

3RD SEMI-ANNUAL ENVIRONMENT & SOCIAL SAFEGUARD MONITORING REPORT

(Reporting Period: July, 2019 to December, 2019)

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)

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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 publically disclosed. The present Semi-Annual Safeguard Monitoring report enlisting details of compliance of various E & S safeguard measures for period July-December, 2019 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 417.885 ha. (approx. 149.90 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 substation, 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. 7.73 million were paid to 235 affected farmers/land owners till reporting period. Similarly, a total amount of Rs. 77.58 million has already been paid to 552 affected persons/land owners towards diminution of land value.

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.

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 compliants 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 2019 only of 3 cases out of total 14 complaints remains 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 3606 persons participated in safeguard consultation process including 808 female participants, which is approx. 22.40% 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 publically disclosed. The present Semi-Annual Safeguard Monitoring report covering the detail status of compliance of various E & S safeguard indicators for period July-December 2019 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'19 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 31Dec.'19
ASSAM						
1	TW 02	1 no. 220 kV Line (55 km)	10 Oct' 17	Apr'20	Dec'20	42%
2	TW 04	1 no. 132 kV line (36 km)	8 Sept'17	Mar'20	Dec'20	32%
3	TW 05	1 no. 132 kV line (53 km)	1 Sept'17	Mar'20	Dec'20	43%
4	TW 07	1 no. 220 kV (33 km) & 7 nos. 132kV line (53 km)	30 May'18	Nov'20	Dec'20	8%
5	P 01	Pile foundations	18 Sept'17	Mar'20	Mar'20	46%
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	Dec'20	56%
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	Dec'20	50%

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.

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	Dec'20	44%
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	Dec'20	35%
10	DMS 01	4 nos. new 33/11kV substation & 7 nos. 33 kV lines (119 km).	20 Oct'16	Jun'19	Dec'20	55%
11	DMS 02	3 nos. new 33/11kV substation & 11 nos. 33 kV lines (146 km)	23 Dec'16	Jul'19	Dec'20	45%
12	DMS 03	5 nos. new 33/11kV substation & 9 nos. 33 kV lines (134 km)	23 Dec'16	Sept.'19	Dec'20	40%
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	46%
MANIPUR						
14	TW 06	4 nos. 132 kV line (85 km) & renovation of 1 no. existing 132 kV line (91 km) and stringing of 2 nd circuit in exi. 132kV line (78 km)	31 May'18	Nov'20	Nov'20	20%
15	SS 01	1 no. new 132/33kV & 2 nos. Ext./Aug. of substations.	3 Jan'18	July'20	Nov'20	18%
16	SS 02	4 nos. Ext. & 1 no. Aug. of 132/33 kV substation.	8 Dec'17	Jun'20	Jun'20	20%
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	12%
18	DMS 01	7 nos. new 33/11kV substation & 7 nos. 33 kV lines (68 km)	3 Mar'17	Dec'19	Jun'20	52%
19	DMS 02	2 nos. new 33/11kV substation & 2 nos. 33 kV lines (20 km)	16 Dec'16	Sep'19	Jun'20	65%
20	DMS 03	2 nos. new 33/11kV substation & 2 nos. 33 kV lines (23 km)	18 Mar'16	Dec'18	Mar'20	90%
21	DMS 04	2 nos. new 33/11kV substation & 2 nos. 33 kV lines (20 km)	18 Mar'16	Dec'18	Mar'20	90%
MEGHALAYA						
22	TW 01	1 no. 220kV line (122 km)	29 Jun'16	Jun'19	Dec'20	42%
23	TW 02	2 nos. 132kV line (103 km)	29 Jun'16	Jun'19	Dec'20	70%
24	SS 01	2 nos. new & 1 no. Ext. of 132/33 kV substation.	12 Aug'16	Aug'19	Dec'20	55%

25	SS 02	2 nos. new 1 no. Ext. of 220/132 kV substation	6 Jun''16	Jun'19	Dec'20	58%
26	DMS 01	4 nos. new 33/11kV substation & 4 nos. 33 kV lines (56 km)	13 July'16	Apr'19	Dec'20	67%
27	DMS 02	3 nos. new 33/11kV substation & 6 nos. 33 kV lines (63 km)	27 May'16	Feb'19	Jun'20	67%
28	DMS 03	4 nos. new 33/11kV substation & 7 nos. 33 kV lines (79 km)	17 May'16	Feb'19	Dec'20	69%
TRIPURA						
29	TW 01	4 nos.132 kV lines (87 km)	12 June'17	Feb'20	Dec'20	7%
30	TW 02	5 nos.132 kV lines(112 km)	12 June'17	Feb'20	Dec'20	9%
31	TW 03	5 nos.132 kV lines (62 km)	12 June'17	Feb'20	Dec'20	7%
32	SS 01	4 nos. new 132/33 kV substation.	4 Nov'16	Nov'19	Dec'20	53%
33	SS 02	2 nos. new & 1 each Ext. and Aug. of 132/33 kV substation.	4 Nov'16	Nov'19	Dec'20	52%
34	SS 03	3 nos. new & 1 no. Ext. & 3 nos. Aug. of 132/33 kV substation.	4 Nov'16	Nov'19	Dec'20	47%
35	DMS 01	7 nos. new 33/11kV substation & 9 nos. 33 kV lines (121 km)	20 Feb'17	Nov'19	Dec'20	35%
36	DMS 02	6 nos. new 33/11kV substation & 11 nos. 33 kV lines (181 km)	20 Jan'17	Oct'19	Dec'20	35%
37	DMS 03	5 nos. new 33/11kV substation & 11 nos. 33 kV lines (137 km)	20 Feb'17	Nov'19	Dec'20	30%
38	DMS 04	10 nos. new 33/11kV substation & 17 nos. 33 kV lines (198 km)	20 Jan'17	Oct'19	Dec'20	38%
39	DMS 05	6 nos. new 33/11kV substation & 9 nos. 33 kV lines (128 km)	20 Feb'17	Nov'19	Dec'20	37%
MIZORAM						
40	TW 01	3 nos.132kV lines (84 km)	20 Sept'17	Mar'20	Dec'20	13%
41	SS 01	1 no. new & 1 no. Ext. of 132/33 kV substation.	2 Nov'17	May'20	Dec'20	12%
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'20	12%
NAGALAND						
43	TW 01	1 no. 220kV line (92 km)	20 Sept'17	Mar'20	Jun'20	17%
44	TW 05	1 no. 132kV line (28 km)	21 Sept'17	Mar'20	Jun'20	15%
45	TW 06	5 nos. 132kV lines(165 km)	31 May'18	Nov'20	Nov'20	14%
46	SS 01	2 nos. new 132/33 kV	5 Dec'17	Jun'20	Nov'20	7%

		substation.				
47	SS 02	1 no. new 132/33 kV & 3 nos. ext. of substation.	30 Nov'17	May'20	Nov'20	12%
48	SS 03	1 no. new 132/33 kV & 1 no. ext.(220/132 kV) of substation	14 Dec'17	Jun'20	Jun'20	12%
49	SS 04	1 no. new & 1 no. ext. of 132/33 kV substation	13 Dec-17	Jun'20	Jun'20	12%
50	DMS 01	2 nos. new 33/11kV substation & 2 nos. 33 kV lines (2.5 km)	12 Feb'18	Nov'20	Nov'20	12%
51	DMS 02	3 nos. new 33/11kV substation & 6 nos. 33 kV lines (59 km)	11 Jan'18	Oct'20	Oct'20	12%
52	DMS 03	3 nos. new 33/11kV substation & 2 nos. 33 kV lines (5 km)	22 Sep'16	Jun'19	Dec'20	70%
53	DMS 04	2 nos. new 33/11kV substation & 1 no. 33 kV lines (10 km)	22 Sep'16	Jun'19	Dec'20	65%

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)		
<p>The Borrower shall make its best efforts to ensure that the Participating States:</p> <p>(a) carry out the their responsibilities under the SS-ESPPFs, IEARs, RAPs, EMPs, CPTDs and/or TPDPs (the "Safeguard 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;</p> <p>(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</p> <p>(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.</p>	<p>LA, Schedule-2, Section-I (D)</p>	<p>These covenants are being complied as part of Project Agreement & Separate Agreements with IA & State Utilities.</p>
Project Agreement (PA)		
<p>The Project Implementing Entity shall:</p> <p>(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</p>	<p>PA, (Schedule), Section- I, E, Para 1</p>	<p>Complied/Being Complied.</p> <p>RAPs and TPDPs not applicable. All others safeguard documents prepared/being prepared. For details refer Table-1.</p>

Description of Covenants	Reference	Status of Compliance
<p>this sub-section, in accordance with the objectives, policies, procedures, time schedules, compensation arrangements and other provisions set forth in the SS-ESPPFs (together, the "Safeguard Documents"), in each case in a manner and in substance agreed with the Bank;</p> <p>(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</p> <p>(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.</p>		<p>Being complied.</p> <p>No such safeguard issues encountered till reporting period. Will be complied if such situation warrants.</p>
<p>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:</p> <p>(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;</p> <p>(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 the respective IEAR(s), EMP(s), RAP(s), CPTD(s) and/or TPDP(s), as required for such transmission line, substation or</p>	<p>PA, (Schedule), Section- I, E, Para 2</p>	<p>Complied/ Being complied.</p> <p>Complied/Being Complied.</p> <p>For details refer Table-1.</p>

