN

This is to certify that an amount of Rs 97296.00 (In words) Ninety seven thousand two hundred ninety six has been duly compensated to Shri/Ms Zakenie Khoubve for the land and surface damages incurred during the construction of LILO of 132kV S/C kohima – wokha at New Kohima Transmission line under NERPSIP, Nagaland. Location no. AP 11/0 of Zhadima Village, Kohima district measuring an Area of 85T. 858 Sq.ft.

Witness

30/6/20
(Signature of landowner)

Acknowledgement by Land owner on receiving of compensation amount



Compensation Cheque to Land owner distributed by DC, Kohima

GOVERNMENT OF NAGALAND
OFFICE OF THE DEPUTY COMMISSIONER
KOHIMA: NAGALAND

NO. REV/PWR/2014/____/// Dated Kohima the 14th March 2019

NOTIFICATION

The undersigned is pleased to notify the following rates of compensation for damage of trees /plantation / Land under Power Grid Project within Kohima District trees /plantation / Land within Kohima District.

- Land rates to be compensated in full (i.e 100%) as determined by the rates fixed.
- Damage around the RoW corridor to be compensated as per existing rates.
- For approach road, damage compensation will be given to the landowners

Table for RoW width for different voltage lines:

Transmission Voltage in kV	Width of Right of Way in metres
66 kV	18
132 kV	27
220kV	35
400 kV S/C	46
400kV D/C	46
765 S/C (With delta configuration)	64
765 D/C	67

NO. REV/PWR/2014/____/// Dated Kohima the 14th March 2019

Trees:-

Sl. No.	Items	Categories	Size	Rate
1.	Timber	Class A	Girth (1'-3') Above Girth 3'	₹. 200/ tree ₹.400/ tree
2.	Timber	Class 'B' & 'C'	Girth (1'-3') Above Girth 3'	₹. 160/tree ₹. 320/tree
3.	Firewood: (more than 1' girth only)	Good variety Common variety		₹. 150/tree ₹.75/tree
4.	Bamboo	Large variety Jatti variety		₹.60/plant ₹.50/plant

Fruit trees:-

Sl. No.	Fruit	Fruit bearing (₹) Fixed rate	Non-Fruit bearing (₹) Fixed rate
1.	Orange	1400 /tree	700/tree
2.	Pear	350 /tree	175/tree
3.	Banana	350/tree	175/tree
4.	Guava	350/tree	175/tree
5.	Pineapple	5200 per acre of ₹.5/- per sucker	Same rate as fruit bearing
6.	Mango	875/tree	350 /tree
7.	Jack Fruit	350/tree	175 /tree
8.	Peach	350/tree	175/tree
9.	Plum	350/tree	175/tree

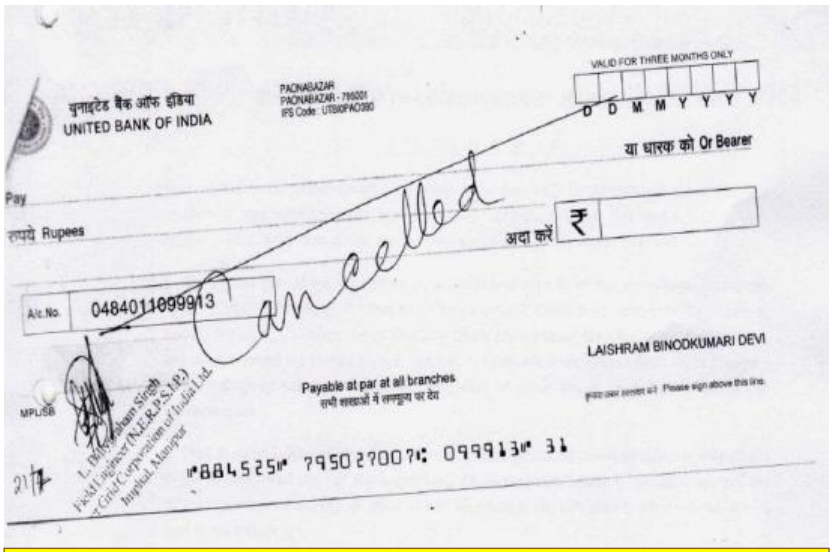
Categories of land:

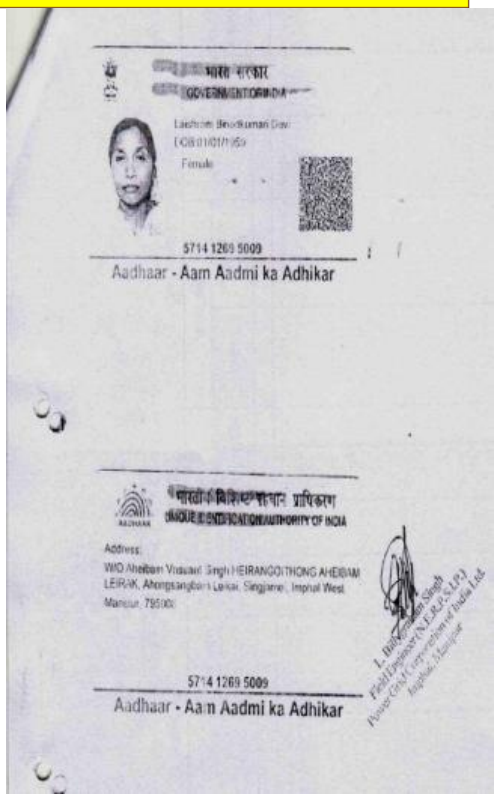
Sl. No.	Category	Rate per Sqft (₹)
1.	Terrace / Residential	₹. 150
2.	Developed Area	₹. 100
3.	Commercial Plantation	₹. 95
4.	Jhum	₹. 70

8% Establishment costs and 2% Contingency costs will be included.

(ANOOP KHINCHI)IAS
Deputy Commissioner
Kohima: Nagaland

Notification/Fixation of Rate by Concerned Authority

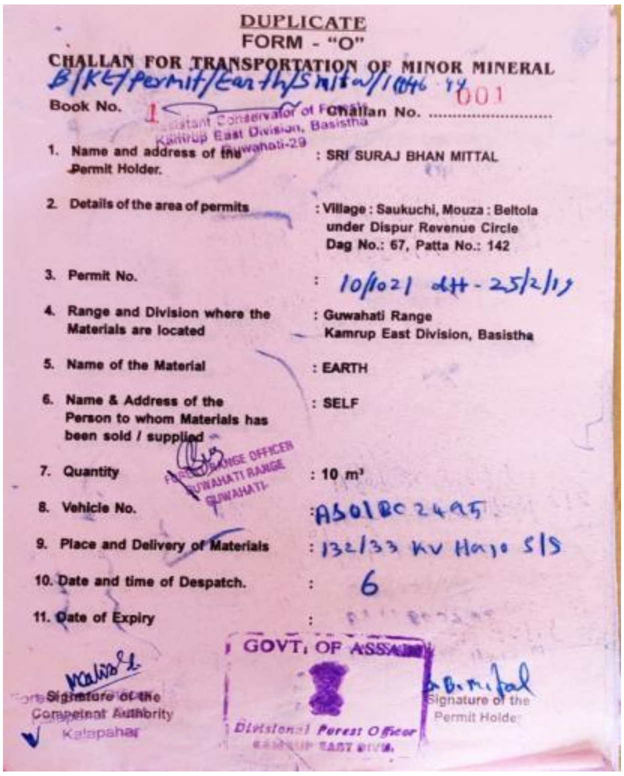




Verification of Documents of land owner/affected person for online transfer of compensation amount