Description of Covenants	Reference	Status of Compliance
<p>distribution network, pursuant to the 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; and</p> <p>(c) the foregoing Safeguard Documents have been publicly disclosed by the Project Implementing Entity and the Participating States (through its 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.</p>		<p>Complied/Being Complied.</p> <p>All approved safeguard reports stand disclosed publically on website of POWERGRID & State Utilities. Below is the link to access such reports; https://www.powergridindia.com/ner-agreements-and-mous</p>
<p>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 and submitted to the Bank; (b) all pre-construction conditions imposed by the governmental authority 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.</p>	<p>PA, (Schedule), Section- I, E, Para 3</p>	<p>Complied/ Being complied.</p> <p>Refer in Table- 2 for details of forest/ wildlife clearances along with their present status</p>
<p>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.</p>	<p>PA, (Schedule), Section- I, E, Para 4</p>	<p>Complied/ Being complied.</p> <p>Out of 18 CPTDs, 7 nos. of CPTD have already been disclosed on website. Another 7 nos. of CPTD stand submitted to Bank in Aug./Nov'19 However, in view of observations on CPTDs received from Bank in Dec'19, a Joint meeting has been proposed to finalize CPTDs. For details refer Table-1.</p>

Description of Covenants	Reference	Status of Compliance
<p>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.</p>	<p>PA, (Schedule), Section- I, E, Para 5</p>	<p>Complied/Being complied.</p>
<p>The Project Implementing Entity shall:</p> <p>(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;</p> <p>(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</p> <p>(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:</p> <p>(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</p>	<p>PA, (Schedule), Section- I, E, Para 6</p>	<p>Complied/ Being complied.</p> <p>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.</p> <p>Being Complied.</p> <p>Independent Agencies/ Consultants for FEAR already appointed for Meghalaya, Assam Tripura, Mizoram & Nagaland States. The process of appointment of consultant for Manipur is in advance stage (award expected by March'20).</p> <p>For details refer Table-1</p>

Description of Covenants	Reference	Status of Compliance
<p>activities, all in accordance with the processes and requirements set forth in the respective SS-ESPPF(s) and IEAR(s); and</p> <p>(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</p>		For details of FEAR status refer Table-1 .
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	29 th June 2015	Dhemaji 1 no. 132kV & 2 nos. 33kV line, 1 no. each 132/33kV & 33/11kV substation	13 May 2015	22 June 2018	M/s Green Circle Inc., Vadodara appointed as Independent Consultant for FEAR preparation in Dec'18. The Consultant has submitted Draft reports on 10 th May'19 & 21 st Oct' 19. Since the quality of these
		Tinsukia & Dibrugarh 1 no. each 220kV & 132 kV and 4 nos. 33 kV line, 2 nos. 132/33kV & 3 nos. 33/11 kV substation	8 July 2015	3 Oct. 2018	

					draft reports were not up to the mark, POWERGRID suggested to revise the report as per approved ToR and also in line with Meghalaya FEAR already approved by Bank. Consultant to submit revised draft FEAR reports for Assam shortly.
		Kamrup 2 nos. 132kV & 11 nos. 33 kV Underground line, 2 nos. 132/33 kV & 5 nos. 33/11 kV substation	20 July 2015	N.A. (UG lines only)	Identification/ finalization of Independent Agency under progress.
		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	14 July 2015	Under preparation	
		Golaghat, Nagaon, Jorhat, Sibsagar & Karbi-Anglong 2 nos.132kV & 8 nos. 33kV line, 2 nos. each 132/33kV & 33/11 kV substation	27 July 2015		
Manipur	17 th August 2015	Imphal West, Senapati & Bishnupur 2 nos.132kV & 5 nos. 33kV line, 1 no.132/33kV & 5 nos. 33/11kV substation	15 June 2015	Submitted to Bank in Nov'19. Joint meeting to be held soon to finalize the report	The process of appointment of consultant for Manipur is in advance stage (award expected by March'20).
		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	23 July 2015		
		Imphal West, Imphal East & Tamenglong 1 no. 132kV & 3 nos. 33kV line, 1 no. 132/33 kV, 3 nos. 33/11kV substation	8 Jan. 2015	Under preparation	

Meghalaya	29 th June, 2015	West Garo Hills & South West Garo Hills 1 no. 132kV & 6 nos. 33kV line, 1 no. 132/33kV & 3 nos. 33/11kV substation	5 May 2015	22 June 2018	20 Nov'19
		Ri-Bhoi and East Khasi Hills 1 no. 220kV & 5 nos. 33kV line, 1 no. 220/132/33kV & 4 nos. 33/11kV substation	7 July 2015	Submitted to Bank in Nov'19. Joint meeting to be held soon to finalize the report	Draft FEAR report being revised in line with approved Garo Hills FEAR and likely to be submitted to Bank in March'20 by the Consultant.
		East Jaintia Hills (1 no. 132kV & 4 nos. 33kV line, 1 no. 132/33kV & 4 nos. 33/11kV substation)	15 June 2015	19 Oct 2018	Identification/ finalization of Independent Agency under progress.
Tripura	17 th June, 2015	Gumti & South Tripura (5 nos. 132kV & 4 nos. 132/33 kV substation)	15 Apr 2015	29 Dec. 2018	M/s Green Circle Inc., Vadodara appointed as Independent Consultant for FEAR preparation in Dec 2018. Based on POWERGRID/ Bank observations on draft FEAR of Assam, FEARs for Tripura are being prepared by the Consultant and likely submitted to Bank shortly (by March'20).
		West Tripura, South Tripura, Sepahijala & Khowai (4 nos.132kV & 24 nos.33kV line, 3 nos. 132/33kV & 15 nos. 33/11kV substation)	18 July 2015	3 Sept. 2018	
		Dhalai, North Tripura & Unakoti (2 nos.132kV & 8 nos. 33kV line, 1 no. 132/33kV & 6 nos. 33/11kV substation)	13 July 2015	15 Oct. 2018	
		Gumti & South Tripura (19 nos. 33kV line, 1 no. 132/33kV & 14 nos. 33/11kV substation)	27 July 2015	Submitted to Bank in Nov'19. Joint meeting to be held soon to finalize the report.	
Mizoram	7 th July, 2015	Lunglei & Lawngtlai (2 nos. 132kV & 1 no.	17 June 2015	Submitted to	M/s Green Circle Inc., Vadodara

		33kV line, 1 no. each 132/33kV & 33/11kV substation)		Bank in Nov'19. Joint meeting to be held soon to finalize the report	appointed as Independent Consultant for FEAR in April'19. Consultant yet to submit draft report.
		Mamit 1 no. 132kV & 33kV line, 2 nos. 132/33kV substation)	26 July 2017	Under Preparati on	
Nagaland	10 th July, 2015	Tuensang & Longleng (1 no. 132kV & 33kV line, 1 no. 132/33kV substation	13 May 2015	Submitte d to Bank in Nov'19.	M/s R. S. Envirolink has been engaged as Independent Consultant in Nov, 19. Data collection completed. Draft report under preparation and expected to be submitted by March'20.
		Mokokchung, Kohima, Dimapur, Phek, Wokha, Zunheboto, Mon 6 nos.132kV & 10 nos. 33kV line, 4 nos. 132/33kV & 9 nos. 33/11kV substation	27 th July 2015	Joint meeting to be held soon to finalize the report	

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 the environmental and social 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 regulation 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 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	

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
TW05	132 kV S/c Rupai-Chapakhowa	53	Nil	
TW07	220 kV D/C Rangia-Amingaon	33	Nil	
	132 kV D/c Amingaon-Hazo	16		
	LIL0 132 kV S/c Rangia-Rowta	10		
	LIL0132kVS/c Kamalpur-S'gram	1		
	LIL0132kVS/c K'pur-Khamakhya	1		
	LIL0 132kV S/c Golaghat-Bokajan at Sarupathar	5		
	132 kV D/c Sonabil-Tezpur	15		
	LIL0 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		

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
MANIPUR				
TW06	Renovation of 132kV Y'bam-Karong-Kohima	91	Nil	
	LILO132 kV S/c Y'bam -Karong	6		
	LILO of 132kV D/c Kongba-Kakching	16		
	Stringing (2 nd 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
SS3	132/33 kV Tamenglong		1.831/ Un-classed Forest	Forest proposal submitted on 29.05.19. Proposal forwarded to DFO, Tamenglong on 28.06.19 for formulation. 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. Presently under formulation at DFO, Imphal.
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	No Reserve forest involved. However, requirement of forest clearance under Forest (Conservation) Act, 1980 was necessitated based on tree

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
				density after completion of tree enumeration Accordingly, forest proposal submitted on 06.04.19. Forest proposal submitted on 06.04.19. Proposal under formulation with DFO, Khasi Hills since 19.06.19. However, Forest Dept. is insisting for providing revenue/non-forest land for CA instead degraded forest land. Matter already taken up with the Joint Secretary (Power), Meghalaya for early resolution of the matter.
TW02	LILO132kV MLHEP-Khliehriat at Mynkre	34	11.566/	Forest proposal for Loop In (4.85 ha.) and Loop Out (6.716 ha.) section submitted on 22.01.19 & 23.01.19 respectively. Proposal was pending at Nodal Officer since 13.09.19 on account of CA land. Issue of CA land has been resolved and proposal to be forwarded to State Govt. by NO.
	132 kV D/c Phulbari-Ampati	50.10	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		
DMS03	33kV LILO Tikrila-Phulbari	6		
	33kV New Shillong - Mawpat	25		
	33kV SE Falls - Mawpat	10		
	33kV New Shillong -N. Shillong	6		
	33kVN.Shillong- Mawryngkneng	26		
	33kV LILO Jowai-L'krem	4		
	33kV Jongksha-Mawkynew	8		
TRIPURA				
TW01	132 kV D/c Bagafa-Belonia	14	2.5118/ Un- classified	Stage-I approval obtained on 30.10.18.Working permission obtained on 07.05.19.
	132 kV D/c Belonia-Sabroom	42	25.5204 RF	Stage-I approval obtained on 28.06.18.Working permission obtained on 07.05.19.
	132 kV S/c Bagafa-Satchand	40	9.1503/ RF	Stage-I approval obtained on 12.10.18.Working permission

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
				under progress.
	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 Udaipur-Bagafa	32	26.77/ RF	Stage-I approval obtained on 09.04.18.Working permission obtained on 07.05.19.
	132 kV D/c Rabindranagar-Belonia	40	74.9493 / RF	Stage-I approval obtained on 12.04.19. Issue of working permission under progress.
	132 kV D/c Rabindranagar-Rokhia	24	21.1896 / RF	Stage-I approval obtained on 28.06.18.Working permission obtained on 15.05.19.
	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 approval obtained on 10.04.18.Working permission obtained on 16.05.19.
	LILO132kV 79 Tilla-Dhalabil at Mohanpur	2	Nil	
	132 kV D/c Udaipur-Amarpur	30	22.0482 /RF	Stage-I approval obtained on 10.04.18.Working permission obtained on 07.05.19.
	132 kV Manu-Manu	2	Nil	
DMS01	33kV LILO T'mukh-Silachari at Karbook	6	Nil	
	33kV LILO Jolaibari- Bagafa at M'pur	16		
	33kV Dalak- Amarpur	15		
	33kV Dalak - Jatanbari	12		
	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		

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
	33kV LILO Belonia-Rajnaragar at Barpathari	10		
	33kV Jolaibari - Silachari	30		
	33kV Jolaibari - Satchand	18		
	33/11 kV Ekinpur Substation		0.1962 /RF	Forest proposal submitted on 08.09.18. Proposal forwarded to RMoEFCC, Shillong on 21.02.19. RMoEFCC raised query on 21.08.19 which is being complied by State Govt.
	33/11 kV Barpathari Substation		0.2209 (Forest & Trishna WL) / RF	Forest proposal submitted on 08.09.18. Proposal forwarded to RMoEFCC, Shillong on 21.02.19. However, RMoEFCC raised certain queries on 31.05.19 which are being clarified by User Agency. Wildlife proposal: Permission/recommendation of Standing Committee of National Board of Wildlife (NBWL) obtained on 21.01.20.
DMS03	33kV Gokul Nagar-Golaghati	15	Nil	No Forest involved
	33kV Gokul Nagar-Durganagar	15		
	33kV G'Nagar-Tapping at Madhupur-Jangalia	1		
	33kV Rajnaragar-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			
	33/11 kV Nidaya Substation		0.3299 (Forest & Trishna WL) /RF	Forest proposal submitted on 18.12.18. Proposal forwarded to RMoEFCC, Shillong on 01.03.19. However, RMoEFCC raised certain queries on 14.03.19 which are being clarified by State Govt. Wildlife proposal: Permission/recommendation of Standing Committee of National Board of Wildlife (NBWL) obtained on 21.01.20.

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
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 Hezamara -Dhalabill	22		
	33kV Ampura - Khowai	16		
	33kV Mohanpur -Hezamara	16		
	33kV Jirania -Champak Nagar	8		
	33kV Teliamura - Taidu	12		
	Chechua to Taidu	20		
	LILO Agartala -Mohanpur at Lembucherra	4		
LILO Khayerpur -Jirania at Ranirbazar	8			
LILO Ambassa-Teliamura at Mungiakami	2			
DMS05	33kV Manu - Dhumachhera	25	Nil	
	33kV Manu - 82 mile	21		
	33kV Manu-Tapping of C. Manu-Manu	4		
	33kV J'Nagar-Dhumachhera	20		
	33kV P.K.Bari - 82 mile	13		
	33kV Kalaisahar-Tilla Bazar	14		
	33kV Ambassa-Jawhar Nagar	13		
	LILO C'manu-Manu at Chailengta	8		
	LILO Salema-Kamalpur at D. Chowmohani	14		
MIZORAM				
TW02	132kV S/c Lungsen-Chawngte	39	Nil	No forest involved. However, verification/confirmation of the same from Forest department is in progress.
	132kVS/c Chawngte-S.Bungtlang	45		
	132kV S/C Lunglei-Lungsen	0.5		
SS02	132kV S/c West Phaileng-Marpara	50	104.77 / Forest as per dictionary meaning/ RF	Forest proposal (104.77 ha.) submitted on 07.03.19. DFO raised certain queries including details of CA land on 03.07.19. CA land has been finalized and proposal likely to be forwarded shortly to State Govt. for recommendation to RMoEF for consideration of Stage –I approval.

Pkg. No.	Name of the Line/Substation	Line Length (In km)	Forest (In Ha.)/ Type	Status/Remarks
				Wildlife proposal (104.77 ha.) Proposal recommended by SBWL on 04.06.19 and forwarded to MoEFCC on 05.12.19. MoEFCC vide its letter dated 16.12.19 requested National Tiger Conservation Authority (NTCA) for their comments/ observations for further consideration of the proposal before Standing Committee of NBWL.
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	
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	
	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	33kV M'chung-Mariani to Longtho	0.5	Nil	Detail survey under progress. However, forest involvement not anticipated
	LILO M'chung-Mariani at Longnak	2		
	33kV Longleng -Longleng Town	5		
DMS02	33kV M'chung-M'chung Town PH	12	Nil	Detail survey under progress. However, forest involvement not anticipated
	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			417.885	

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

Till reporting period (up to December 2019), Bank has completed its four implementation support missions. During 4th mission (from November 25 to December 31, 2019), the Bank team including environment and social specialists undertook field visits to selected

sites in Assam (Site visits photographs placed as **Plate-1**). 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 Safeguard

S.N	Actions	Responsible	Present Status
1.	CPTD: Making land and crop compensations in respect of eligible cases	POWERGRID	Compensation payment in respect of tree, crop and land are being paid as per norms to all farmers/land owners in line with work progress of tower foundation/erection activity. Till reporting period, Rs. 77.58 million & Rs. 7.73 million has been paid against land and Tree/crop compensation respectively to total 787 APs/land owners. For details refer Table- 8 .
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	Land for Tarun Nagar substation has been handed over to POWERGRID in Feb, 2020. Alternate land for Takyel has been finalized but yet to be handed over to POWERGRID. Matter taken up during Steering Committee meeting held in Jan/Feb.' 20.
5	Forest and/ or Wildlife clearance for 33 kV S/S at Nidaya, Barpathri and Ekinpur (Tripura)	POWERGRID TSECL	Wildlife permission for 33 kV substations at Nidaya & Barpathri already obtained. However, forest clearance for all three substations are in advance stage and Stage-I approval is expected shortly (for details refer Table-2 above).
6	Addressing observations from field visit (refer Annex IV)	POWERGRID	Being complied with.

7	Appointment of consultants for preparation of Final Environmental Assessment Report for sub-projects in Manipur	POWERGRID	The process of appointment of consultant for Manipur is in advance stage. Award expected by March'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	Draft FEARs (2 nos.) for Nagaland submitted by the Independent Consultant shared with Bank on 16.03.20. Revised /Draft FEA reports for Assam (2 nos.) and Meghalaya (1 no.) are under finalization and expected to be shared shortly by respective consultants. However, POWERGRID has raised the issue related to competency & understanding level & delay in submission of draft FEAR reports by Independent Consultants and requested Bank to let it undertake the preparation of these reports in-house. The Bank informed that it will discuss with Regional Environment and Social Safeguards Adviser.
9	Sharing Initial Environmental Assessment Report (IEAR) for planned 8 new lines across Assam and Tripura	POWERGRID/ Consultants	Draft IEAR for Assam already shared with Bank in Feb'20. However, the same being revised based on the comments/ observations received from the Bank. As regard Tripura, IEAR shall be prepared/shared once the detailed surveys of proposed lines are completed.
10	Filling up vacancy for field officer (ESM) in Manipur	POWERGRID	In view of resignation of FO of Mizoram recently the process of recruitment of EO shall be taken up for both Manipur & Mizoram by HR Dept.
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 3 rd week of March. However, in view of outbreak of corona virus joint meeting has now been deferred to month of April.