Appendix- 5: Details of Borrow Area Management /Improvement

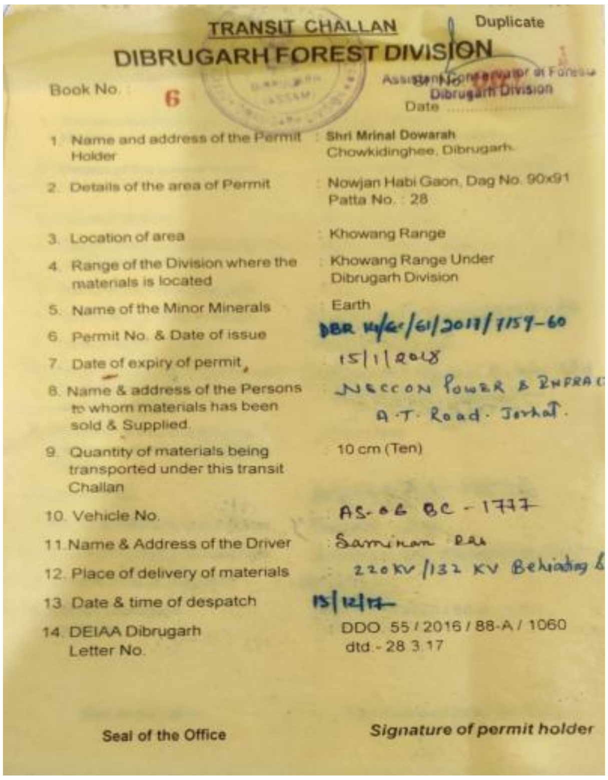
Sl No.	Name of Substation	Total Volume (m^3)	Coordinates	Source
Assam				
1	132/33 kV Tangla	7040	26°39'54.65"N 91°54'02.66"E	Site developed as pond after due consent/agreement with land owner.
2.	220/132 kV Behiating	20550	27°18' 44.57"N 94°53' 15.54"E	Existing/registered borrow site
3.	132/33 kV Sarupather	8000	26°13' 8.01"N 93°50' 57.4"E	Existing/registered borrow site
4.	132/33 kV Silapather	13396	27°32'18.67"N 94°42'39.49"E	Site developed as pond after due consent/agreement with land owner.
5.	132/33 kV Chapakhowa	10955	27°55'27.73"N 95°42'58.64"E	Site developed after due consent/ agreement with land owner.
6	132/33 kV Tezpur	14186	26°45'02.9"N 92°50'04.2"E	Site developed as pond after due consent/agreement with land owner.
7	132/33 kV Teok	10405	26°43'37.98"N 94°37'08.88"E	Existing/registered borrow site
8	132/33 kV Hazo	13400	26° 8' 29.02" 91° 35' 8.82"	Existing/registered borrow site
9	132/33 kV GMC	9100		
10.	132/33 kV Paltan Bazaar	2265		
Meghalaya				
1	33 kV Mawkynrew	1068	25º24’47.89” N 91º59’52.16” E	Community land utilized for development of road in agreement with community.
Tripura				
1.	132/33kV Mohanpur	1344	23º57’0.57’’ N 91º23’4.05” E	Borrowed earth from private land with due consent from land owner.
2.	132/33kV Rabindranagar	814	23º27’35.76’’ N 91º16’22.36’’ E	
3	33/11kV Golaghati	3182	23º41’47.50” N 91º21’59.80’’ E	
4	132/33kV Jirania Ext.	450	23°48'32.40"N 91°26'09.60"E	
Manipur				
1.	Andro SS	7404	24°45' 58"N 94°14'26"E	Borrowed earth from private land with due consent from land owner
2.	33/11 kV Hiyangthang	4345	24°46'49.44"N 93°47'24.87"E	
3	Lamphel SS	3357	24°46'49.44"N 93°47'24.87"E	
4	Top-Khongnangkhong	2429	24°47'47.68"N 93°59'33.88"E	
5	Kwakta	571	24°46' 56.11"N 93°52' 11.47"E	
6	Sanjenbam 33/11	3894	24°49'38.43"N 94°21'18"E	



DUPLICATE
FORM - "O"
CHALLAN FOR TRANSPORTATION OF MINOR MINERAL
B/KE/Permit/Earth/SMital/1046-47
Book No. 1   Challan No. 001

1. Name and address of the Permit Holder.	: SRI SURAJ BHAN MITTAL
2. Details of the area of permits	: Village : Saukuchi, Mouza : Beltola under Dispur Revenue Circle Dag No.: 67, Patta No.: 142
3. Permit No.	: 10/1021 dt- 25/2/17
4. Range and Division where the Materials are located	: Guwahati Range Kamrup East Division, Basistha
5. Name of the Material	: EARTH
6. Name & Address of the Person to whom Materials has been sold / supplied	: SELF
7. Quantity	: 10 m³
8. Vehicle No.	: AS01BC2495
9. Place and Delivery of Materials	: 132/33 KV Hajo S/S
10. Date and time of Despatch.	: 6
11. Date of Expiry	:

Signature of the Competent Authority
GOVT. OF ASSAM
Divisional Forest Officer
Signature of the Permit Holder

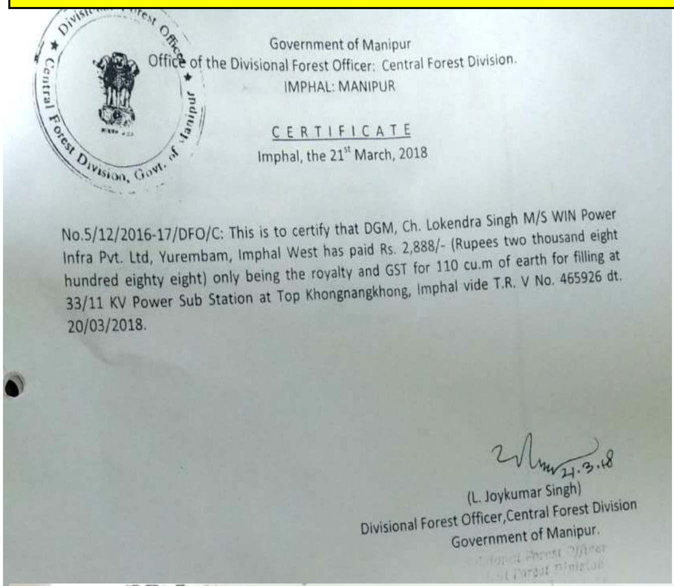


TRANSIT CHALLAN   Duplicate
DIBRUGARH FOREST DIVISION
Book No. 6   Date

1. Name and address of the Permit Holder	Shri Mrinal Dowarah Chowkidinghee, Dibrugarh
2. Details of the area of Permit	Nowjan Habi Gaon, Dag No. 90x91 Patta No. : 28
3. Location of area	Khowang Range
4. Range of the Division where the materials is located	Khowang Range Under Dibrugarh Division
5. Name of the Minor Minerals	Earth
6. Permit No. & Date of issue	DBR W/G/61/2017/7159-60
7. Date of expiry of permit	15/1/2018
8. Name & address of the Persons to whom materials has been sold & Supplied	NECCON POWER & INFRA A.T. Road. Jorhat.
9. Quantity of materials being transported under this transit Challan	10 cm (Ten)
10. Vehicle No.	AS-06 BC-1777
11. Name & Address of the Driver	Samiran Rai
12. Place of delivery of materials	220kV/132 KV Behiating
13. Date & time of despatch	15/12/17
14. DEIAA Dibrugarh Letter No.	DDO 55/2016/88-A/1060 dtd.- 28.3.17

Seal of the Office   Signature of permit holder

Sample of Transit challan of borrowed earth for 132/33 kV Hazo & 132/33 kV Sarupathar Substation

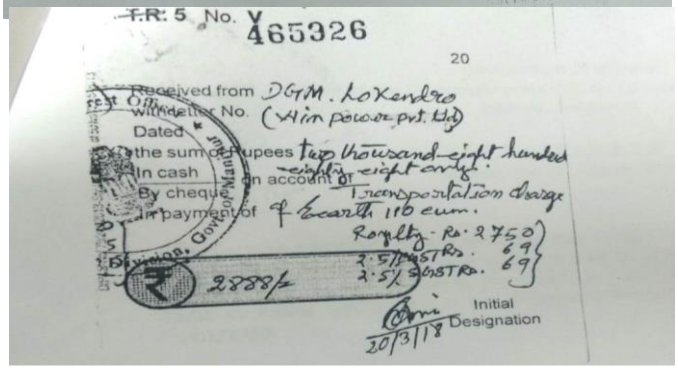


Government of Manipur
Office of the Divisional Forest Officer: Central Forest Division.
IMPHAL: MANIPUR