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



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 NERPSIP Semi-Annual Safeguard Monitoring Report for period July - December, 2019

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.
		<i>* Planned, ** Under Implementation, *** Completed</i>		
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	550*		
21	33/11 kV Takyel	140*		
22	33/11 kV Lamphel	05*		
23	33/11 kV Top Khongnankhong	05*	RRM Wall**	
24	33/11 kV Porompat			Outer drainage***
25	33/11 kV Andro	15*	RRM Wall**	
26	33/11 kV Hiyangthang	73*	RRM Wall***	Crossing*

Plate 2 : Implementation of Site Specific Measures



RRM Wall at 33/11 kV New Shillong, Meghalaya



RRM Wall at 33/11 kV Raksambre, Meghalaya



Revetment Wall provided for Tower Protection in 220 kV D/c Byrnihat-Mawngap-New Shillong & LILO of 132kV MLHEP-Khliehriat Line in Meghalaya



RRM Wall at 33/11kV Ando, Manipur



Outer Drainage at 33/11 kV Porompat, Manipur



RRM Wall at 33/11 kV Ukhrul, Manipur



Retaining Wall at 132/33 kV Gokulnagar, Tripura

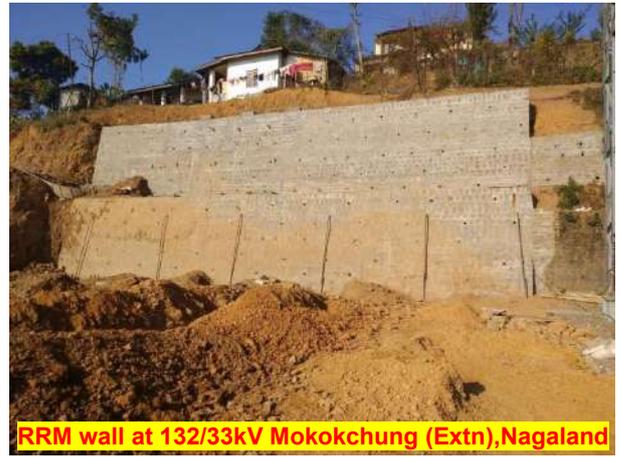


RRM Wall at 33/11 kV Golaghati, Tripura

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
27	33/11kV Kaithelmanbi	290*		
28	33/11 kV Kwata	05*		
29	Aug.of 33/11 kV Ukhrul		Retaining Wall**	
30	33/11 kV Tuilaphai S/s	84**		
MEGHALAYA				
31	220/132kV N. Shillong	20*	Retaining Wall* Stone Pitching*& Grass with bamboo grids*	
32	132/33 kV Mynkre	25*	RRM Wall*	
33	132/33 kV Phulbari	10*	Revetment & RRM Wall**& Grass with bamboo grids*	
34	33/11 kV Rymbai		RRM Wall**	
35	33/11 kV Latyrke		RRM Wall***	
36	33/11 kV Rajballa Bhaitbari		Revetment, RRM Wall** & Grass with bamboo grids*	
37	33/11 kV Chibinang		RRM Wall**	
38	33/11 kV Raksambre		RRM Wall***	
39	33/11 kV Mawpat		RRM Wall***	
40	33/11 kV New Shillong		RRM Wall***	
41	33/11 kV Maw'kneng		RRM Wall***	
42	33/11 kV Mawkynew		Stone Pitching***	
43	LILO132kV MLHEP-Khliehriat Line at Mynkre		Revetment wall (26 locations)** and Unequal Leg Extension (ULE) (33 locations)**	
44	220 kV D/c Byrnihat-Mawngap-New Shillong line		Revetment wall (163 locations)** and ULE (57 locations)**	
TRIPURA				
45	132/33 kV Gokulnagar	12*	Retaining Wall***	01 No. recharge pit in each substation*
46	132/33 kV Belonia	115*	Retaining Wall*	
47	132/33 kV Satchand		Retaining Wall*	
48	132/33 kV Manu		Retaining Wall*	
49	132/33 kV Mohonpur	05*	Retaining Wall*	
50	132/33 kV Bagafa	50*	Retaining Wall*	
51	132/33 kV Amarapur		Retaining Wall*	
52	132/33kVAmbassa(Extn)	150*		



RRM Wall at 132/33 kV Wokha S/S Extn, Nagaland



RRM wall at 132/33kV Mokokchung (Extn), Nagaland



RCC Retaining wall at New Secretariat Complex, Nagaland

2019/12/24 12:33



Retaining Wall at 33/11 kV Chakabhama (Aug.), Nagaland

10.6.2018



RRM Wall at 33/11 kV GS Road, Assam



RRM Wall at 33/11 kV Dibrugarh, Assam



RRM Wall at 33/11 kV Ramdiya, Assam



RRM Wall at 33/11 kV Hazo, Assam

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.
53	33/11 kV Golaghati		RRM**	
54	33/11 kV Durganagar	500*		
55	33/11 kV Nidaya	200*		
56	33/11 kV Simna	200*		
57	33/11 kV Jawaharnagar	25*		
58	33/11 kV 82 Mile	5*		
59	33/11 kV Dhumacherra	5*		
NAGALAND				
51	132/33kV Secretariat Complex Kohima	80**	RRM & Retaining Wall***	
52	132/33 kV Longnak		Retaining Wall**	
53	132/33 kV Longleng	500**		
54	132/33 kV Pfutsero	100*	Retaining Wall*	
55	132/33 kV Zunheboto	80*	Retaining Wall*	
56	Ext. of 132/66/33 kV Mokokchung		RRM & Retaining Wall***	
57	Ext.of 132/33kV Wokha		RRM & Retaining Wall***	
58	33/11 kV Longtho	700*		
59	33/11 kV Longleng		RRM Wall*	
60	33/11kV Pfutsero	55*	RRM Wall**	
61	Aug. of 33/11kV Bosta		Retaining Wall***	
62	Aug. of 33/11kV Chakabhama		Retaining Wall***	
63	Aug. of 33/11kV Torogonyu		Retaining Wall*	
64	Aug. of 33/11kV Tseminyu		Retaining Wall*	
65	220 kV S/c N. Kohima-Wokha-M.chung		ULE - 233 locations*	
66	132 kV D/c Kohima-New Secretariat Complex		Revetment wall (2 locations)* and ULE (14 locations)*	
67	132 kV S/c Wokha-Zunheboto-M'chung		ULE (101 locations)*	
68	132 kV S/c Tuensang-Longleng		ULE (77 locations)*	
69	LILo of 132 kV S/c Kohima-Workha at New Kohima		ULE (14 locations)*	
70	LILo 132 kV D/c Kohima-Meluri at Pfutsero		Revetment wall (6 locations)* and ULE (7ocations)*	

MIZORAM				
71	132/33 kV Lungsen		Retaining Wall* Stone Pitching*	Cross drainage* Outer drainage*
72	132/33 kV West Phaileng	80*	Retaining Wall*	Cross drainage**
73	132/33 kV Marpara	130*	Retaining Wall* Grass with bamboo grids*	Cross drainage*
74	33/11kV S. Bungtlang	200*	Retaining Wall*	Cross drainage*
75	Aug. of 132/33 kV Lunglei		Retaining Wall* Stone Pitching*	Cross drainage*
76	132 kV Lungsen-Chawngte		Unequal Leg Extension (ULE) (76 locations)*	
77	132 kV Chawngte-S.Bungtlang		ULE (56 locations)*	
78	132 kV West Phaileng-Marpara		ULE (112 locations)*	

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/AIDS are also conducted at every active site. Safety film for transmission project developed by POWERGRID have been translated in local languages² 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'19 no accidents (fatal or non-fatal) including major/minor injuries were reported from any of the construction sites.

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

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



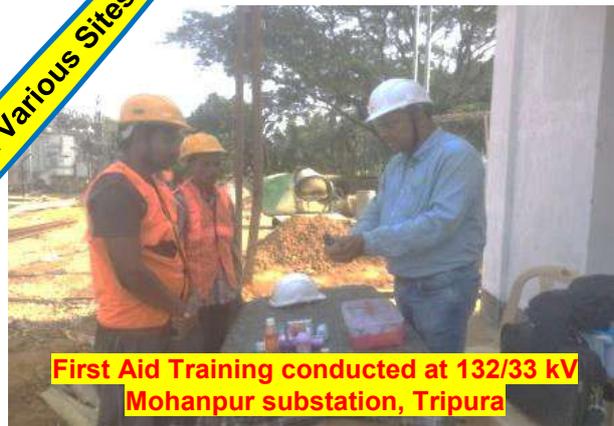
Training on Height work at 33/11 kV Chakabhama, Nagaland



Tool Box Talk at Site of 132 kV Chawngte – South Bungtlang line, Mizoram



Safety Awareness at Yurenbum Site, Manipur



First Aid Training conducted at 132/33 kV Mohanpur substation, Tripura



Training on safety while working at height at 132/33 kV Tangla substation, Assam



CPR (Cardio-Pulmonary Resuscitation) Training at 132/33 kV Mynkre

From L to R : Health Check-up report , Issue of Induction Card & Height Pass Sites

NECCON POWER & INFRA LTD.
Medical Health Check-Up Workers
132/33 KV TANGLA (MW) S/S, ASM-55-03

HEALTH CHECK-UP REPORT

Name: Sohelul Haq Father's Name: Ajayalal
Sex: Male Age (Years): 30
Identification Mark: A black mole on left face
Address: Vill- Umanlal, Dist- Kamrup, Assam - Nagaon