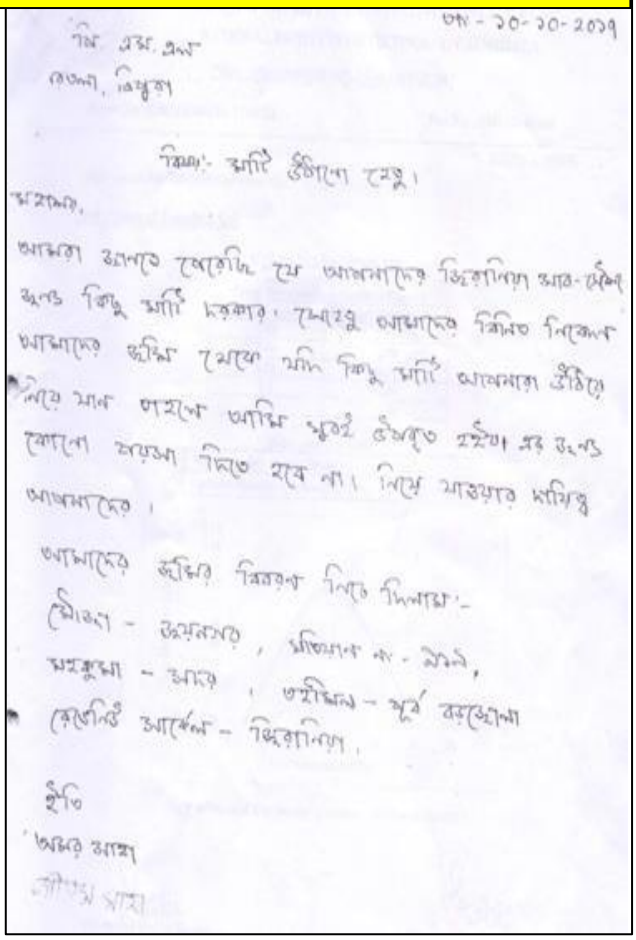
CERTIFICATE
Imphal, the 21st March, 2018

No.5/12/2016-17/DFO/C: This is to certify that DGM, Ch. Lokendra Singh M/S WIN Power Infra Pvt. Ltd, Yurembam, Imphal West has paid Rs. 2,888/- (Rupees two thousand eight hundred eighty eight) only being the royalty and GST for 110 cu.m of earth for filling at 33/11 KV Power Sub Station at Top Khongnangkhong, Imphal vide T.R. V No. 465926 dt. 20/03/2018.

(L. Joykumar Singh)
Divisional Forest Officer, Central Forest Division
Government of Manipur.



T.R. 5 No. V 465326
Received from DGM. Lokendro (Win power pvt. ltd)
the sum of Rupees two thousand eight hundred eighty eight only
In cash / By cheque / in account of Transportation charge in payment of Earth 110 cum.
Royalty - Rs. 2750
2.5% SGST Rs. 69
2.5% CGST Rs. 69
₹ 2888/-
Initial Designation
20/3/18



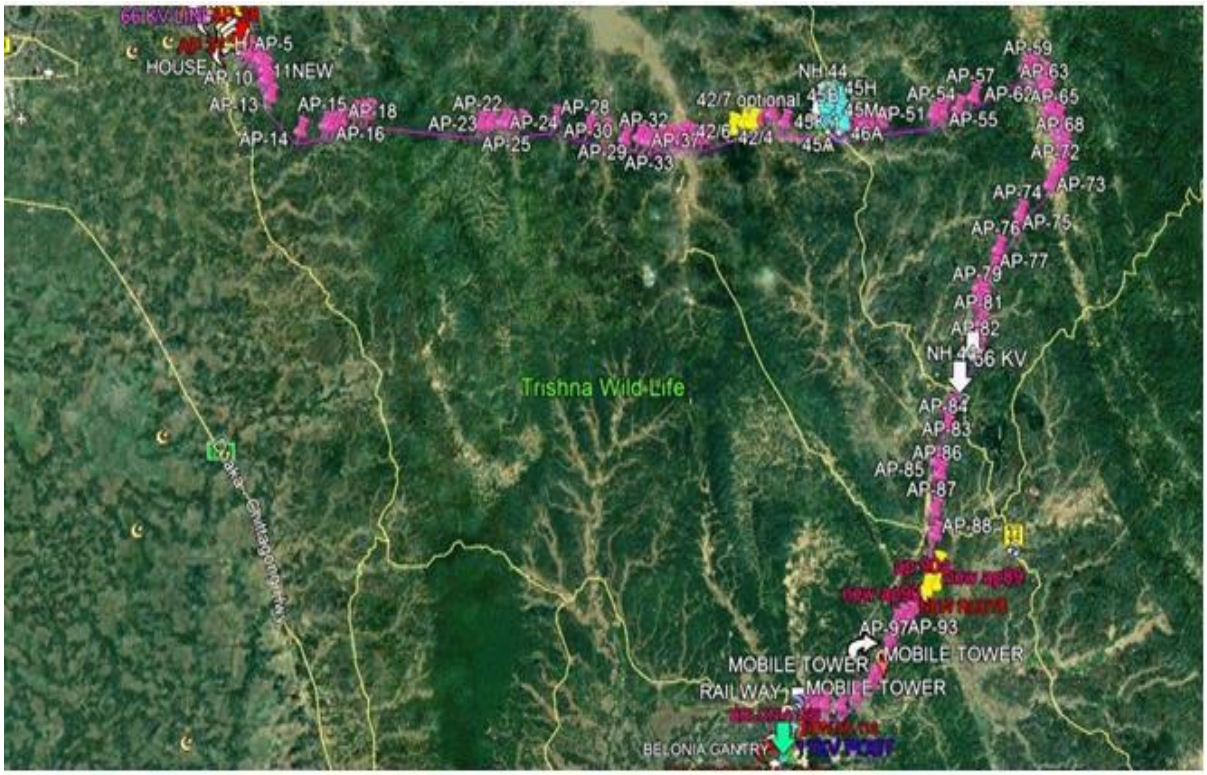
Consent from land owner for Borrowed Earth

Development of Borrow Area into a Pond as desired by Local Villagers near 132/33 KV Tezpur Substation

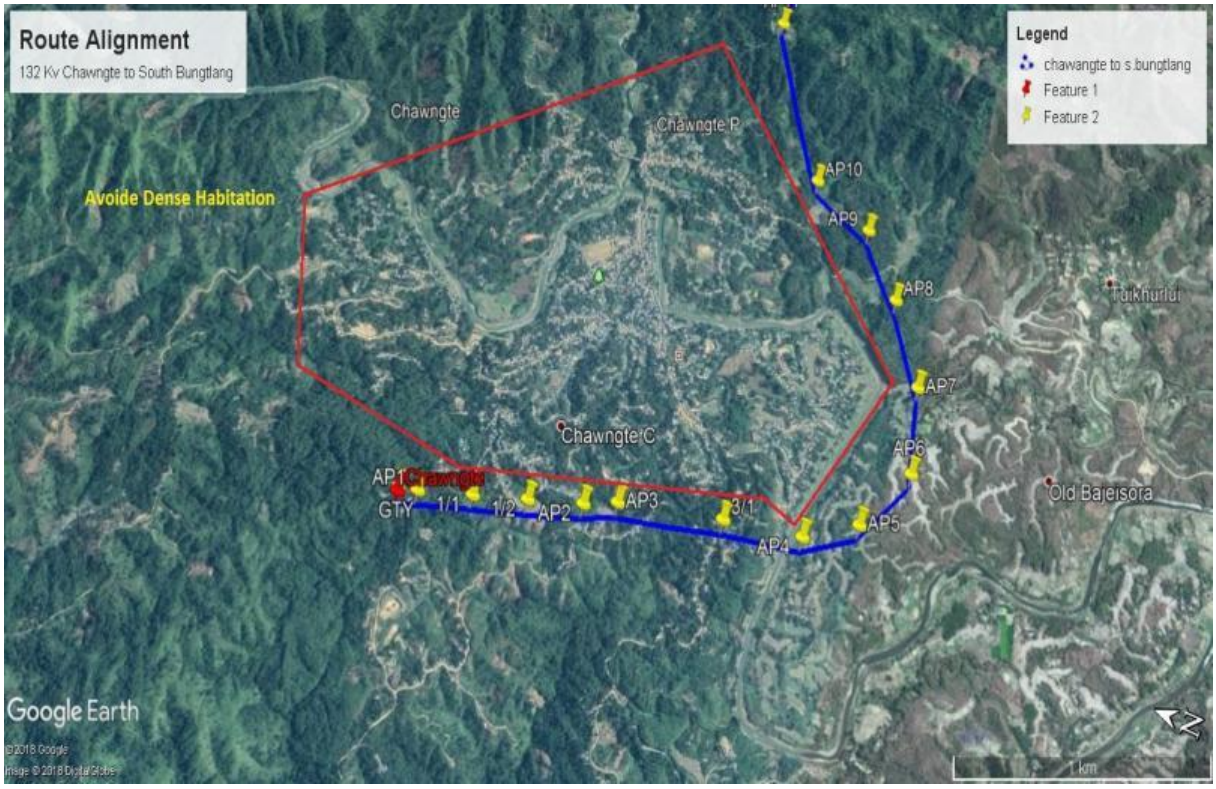
Borrow Earth Site for Lamphel & Andro site in Manipur

Plate 7: Avoidance of Environmentally and Socially Sensitive Areas

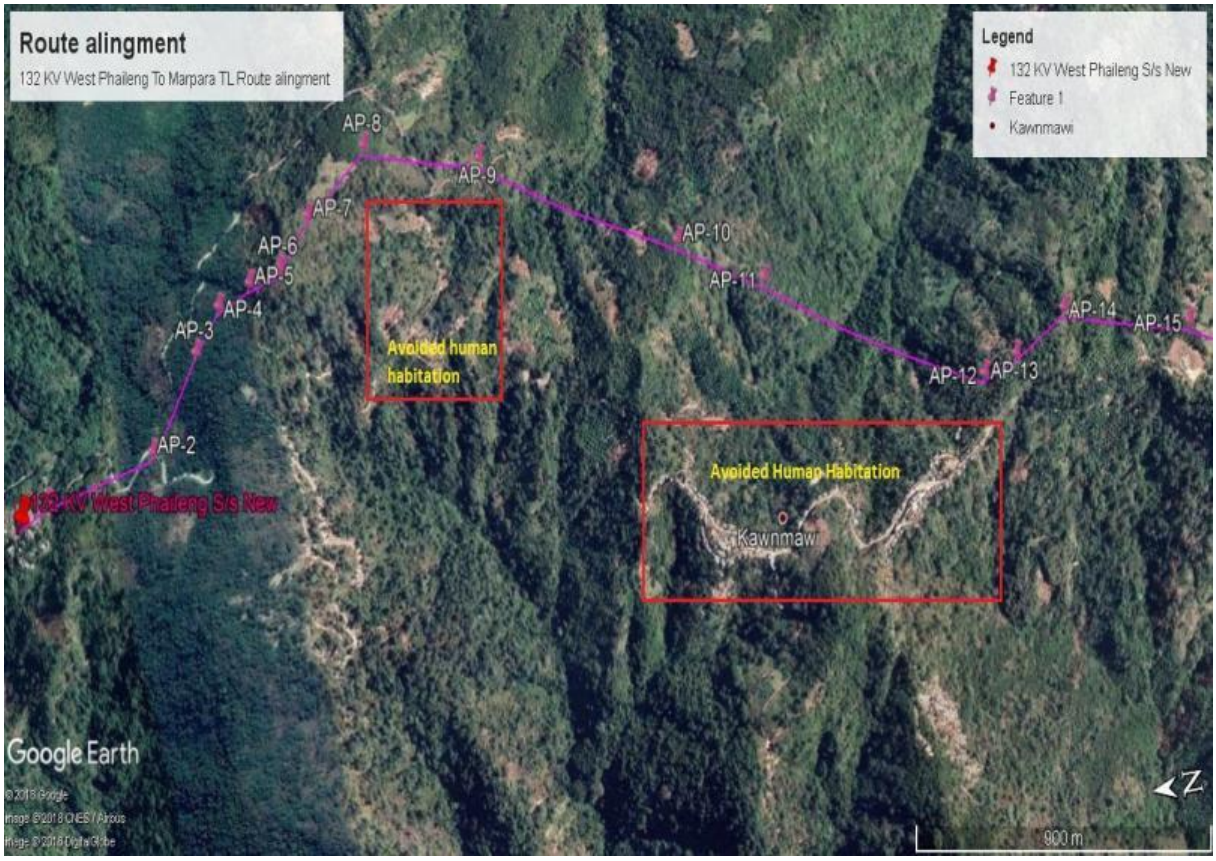
Avoidance of Human Habitation & Tree Felling in Dhemaji-Silapather 132kV line in Assam



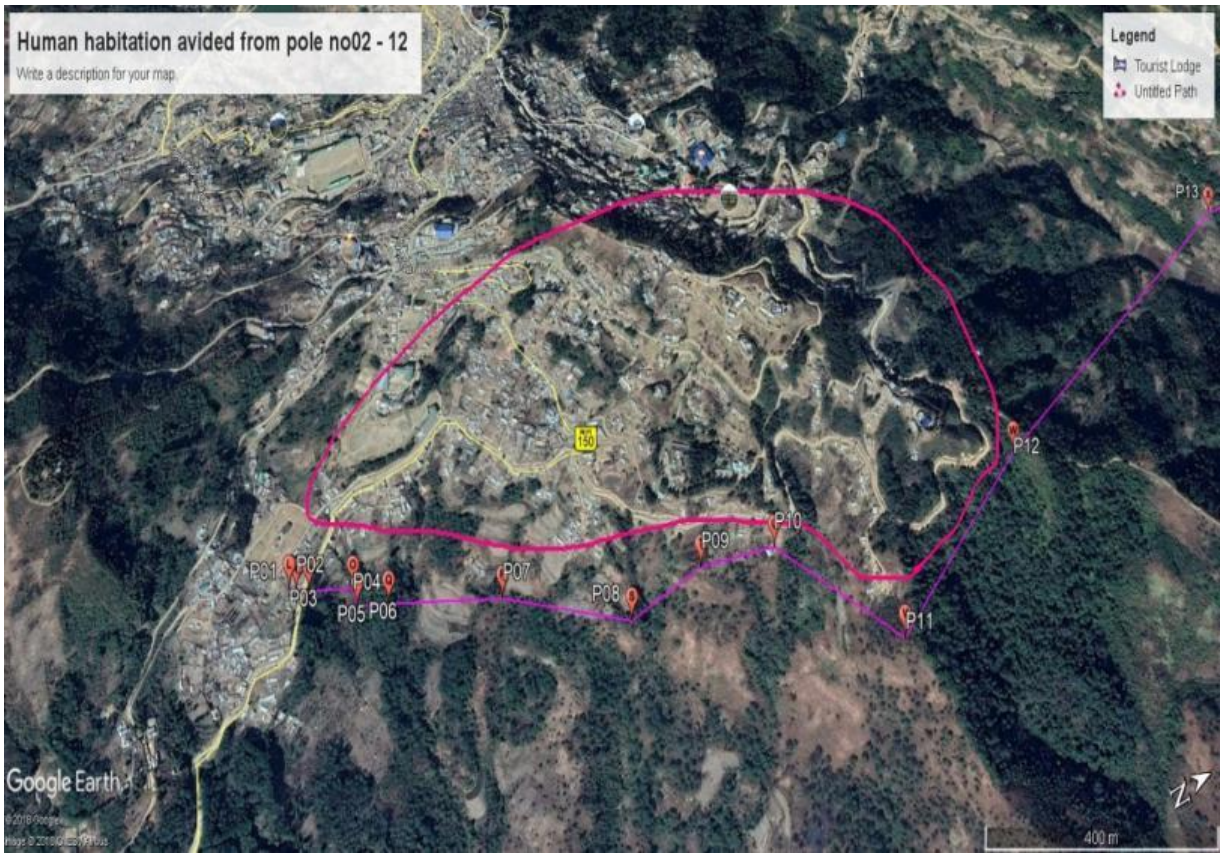
Complete Avoidance of Trishna Wildlife Sanctuary by adopting even more circuitous route (AP-14 to AP-109)for Rabindranagar- Belonia 132kV line in Tripura