Height (cm)	Weight (kg)	Chest (cm)	Pulse (per min)	Blood Pressure	Vision (ft)	Hear	Remarks (if Any)
167	61	79	78	110/80	6/6	Good	

1) Whether any illness found during this health check up: NO
2) Whether any Physical disability found during this health check up: NO
3) Whether any Tetanus Injection administered during this health check up: NO
4) Whether any found Physically fit to work at height during this health check up: YEST

Signed: Sohelul Haq (Name & Sign)
Site Manager: Ajayalal (Name & Sign, with Seal)
Doctor Sign & Seal (with Name)

Induction Training: 01-10-2017

PERSONAL RECORD

Name: LOKEN CHANDRA SINGH
Designation: Electrician
Address: 100, G. S. Road, Sarabathar, G. Lalaghat, Assam
Emergency contact number: 9859928552

Signature of Card Holder
Signature of issuing Authority

স্বাক্ষর নিবন্ধন

- কর্মকর্তা বা প্রকল্পের নাম সঠিক ভাবে লিখতে হবে।
- ইন্ডাকশন কার্ড নতুন লিগেট হয়ে থাকবে।
- যদিহে কোন পরিবর্তন ঘটে থাকবে তা
- প্রকল্পের নতুন বা পুরানো কাজের ক্ষেত্রে
- যদিহে কাজের ক্ষেত্রে পরিবর্তন ঘটে থাকবে তা
- ইন্ডাকশন কার্ড নতুন লিগেট হয়ে থাকবে।
- ইন্ডাকশন কার্ড নতুন লিগেট হয়ে থাকবে।

HSE INDUCTION CARD

SPML
Saftey Promoting & Maintaining Ltd.

MEMBER'S ID NUMBER: 2003000000
OFFICE ADDRESS: 100, G. S. Road, Sarabathar, G. Lalaghat, Assam

NECCON POWER & INFRA LTD.

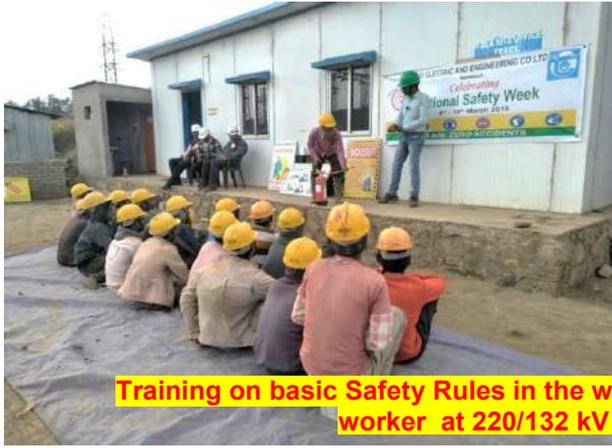
HEIGHT PASS

NAME: LOKEN CHANDRA SINGH
FATHER'S NAME: LAKHISINGHA
AGE: 24
Mobile No.: NO
ADDRESS: SARABATHAR, G. LALAGHAT.

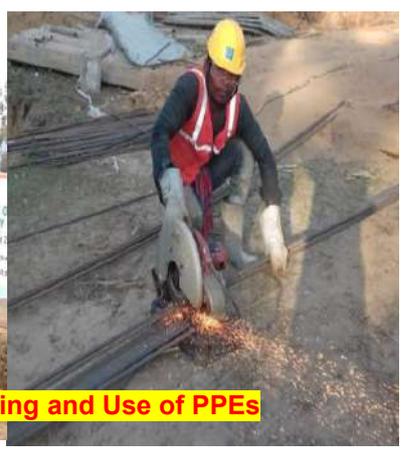
Issue Date: 12/07/18 12/19/18
Valid Up to: 3 Month

Medical Fitness Certificate obtained: Yes / No
Trained and inducted about Hazard at height: Yes / No

Sign of issuing authority



Training on basic Safety Rules in the workplace and certificate of appreciation worker at 220/132 kV Mawngap, Meghalaya



Mock Drill on Fire Fighting, Training on Safe Material Handling and Use of PPEs at 33/11kV Lalmati, Nagaland



Temporary Barricading of Excavation area and Entry Gate with security personnel at 132/33 kV Marpara , Mizoram



TECHNOFAB ENGINEERING LIMITED

EMERGENCY CONTACT NUMBER
GARIEE 33/11 KV NEW S/S UNDER NERPSIP FOR DMS-1

DEPARTMENT	PLACE	PHONE NO.	DISTANCE FROM S/S
POLICE STATION	GAHATE	913821-883-887	1.5 KM
TRUCK STATION	GAHATE	913821-883-887	1.5 KM
AMBULANCE NO.	GAHATE	913821-883-887	1.5 KM
NEAREST HOSPITAL	GAHATE	913821-883-887	0.5 KM
NEAREST ELECTRIC OFFICE	GAHATE	913821-883-887	0.5 KM



Display of Safety Sign, Emergency Contact Number

First Aid Box



**From L to R : Above - Health Check-up at 33/11 kV Andro (Manipur) & 132/33 kV Marpara (Mizoram)
Below : Health Check-up at 33/11 kV Hivanathana (Manipur) & 33/11 kV Bosta (Nagaland)**



HIV/AIDS Awareness at 132/33kV Satchand (Tripura) & Tezpur (Assam)



Screening of Safety Film in Local Language to Workers at each active site

DG set installed with proper platform & roof

Safety Check List TL Const - 02, Revision-1(May, 2014)

POWER GRID CORPORATION OF INDIA LTD.,
(CORPORATE OPERATION SERVICES)

SITE SAFETY INSPECTION/AUDIT CHECK LIST

EXCAVATION & FOUNDATION

DATE OF INSPECTION: 01-02-19 NAME OF THE LINE: L110 OF 132KV D/C SURJAMANINAGAR - ROKHIA/TI at Grotvinagar.

LOCATION NO: AP 5/0 CLASSIFICATION OF SOIL & TYPE OF TOWER: DRN / DLT6

NAME OF THE AGENCY: TEEMS INDIA TOWER LEAS PVT LTD

SITE ENGINEER/SUPERVISOR OF THE AGENCY: PIJUSH CHATTERJEE

SAFETY OFFICER OF THE AGENCY: KALAI SELVAM . K

S.NO	CHECK LIST	YES/NO	REMARKS, IF ANY
1	Check List to be verified by the Agency's Site supervisor / Gang leader is available at Site and updated.	YES	
2	Safe Work Procedures / Instructions in the language understood by the workers available with Site supervisor / Gang leader and workers are aware of the safe work procedures.	YES	HINDI
3	Pre talk on safety issues to the workers being done by the Safety Stewards / Supervisor / Engineer / Safety Officer of the Agency.	YES	
4	Appropriate safety messages / warnings are displayed at site to caution the workers	YES	
5	Adequate warning / protection to public / children moving nearby ensured (RED FLAGS / CAUTION TAPE / ROPE / BOARDS).	YES	
6	Sufficient Angle of Repose / slope provided to prevent collapse of soil at vulnerable locations.	YES	
7	Adequate shoring and shuttering provided in collapsible soil conditions.	YES	
8	(a) Drilling and Blasting, if any, carried out with adequate precautions. (b) Whether the blaster is a valid license holder?	-	NOL Required
9	Dewatering of the pits is being done, wherever required.	YES	3meters away from the pit
10	Clear edges to prevent fall of objects inside the pit - the excavated earth, stones and tools dumped atleast half of the depth of the pit away from the pit edges.	YES	
11	Machines like concrete mixer, vibrator, etc. placed away atleast half of the depth of the pit away from the pit edges.		

- 2 -

12	The steel plate (chute) used for pouring the concrete into the pit properly anchored to prevent the same from falling into the pit, endangering the persons inside the pit.	YES	
13	Jacks used for supporting the template are properly positioned / anchored to avoid sliding down of the template from the jacks and endangering the workers.	-	
14	All ladders used are of sound construction, appropriate height and free from any defect.	YES	
15	All the workers are provided with good quality SAFETY HELMETS conforming to BIS Standard IS:2925.	YES	
16	All the workers engaged in steel work are provided with LEATHER SAFETY GLOVES.	YES	
17	The workers engaged in concreting work inside the pit are provided with GUMBOOTS.	YES	
18	The workers engaged in handling cement are provided with appropriate DUST MASKS.	YES	
19	Appropriate SAFETY BELT / fall protection provided to workers working on form box to pour concrete into the form box / ramming in form box.	YES	
20	(a) First aid box with listed items as per BOCW Act, 1996 available. (b) Number of First Aid Trained persons and their names. (c) First Aid Register is available at site. (d) Nearby medical facilities for use during exigencies identified (Location / Phone No.)	YES 2 YES YES	1. KALAI SELVAM 2. NAFU BABBAR (MANAGER SUPERVISOR) U DATE PUR HOSPITAL - 9426506184
21	Atleast one vehicle (four wheeler) is available for use in case of emergencies.	YES	BOLERO

FOR EMC LIMITED
SIGNATURE/NAME/DESIGNATION OF POWERGRID REPRESENTATIVE (ABHJIT DEY) PROJECT MANAGER
SIGNATURE/NAME/DESIGNATION OF AGENCY'S REPRESENTATIVE SAFETY SUPERVISOR