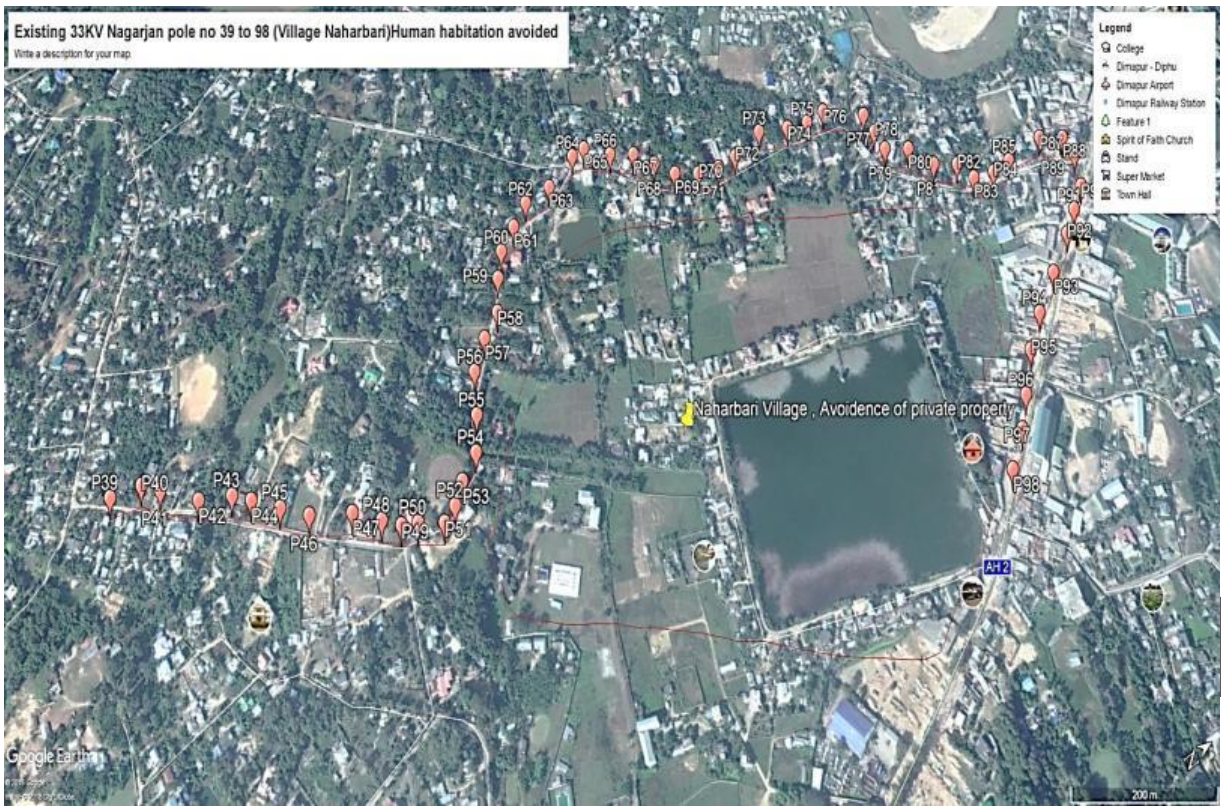


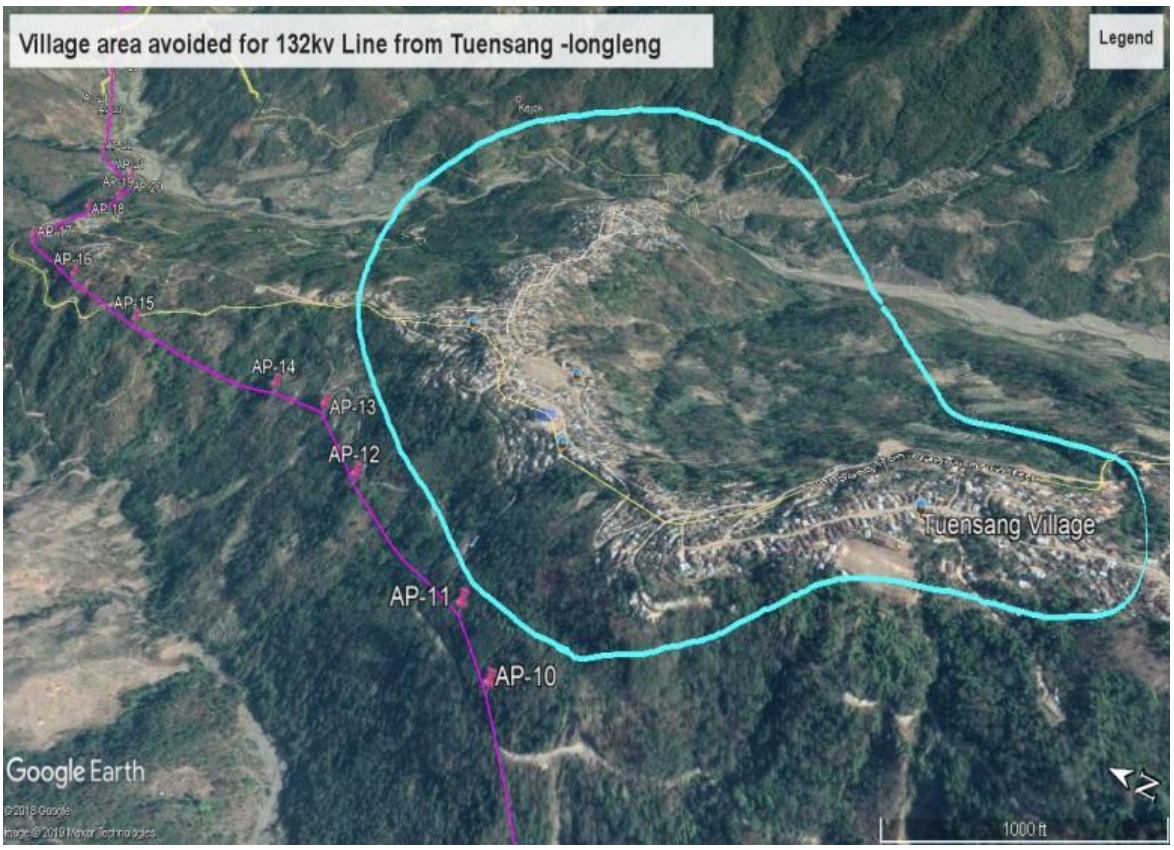
Avoidance of dense habitation area (AP-1 to AP-15) for Chawngte-S. Bungtlang 132kV line in Mizoram



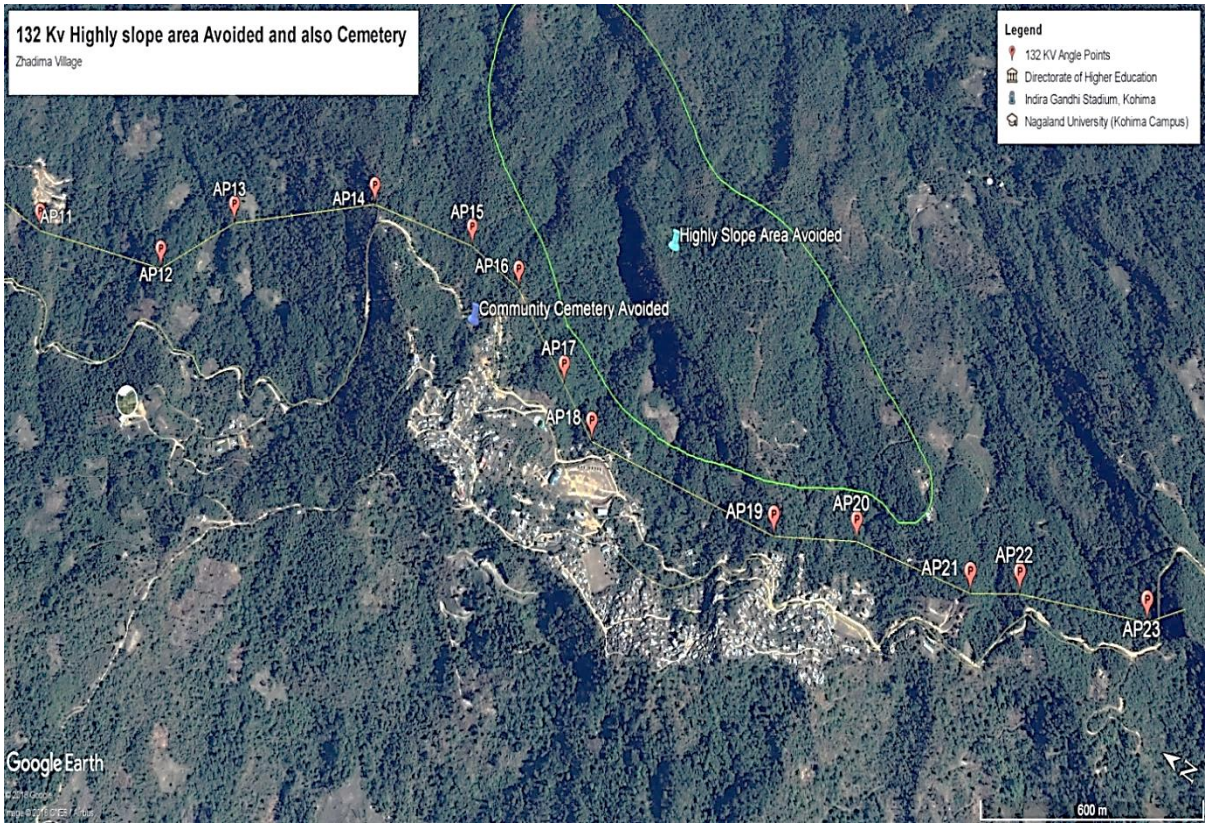
Avoidance of habitation area (AP-1 to AP-16) for West Phaileng- Marpara 132kV line in Mizoram


Human habitation avided from pole no02 - 12
Write a description for your map
Legend
Tourist Lodge
Untitled Path
P01
P02
P03
P04
P05
P06
P07
P08
P09
P10
P11
P12
P13
160
Google Earth
400 m


Existing 33KV Nagarjan pole no 39 to 98 (Village Naharbari)Human habitation avoided
Write a description for your map
Legend
College
Dimapur - Diphu
Dimapur Airport
Dimapur Railway Station
Feature 1
Spirit of Faith Church
Stand
Super Market
Town Hall
Naharbari Village , Avoidence of private property
AH 2
Google Earth
200 m



Avoidance of habitation area for Tuensang – Longleng Complex 132kV line in Nagaland



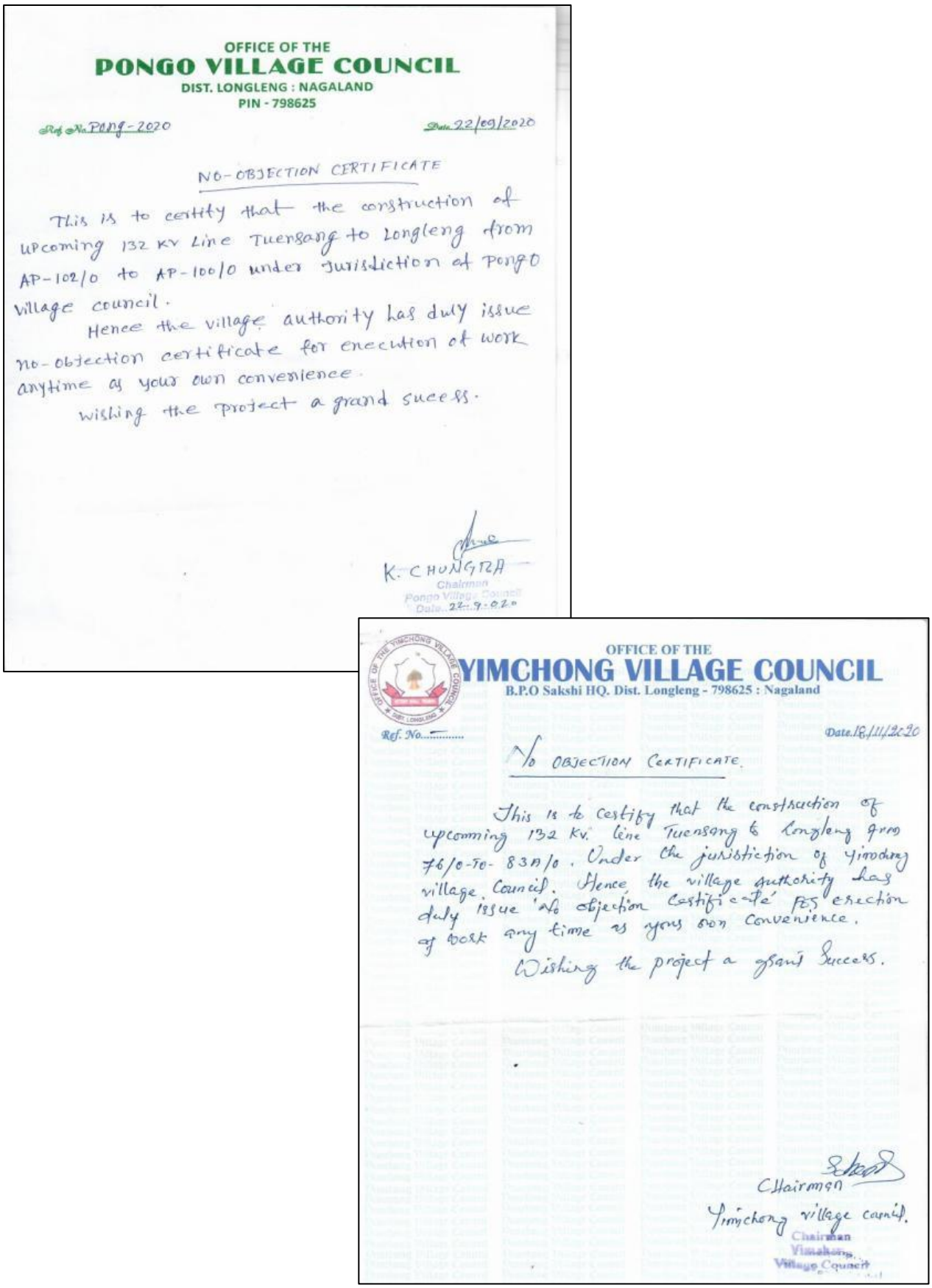
Avoidance of Steep slope area and Cemetery (AP-14 to AP-24) for New Kohima – New Secretariat Complex 132kV line in Nagaland

Plate 8 : Sample Photos of Integrated Drainage and Sewage Management Measures at Substation

Septic Tank & Soak Pit at 33/11 Lalmati substation, Nagaland

Integrated Drainage System at 33/11 Lalmati substation,

Plate 9 : NoC/Consent from ADC/VDC/Land Owners



OFFICE OF THE
PONGO VILLAGE COUNCIL
DIST. LONGLENG : NAGALAND
PIN - 798625

Ref. No. PONG-2020 Date 22/09/2020

NO-OBJECTION CERTIFICATE

This is to certify that the construction of upcoming 132 KV Line Tuensang to Longleng from AP-102/0 to AP-100/0 under jurisdiction of Pongo village council.

Hence the village authority has duly issue no-objection certificate for execution of work anytime as your own convenience.

Wishing the protect a grand success.

K. CHUNGTA
Chairman
Pongo Village Council
Date 22-9-020

OFFICE OF THE
YIMCHONG VILLAGE COUNCIL
B.P.O Sakshi HQ. Dist. Longleng - 798625 : Nagaland

Ref. No.....

Date 18/11/2020

N/O OBJECTION CERTIFICATE

This is to certify that the construction of upcoming 132 KV. line Tuensang to Longleng from 76/0-TO-83A/0. Under the jurisdiction of Yimchong village Council. Hence the village authority has duly issue 'No objection Certificate' for erection of work any time as your own convenience.

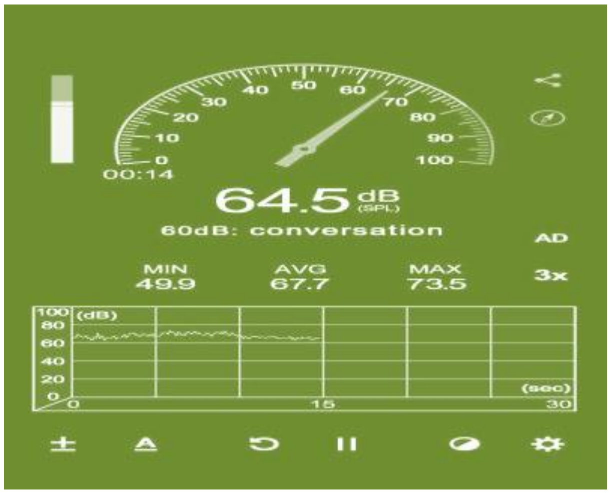
Wishing the project a grand success.

Chairman
Yimchong village council.