(5) Regional In-charge / POWERGRID /

**Strict Adherence of Safety Checklists
Filled in Safety checklist at location AP 2/0 for L110 of 132KV Rokhia-Surjamaninagar line**

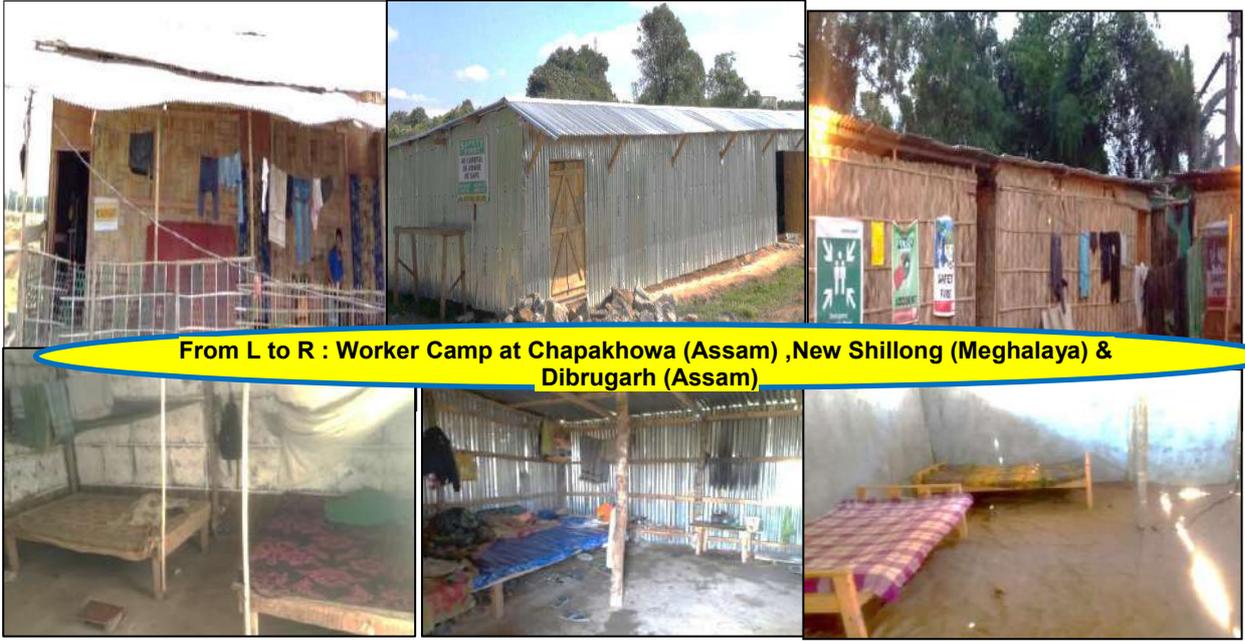
The amenities for worker's including occupational health, safety and hygiene at work site is the responsibility of contractors/sub-contractor(s), who is also abide by various provisions related to worker welfares in contractual agreements and EMP. Moreover, as per contract agreement contractor and his 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.

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;

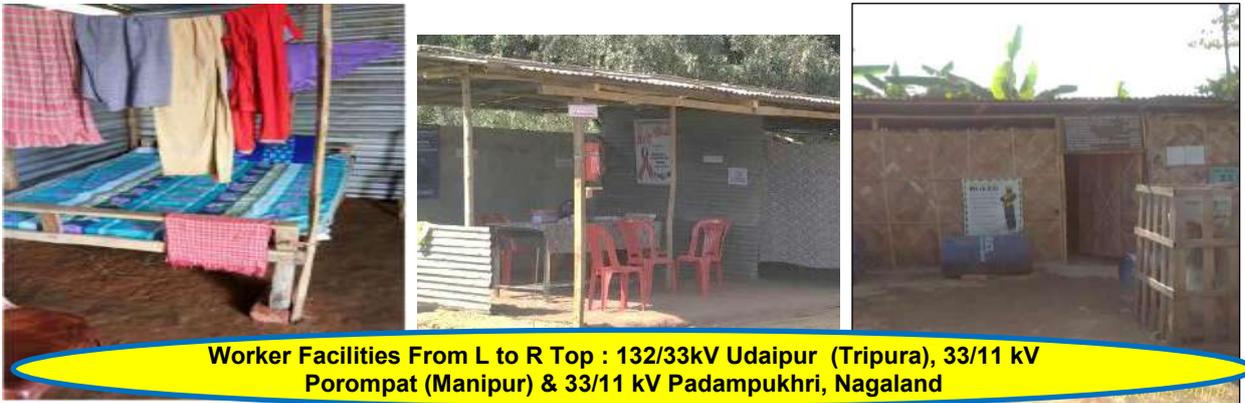
State	Name of Contractor	Package	Approved Worked force	Worked force(max.) Employed
Assam	M/s Necon Power & Infra Ltd	SS-01-03, DMS-01	340	230
	M/s JV Techno & Seiyuan	SS-04	100	60
	M/s T & R (India) Ltd	TW-01	100	42
	M/s Meher Foundation & Civil Engg. Pvt. Ltd	P - 01	30	04
	M/s Power Mech Projects Ltd	TW-02 & 05	110	50
	M/s Teems India Pvt. Ltd	TW-04	60	25
	M/s Simplex Infra. Ltd.	TW-07	100	50
	M/s Sterling & Wilson Pvt. Ltd.	DMS-02 & 03	300	120
Meghalaya	M/s Necon Power & Infra Ltd	DMS-01 to 03, SS-02	215	140
	M/s Techno Electric & Engg Co. Ltd	SS-02	100	70
	M/s Unique Structures & Towers Ltd.	TW-01 & 02	400	242
Tripura	M/s SPML	SS-01 to 03	300	50
	M/s Teems on behalf M/s EMC Limited	TW- 01 to 03	300	30
	M/s Technofab	DMS 01 to 05	500	157
Manipur	M/s Win Power Infra Pvt. Ltd	DMS -01 & 02	60	30
	M/s Siddhartha Engg. Ltd.	DMS -03 & 04	50	32
	M/s Sterling & Wilson Pvt. Ltd.	SS-01 & 03	360	99
	M/s Shyama Power India Ltd.	SS-02 & TW-06	200	110
Mizoram	M/s KSA Powerinfra Pvt. Ltd	SS-01, TW-01	100	14
	M/s Sterling & Wilson Pvt. Ltd	SS-02	119	45
Nagaland	M/s Sterling & Wilson Pvt. Ltd.	DMS-03 & 04	200	56
	M/s Shyama Power India Ltd.	TW-01,05,06 & SS-03	400	170
	M/s Techno Power Ente. Ltd	DMS-01 & 02	75	55
	M/s Power Mech. Projects Ltd.	SS-02 & 04	100	35
	M/s Techno Electric & Engineering Co. Ltd	SS-01	100	60

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



From L to R : Worker Camp at Chapakhowa (Assam) ,New Shillong (Meghalaya) & Dibrugarh (Assam)



Worker Facilities From L to R Top : 132/33kV Udaipur (Tripura), 33/11 kV Porompat (Manipur) & 33/11 kV Padampukhri, Nagaland



**Above: Toilet & Sanitation Facilities
Below L to R: Drinking Water, Garbage Bin & Kitchen**



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 programme 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 addition to above, a three days training programme exclusively for its project personnel associated with construction and safeguard management at site under NERPSIP was organised at PAL Manesar, Gurgaon on 11-13 December, 2018. During such programmes 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 programmes are placed as **Plate- 5**. Details of training programmes conducted till Dec'19 is provided below in **Table-5**.

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

Sl.	Topic of Training Programme	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 & 24 th May' 18,	-Do-	36
3	Env. & Soc. aspects of T & D Projects under NERPSIP	Pragna Bhavan, Agartala, Tripura 4 & 5 th 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 & 7 th May 2019	Manager and Jr. Engg. level of AEGCL/APDCL	60
6	Environmental and Social Aspects in Project Management	Guwahati, Assam 6 & 7 th May 2019	Middle Management including Site Officials	48
7	Environment Safeguard Management in T& D Projects	EDC, Misa (Assam) 23 rd May 2019	Technician of MePTCL	15
8	Environment Safeguard Management in T& D Projects	EDC, Misa (Assam) 12 & 13 th June 2019	Technician of AEGCL/APDCL	40

Plate 5 : E & S Training Programme



E & S Aspects of Projects and System Planning & STU Management under NERPSIP, 23-24th April' 2018, Conference Hall, DPN Kohima, Nagaland



E & S aspects of T & D Projects under NERPSIP, 23-24 May'18, Aijal Club, Aizawl, Mizoram



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.	11.15 Hrs.-12.45 Hrs.	13.45 Hrs. – 15.15 Hrs.	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	11.45 -13.00	14.00 - 1530	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 issues 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 Engaging with Indigenous People (Tribal) & addressing Gender Issues with special reference to NER States Sh. R. Swarnkar, Former Sr. Social Specialist ADB	11.45 -13.00 Environmental laws of India vis-a-vis Forest & Wildlife Clearance Sh. S.S.Singh General Manager (ESM)	14.00 - 1530 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.)	15.45 - 17.00 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 Environmental and Social Policy & Procedures Framework (ESPPF) - An Overview Sh. S.K. Kar Manager (ESM)	11.15-12.30 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)	13.30- 14.30 Panel Discussion, Valedictory & feedback	