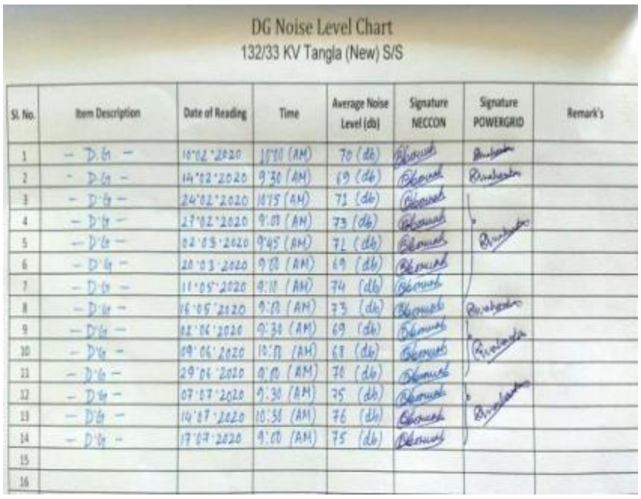
Chairman
Yimchong
Village Council

Plate- 10 Noise & Water Test Report at Different Construction Sites

Noise Level Measured at 132/33 KV New Secretariat complex S/s (Tripura)



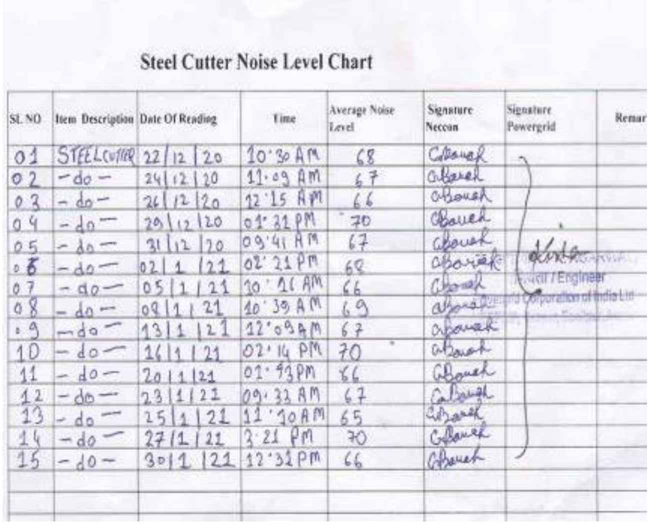
Noise monitoring done for Cutter machine at 132/33 kV Hazo SS, Assam



DG Noise Level Chart
132/33 KV Tangla (New) S/S

Sl. No.	Item Description	Date of Reading	Time	Average Noise Level (db)	Signature NECCON	Signature POWERGRID	Remark's
1	D.G	10.02.2020	10:10 (AM)	70 (db)			
2	D.G	14.02.2020	9:30 (AM)	69 (db)			
3	D.G	24.02.2020	10:15 (AM)	71 (db)			
4	D.G	27.02.2020	9:00 (AM)	73 (db)			
5	D.G	02.03.2020	9:45 (AM)	71 (db)			
6	D.G	20.03.2020	9:10 (AM)	69 (db)			
7	D.G	11.05.2020	9:10 (AM)	74 (db)			
8	D.G	16.05.2020	9:10 (AM)	73 (db)			
9	D.G	02.06.2020	9:30 (AM)	69 (db)			
10	D.G	09.06.2020	10:10 (AM)	68 (db)			
11	D.G	29.06.2020	9:10 (AM)	70 (db)			
12	D.G	07.07.2020	9:30 (AM)	75 (db)			
13	D.G	14.07.2020	10:30 (AM)	76 (db)			
14	D.G	17.07.2020	9:00 (AM)	75 (db)			
15							
16							

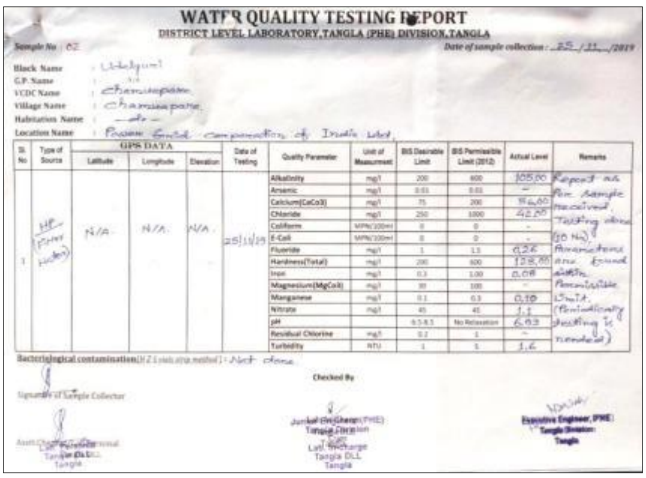
Noise Level Data near DG Set at 132/33 KV Tangla SS (Assam)



Steel Cutter Noise Level Chart

Sl. NO	Item Description	Date Of Reading	Time	Average Noise Level	Signature Neccon	Signature Powergrid	Remar
01	STEEL CUTTER	22/12/20	10:30 AM	68			
02	-do-	24/12/20	11:09 AM	67			
03	-do-	26/12/20	12:15 AM	66			
04	-do-	29/12/20	01:32 PM	70			
05	-do-	31/12/20	09:41 AM	67			
06	-do-	02/1/21	02:21 PM	68			
07	-do-	05/1/21	10:41 AM	66			
08	-do-	08/1/21	10:39 AM	69			
09	-do-	13/1/21	12:09 AM	67			
10	-do-	16/1/21	02:14 PM	70			
11	-do-	20/1/21	01:43 PM	66			
12	-do-	23/1/21	09:33 AM	67			
13	-do-	25/1/21	11:10 AM	65			
14	-do-	27/1/21	3:21 PM	70			
15	-do-	30/1/21	12:32 PM	66			

Noise Level Data near Batching Plant at 132/33 KV Tezpur S/s (Assam)



WATER QUALITY TESTING REPORT
DISTRICT LEVEL LABORATORY, TANGLA (PHE) DIVISION, TANGLA

Sample No : 02
Date of sample collection : 25/11/2019

Block Name : Udalguri
G.P. Name :
VCDC Name : Chamuapara
Village Name : Chamuapara
Habitation Name : -do-
Location Name : Power Grid Corporation of India Ltd.

Sl. No	Type of Source	GPS DATA Latitude	Longitude	Elevation	Date of Testing	Quality Parameter	Unit of Measurement	BIS Desirable Limit	BIS Permissible Limit (2012)	Actual Level	Remarks
1	HP (PHE holder)	N/A	N/A	N/A	25/11/19	Alkalinity	mg/l	200	600	105.00	Report as per sample received. Testing done (10 Nos) Parameters are found within Permissible Limit. (Periodically testing is needed)
						Arsenic	mg/l	0.01	0.01	-	
						Calcium(CaCo3)	mg/l	75	200	56.00	
						Chloride	mg/l	250	1000	42.00	
						Coliform	MPN/100ml	0	0	-	
						E-Coli	MPN/100ml	0	0	-	
						Fluoride	mg/l	1	1.5	0.26	
						Hardness(Total)	mg/l	200	600	128.00	
						Iron	mg/l	0.3	1.00	0.08	
						Magnesium(MgCo3)	mg/l	30	100	-	
						Manganese	mg/l	0.1	0.3	0.10	
						Nitrate	mg/l	45	45	1.1	
						pH		6.5-8.5	No Relaxation	6.03	
						Residual Chlorine	mg/l	0.2	1	-	
						Turbidity	NTU	1	5	1.6	

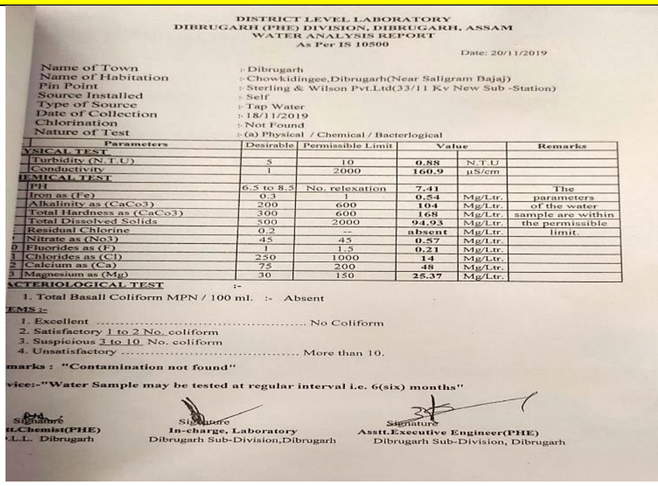
Bacteriological contamination [H2S vials strip method] : Not done

Checked By

Signature of Sample Collector

Asstt. Chemist / Lab. Personnel, Tangla DLL, Tangla
Junior Engineer (PHE), Tangla Division; Lab. In-charge, Tangla DLL, Tangla
Executive Engineer, PHE, Tangla Division, Tangla

Drinking Water Quality Test Report of 132/33 KV Tangla SS (Assam)



DISTRICT LEVEL LABORATORY
DIBRUGARH (PHE) DIVISION, DIBRUGARH, ASSAM
WATER ANALYSIS REPORT
As Per IS 10500

Date: 20/11/2019

Name of Town :- Dibrugarh
Name of Habitation :- Chowkidingee, Dibrugarh(Near Saligram Bajaj)
Pin Point :- Sterling & Wilson Pvt.Ltd(33/11 Kv New Sub -Station)
Source Installed :- Self
Type of Source :- Tap Water
Date of Collection :- 18/11/2019
Chlorination :- Not Found
Nature of Test :- (a) Physical / Chemical / Bacterlogical

	Parameters	Desirable	Permissible Limit	Value		Remarks
	PHYSICAL TEST					
	Turbidity (N.T.U)	5	10	0.88	N.T.U	
	Conductivity	1	2000	160.9	µS/cm	
	CHEMICAL TEST					
[illegible]	PH	6.5 to 8.5	No. relexation	7.41		The parameters of the water sample are within the permissible limit.
[illegible]	Iron as (Fe)	0.3	1	0.54	Mg/Ltr.	
	Alkalinity as (CaCo3)	200	600	104	Mg/Ltr.	
	Total Hardness as (CaCo3)	300	600	168	Mg/Ltr.	
	Total Dissolved Solids	500	2000	94.93	Mg/Ltr.	
	Residual Chlorine	0.2	--	absent	Mg/Ltr.	
9	Nitrate as (No3)	45	45	0.57	Mg/Ltr.	
10	Fluorides as (F)	1	1.5	0.21	Mg/Ltr.	
11	Chlorides as (Cl)	250	1000	14	Mg/Ltr.	
12	Calcium as (Ca)	75	200	48	Mg/Ltr.	
13	Magnesium as (Mg)	30	150	25.37	Mg/Ltr.	

BACTERIOLOGICAL TEST :-
1. Total Basall Coliform MPN / 100 ml. :- Absent

ITEMS :-
1. Excellent .... No Coliform
2. Satisfactory 1 to 2 No. coliform
3. Suspicious 3 to 10 No. coliform
4. Unsatisfactory .... More than 10.

Remarks : "Contamination not found"

Advice:-"Water Sample may be tested at regular interval i.e. 6(six) months"

Signature, Asstt.Chemist(PHE), D.L.L. Dibrugarh
Signature, In-charge, Laboratory, Dibrugarh Sub-Division, Dibrugarh
Signature, Asstt.Executive Engineer(PHE), Dibrugarh Sub-Division, Dibrugarh

Drinking Water Quality Test Report of 33/11 KV Dibrugarh SS (Assam)

Plate- 11: Community/Villagers Safety

Display of Signage Board

Proper Barricading of Work Area

Safety Awareness and Information dissemination before start of work

Plate -12 : Permission/Way Leave for Rail/Road Crossing & UG Cable lying work

GOVERNMENT OF ASSAM
OFFICE OF THE EXECUTIVE ENGINEER PWD (ROADS)
NORTH GUWAHATI STATE ROAD DIVISION AMINGAON, GUWAHATI-31

NO.NGSDD/Com-58/ /19-20

Date : 2 / 11 / 2019

To,

The General Manager,
NERPSHIP PM-II, Guwahati

Sub : Permission for excavation on the Road for laying of 132 KV underground power cable under North East Regoinal Power System Improvement Project (NERPSIP) at Guwahati

Ref :
i) Your letter no NERPSIP/GHY/1024/PWD/2019/2221 dated 23.09.2019
ii) Our letter no NGSRD/Com-35/1016 dated 30/08/2019
iii) The Superintending Engineer,PWRD, Guwahati ARIASP Circle letter no ARIASP/Misc-74/1762 dated 23/09/2019
iv) The Managing Director, Guwahati Metropolitan Drinking Water & Sewerage Board letter no GJB/GEN/37/2017/295 dated 01/11/2019

Sir,

With reference to the above, I am to inform you that as per the discussion in the meeting held on 6th November, 2019 in the Office Chamber of the Addl. Chief Secretary, Guwahati Development Department and as directed by Superintending Engineer, PWRD, Guwahati ARIASP Circle, the necessary permission for laying underground power cable from Panbazar Fly-Over Police point to Kamakhya Gate on A.T Road (Ch 0.00 m to Ch 3900.00 m) is hereby accorded subject to the following terms and conditions.

Terms & Conditions:

1. The laying of underground cable will be as per the specification of the concerned department.
2. During laying of cables, the traffic control management will be arranged from your end.
3. During laying of cables, the safety of other underground utility service should be maintained from your end.
4. Restoration of the road upto the pre digging status must be taken up immediately from your end.
5. No construction materials and debris should be dumped within the Right of Way of the road.
6. During construction/repair of the road on later stages, if any damage occurs to the underground cables, the Public Works Department will not be responsible for the same.
7. The NOC is subject to no objection from other statutory organization such as District Administration, District Police Authority, PHE/APDCL etc.

Yours faithfully,

Executive Engineer,PWD,(R)
North Guwahati State Road Division,
Amingaon,Guwahati-31
dated : /11/2019

Memo no:NGSRD/Com-58/
Copy to:
1. The Superintending Engineer, PWRD, Guwahati ARIASP Circle, Guwahati-21 for favour of kind information.
2. The Asstt. Executive Engineer, PWD, Guwahati State Road Sub Division-II, Guwahati-01 for information and necessary action.

Executive Engineer,PWD,(R)
North Guwahati State Road Division,
Amingaon,Guwahati-31

OFFICE OF THE DEPUTY COMMISSIONER OF POLICE, TRAFFIC GUWAHATI, ASSAM

Memo No.: - GTP / DCP (Tr.) / 2020 / 10 / 69 , Dated: 29.01.2020

To

The Chief Manager,
Power Grid Corporation of India Limited,
Guwahati.

Sub: - Underground cable laying works at Kamakhya – Paltanbazar Road – regarding.

Ref: - NERPSIP/GHY/UG cables/Traffic/2020 dated: 29.01.2020.

Sir,

With reference to the subject cited above, it is requested that the cable laying work may be done only during the night hours after 10.00 pm in view of the heavy traffic on that route. Further, all necessary precautions should be taken and signages put up for safety and security of the road uses and workers.

Yours Sincerely

Deputy Commissioner of Police, Traffic,
Guwahati, Assam

Memo No.: - GTP / DCP (Tr.) / 2020 / 10 / , Dated: .01.2020

Copy for information and necessary action to:

1) Inspectors of Traffic, Panbazar/Pandu Divisions.
2) In-charges, Traffic, Paltanbazar/Panbazar/Bharalumukh/Jalukbari P.Ss

Deputy Commissioner of Police, Traffic,
Guwahati, Assam

Plate -13: Photographs of various measures undertaken at construction Sites in response to COVID-19 pandemic

	
Thermal Scanning at 33 kV Langdum – Andro Line (Manipur)	**Thermal Scanning at 33 kV Moirang - Kwakta Line (Manipur)**
	
Thermal scanning of workers at 132/33 kV Tangla Line (Mizoram)	**Thermal scanning of workers at Marpara (Mizoram)**
	
COVID Awareness at 33/11 kV Pishum (GIS) (Manipur)	**COVID Awareness at 132/33 kV Tangla New, Assam**

	
COVID Awareness at 132/33 kV West Phaileng (Mizoram)	**COVID Awareness at 132 kV West Phaileng- Marpara T/L(Mizoram)**
	
Sanitization of construction site at 132/33 kV Tangla , Assam	**Sanitization of labour camp at 132/33 kV Tangla , Assam**
	
Sanitization Of Office at 132/33 kV Gamphajol, Manipur	**Sanitization Of Labour Camp at 132/33 kV Gamphajol, Manipur**

	
Food items distributed to stranded labours during Covid-19 lockdown at Mawngap GIS Substation (Meghalaya)	**Awareness program and distribution of hand sanitizer & masks to workers at LILO of 132 kV D/C MLHEP-Khliehriat line (Meghalaya)**
	
COVID awareness at 132/33kV Mokokchung (Nagaland)	**COVID awareness at 132/33kV Gokulnagar (Tripura)**