Env. & Soc. aspects of T & D Projects under NERPSIP, 4 & 5th Sept'18, Pragna Bhavan, Agartala Tripura



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

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 December' 19 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	Nos. Obs./ Notice issued by Regional Safety	Obs./Notice issued by Site Officials	Penalties, if any
Assam	14	19	1
Meghalaya	6	16	Nil
Tripura	4	29	Nil
Manipur	10	19	Nil
Nagaland	2	15	Nil
Mizoram	Nil	27	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. Wherever required, consent from ADC/VDC is also obtained, In the instant case, no land is secured through Involuntary Acquisition. Hence, no social issues such as physical displacement; R & R are envisaged in the instant project. Details of land secured for transmission and distribution substations (220/132/33 kV 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		Comm unity 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 Amarapur	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	-				
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			Type of Land (Govt./ Pvt.)	No. of Land Owner	Total Cost of Land (Rs Million)	Method of Securing Land/ Remarks, if any
	33/11 kV Rupaichari	0.62				
31	33/11 kV Ekinpur	1.03				
32	33/11 kV Gabardi	0.67				
33	33/11 kV Barpathari	0.74				
34	33/11 kV Karbook	0.59				
35	33/11 kV Muhuripur	0.99				
36	33/11 kV Dalak	1.38				
37	33/11 kV Mungiakami	1.15				
38	33/11 kV Durga Chowmohani					
39	33/11 kV Garjee	0.79				
40	33/11 kV Sekerkote	0.70				Yet to be handed over to POWERGRID
41	33/11 kV Taidu		Pvt.	1		Land willingly donated by owner
42	33/11 kV Manughat	0.80	Pvt.	1	0.657	
MIZORAM						
1	132/33 kV Lungsen	3.16				
2	132/33 kV W. Phaileng	3.92	PEDM Land	N.A	N.A	N.A
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				
7	33/11kV Longleng Town	0.52				
8	33/11kV Mokochung Power House	0.15				
9	33/11kV Mokochung Hospital Area	0.20				
10	33/11kV Zunheboto South Point	0.76	DPN Land	N.A	N.A	N.A
11	33/11kV Sechu-Zubza (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

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
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 law³ 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

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.

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 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-3** 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, Manipur and Mizoram States have 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. However, in the remaining States, who have not adopted the MoP guidelines till date the existing practice of 100% land cost for tower base shall be implemented.

The process of land compensation begins with identification of land owners, verification of land records etc. However, actual process start only after fixation of land rates by the concerned DC/DM. Accordingly, payment of land compensation are 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

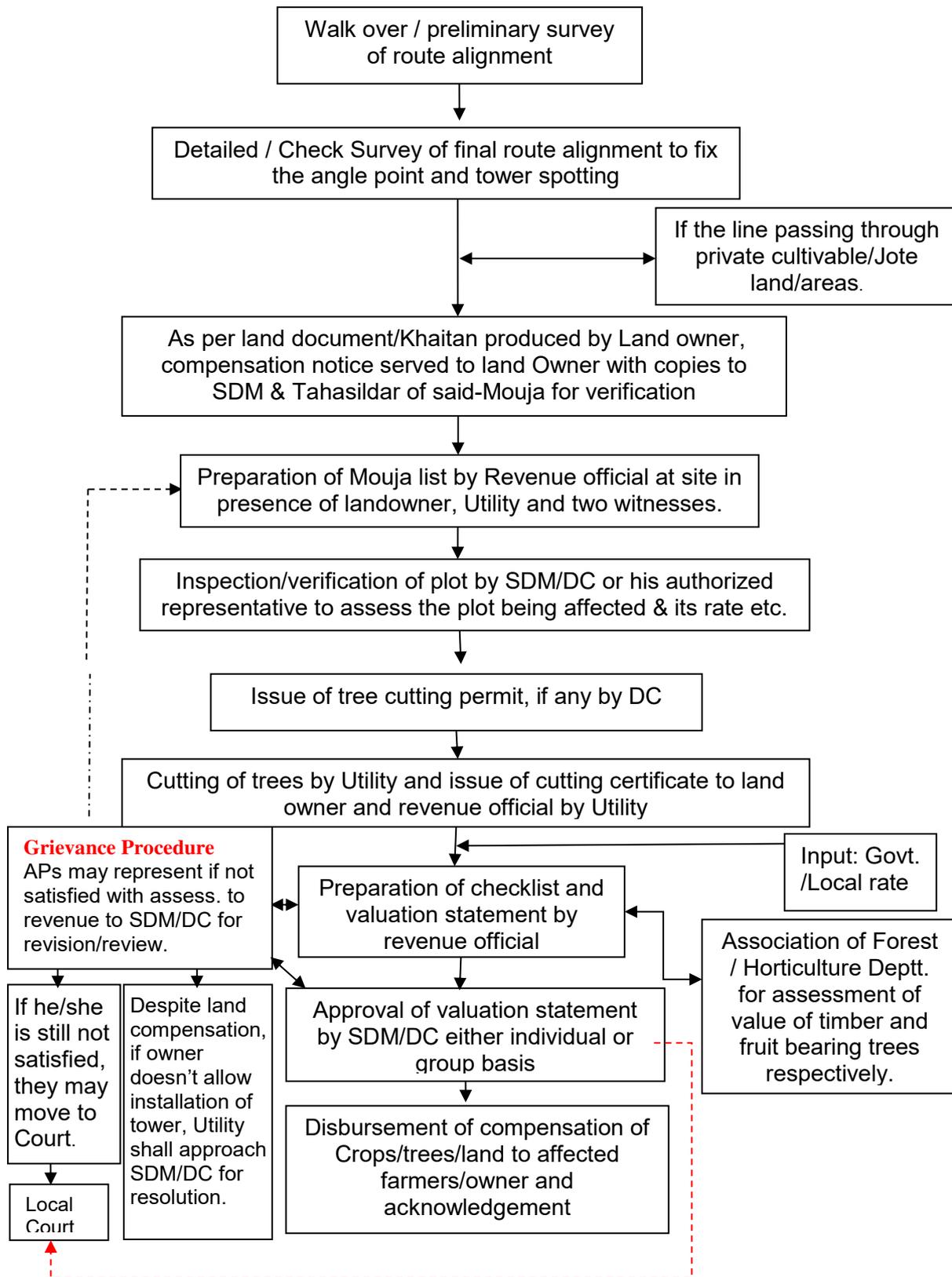


Table - 8: Status of Land, Tree & Crop Compensation

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	105	97	64	33	1.22	Stringing not started yet					75	66	09	1.84	8 nos. tower location in Govt. land	
2	132 kV S/c Dhemaji-Silapathar	39	40	16	24	0.44							Nil	Nil	Nil	Nil	Processing delayed due to change in staffs in DC/ Revenue Office
3	132 kV S/c Rupai-Chapakhowa	83	63	48	15	0.52							70	70	0	2.53	20 nos. tower location in Govt. land & 10 cases pending for title disputes.
Sub Total Assam		227	193	128	65	2.18						145	136	09	4.38		
Meghalaya																	
1	220kVD/c Byrnihat-Mgap-N.Shillong	221	221*	140*	81*	54.06	Not Started	Not Applicable as State Govt. has not adopted MoP Guidelines				30	30	0	2.64		
2	LIL0132kV MLHEP-Khliehriat	73	72*	59*	13*	4.40	2.0					Nil	Nil	Nil	Nil		
3	132 kV D/c Phulbari-Ampati	172	172*	170*	2*	13.26	10					9	9	0	0.14		
Sub Total Meghalaya		466	465	369	96	71.72						39	39	0	2.78		
Manipur																	
1	132 kV D/c Imphal – Nin'khong	46	30	32	02	2.10	Stringing not started yet				Nil	Nil	Nil	Nil			
Sub Total Manipur		46	32	30	02	2.10						Nil	Nil	Nil	Nil		
Nagaland																	
1	132 kV D/c Kohima-New Sec. Complex	18	19	15	4	1.48	Not Applicable as State Govt. has not adopted MoP Guidelines				16	16	0	0.11			

2	LILLO 132 kV D/c Kohima-Meluri at Pfutsero	7	11	10	1	0.10					11	0	11	0	
Sub Total Nagaland		25	30	25	5	1.58					27	16	11	0.11	
Tripura															
1	132 kV D/c Ambasa- PK Bari	2	2	0	2	0					4	2	2	0.30	
Sub Total Tripura		2	2	0	2	0					4	2	2	0.30	
Mizoram															
1	132kV S/c West Phaileng-Marpara	4	N/A	N/A	N/A	N/A	No compensation provisions for line corridor (only 100% for tower base) as per State Govt. notification 01.05.2019				13	9	4	1.67	4 nos. tower location in Govt. land
Sub Total Mizoram		8									20	9	11	0.16	
Grand Total		774	722	552	170	77.58					235	202	33	7.73	

**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 140 tower locations for which compensations has already been paid, 37 locations falls under private ownership & remaining 103 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

S N	Name of the Subproject /State	Loc. No/ Village	Name of complainants	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-Surajmaningar at Gokulnagar (Tripura)	AP-13 & 14	Villagers of Gokulnagar	05.06.18	Route diversion at location AP-13 & 14, infringing their land intended to be used for construction of houses by marginalized people	Resolved. Modification in route alignment avoiding such land has been achieved after due diligence to the satisfaction of complainants.
C. Verbal Complaints						
2.	132kV S/c West Phaileng-Marpara (Mizoram)	AP-168	Sh. Bosisto Moni	13.12.18	Compensation for crop/other damages during construction	Resolved. Compensation framework explained to complainant to his satisfaction
3	33/11 kV Botsa (Ext.) substation (Nagaland)	Village Botsa	Dr. Ropfu Dolie (PHC)	01.03.18	Regarding Road Block due to construction materials	Resolved. Within 3 hours to complainant satisfaction
4.	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
5.	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 are being held to find an amicable solution
6.	33/11 kV Padampukhri substation (Nagaland)	Village Padampukhri	Nearby Residents	18.07.18	Unpleasant sound due to construction	Resolved. Noise reduction measures implemented & no further complaint received
7.	33/11 kV Botsa (Ext.) substation (Nagaland)	Village Botsa	Villagers	28.12.18	Fencing of the substation boundary	Resolved. Fencing work completed in July'19

8.	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. SDO PMD- I, Khawiva suggested alternative location for storage/ disposal of excavated soil
9	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 Area)	Issue resolved through meeting/ discussion
10	Concerned land owners of Loc. No. 01 to 28 of Zhadima village		06.06.19	Matter resolved through discussion. Compensation framework explained to complainant to their satisfaction.		
11	Land Owners at AP- 19-20		08.11.19	Compensation towards Approach road	Matter resolved through discussion with Contractor and Land owners.	
12	220 kV D/C Killing- Mawphlang- New Shillong Transmission line	Mawphlang	AP 1-3	10.08.19	Realignment of line route	Meeting held under chairmanship of Joint Secretary Power on 4 th Oct.'19. Minor realignment along with making 3 towers multi-circuit has been proposed.
13	132kV Kohima – Wokha (Nagaland)	Phezha AP-01	Medosao Semou	21.10.19	RoW issue (higher compensation demand)	Discussion/ negotiation under progress
14	220kV New Kohima - Mokokchung via Wokha line (Nagaland)	Ehunny, AP-113 to 121	Village council of Ehunnu	08.11.19	Compensation towards Approach road	Matter resolved through discussion with Contractor and Land owners.

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 Dec'19 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)
June- Dec.'19	335	296	39	Tripura : 27 (09 female), Meghalaya 44 (6 female),Nagaland: 198 (19 female), Mizoram: 66 (5 female)
Total	3606	2798	808 = 22.40%	

Plate 6: Stakeholders Consultation



Public Consultation during ESPPFs- Above - Hotel Imphal, Imphal, (Manipur) on 21st April 2015
Below- NEHU Complex, Shillong (Meghalaya) on 29th April 2015



Public Consultation during IEARs- Above – Bagafa, Tripura on 15st Sept' 2014
Below – Phuldungsei, Mammit, Mizoram on 18th May 2017 & Phulbari (Meghalaya) on 10th Dec. 2014



Public Consultation during IEARs
Yurebam village in Imphal on 5th November, 2015 & Phuldunasei, Mammit, Mizoram on 18th May 2017

Consultation/Meeting with land owner during land securing for substation - 132kV Teok, Assam (Left) & 132/33kV Pfutsero Nagaland (Right)



**Consultation during construction period
Above : At New Keithelmanbi and Napetpalli Village (Manipur)
Below : At Teroguvonou and Pongo Village (Nagaland)**



**Meeting with other Stakeholders
Above : Meeting with DC, Kohima, Nagaland (left) & DC East Jaintia Hills District (Meghalaya)
Below : Meeting with Village Headman of Mawkhar, Mawpynthih & Maweitnai (Meghalaya) & VDC Members Zadima (Nagaland)**





Consultation during Reporting Period

Above - Left : With land owners (AP 117/0), on 11th Sept'19 Right- With village Headman of Ladpnarim Village enroute of 220KV D/c Byrnihat-Mawngap-New Shillong.

Below – Public Meeting at Yaingangpokpi on 12 Aug' 19 and Tamenglong 16 Aug' 19 enroute of 132 kV D/C Yaingangpokpi Kongba & 132kV S/C (On D/C Tower) Rengpang-Tamenglong TL



Consultation during Reporting Period

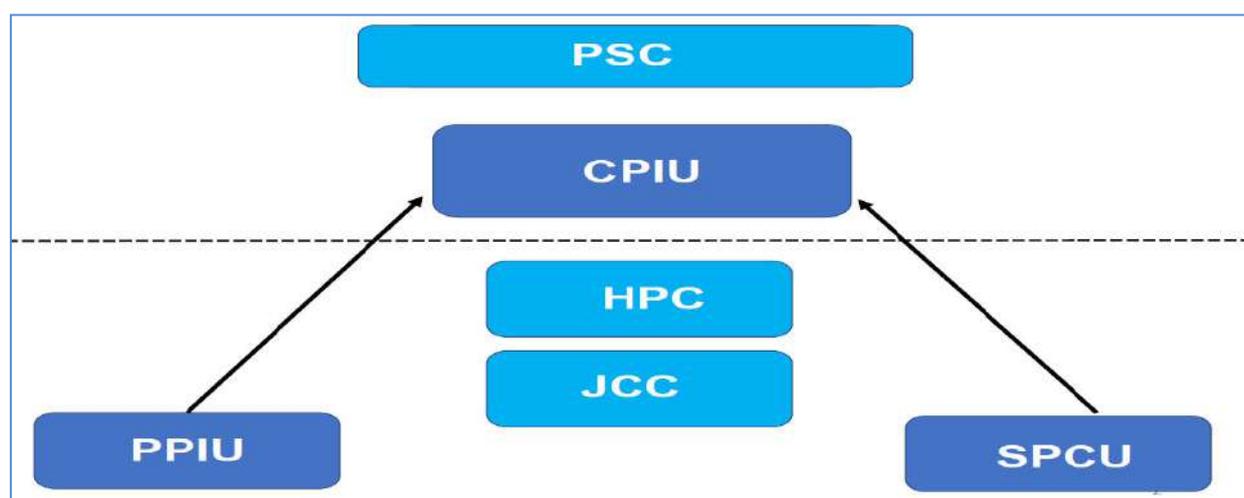
Above - Left : Meeting at Botsa, Kohima on 7th Sept'19 Right : Public Meeting at Zhadima, Kohima on 25th Sept.'19

Below – Public Meeting at Lunasen. Lunalei on 8th July' 19



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 endeavours 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 were 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 417.885 ha or approx. 149.90 km, (which is just 4.34 % of total line length of 3,452km of proposed TL/DL), including 0.55 Ha of protected area i.e. Trishna Wildlife Sanctuary. 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 willing 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, the state governments are also being 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.

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
					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 <i>(Sec-II. 2.2 i of Contract agreement)</i>	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 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

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
								and therefore, provisions of tower extensions up to 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.
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 Measures to avoid invasion of alien species	Tower/pole location and overhead/ underground line alignment selection (distance to nearest protected or reserved forest) Intrusion of invasive species	Consultation with local authorities – once Consultation with local authorities and design engineers – once Consultation with local forest authorities - once	IA/ Survey Agency <i>(Sec-II. 2.4, 2.1 (i) of Contract agreement)</i>	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) Act, 1980 have been obtained/ are presently under various stages of approval process at State Govt/ RMoEFCC level (for details

⁵ As per International/National best practices and in consultation with concerned forest/wildlife Authority
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Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			Obtain statutory clearances from the Government	Statutory approvals from Government	Compliance with regulations – once for each subproject			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
			Consultation with autonomous councils wherever required	Permission/ NOC from autonomous councils	Consultation with autonomous councils – once during tower placement			
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 <i>(Sec-II. 2.4, 2.1 (i) of Contract</i>	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

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			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	<i>agreement)</i>	Part of detailed sitting and alignment survey /design	compensation as per assessment of revenue authorities is paid to land owner/farmer in case of inevitable damages.
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
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 design/drawing. As per approved design provision of pit (capacity of 130% of transformer oil volume) below each transformer and a sump of capacity of 200% of oil volume of largest transformer is provided.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			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
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 fire fighting 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 installation	Noise and vibrations	Construction techniques and machinery selection seeking to minimize ground disturbance.	Construction techniques and machinery	Construction techniques & machinery creating minimal ground disturbance- once at the start of each construction phase	IA (Contractor through contract provisions) (Sec-IX. PC 22.4.3.5, 22.4.1 of <i>Contract agreement</i>)	Construction period	Complied/ Being Complied. 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	Timing of start of construction	Crop disturbance – Post harvest as soon as possible but before next	IA (Contractor through contract provisions) (Sec-II. 2.5 of	Construction period	Complied/ Being Complied. As already explained, construction activities on farm/agricultural land are being undertaken mostly

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			wherever possible).		crop – once per site	<i>Contract agreement</i>		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 and 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. Noise levels are being monitored in all active sites regularly and all readings are found to be well within permissible limits (refer Plate-9). 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).
		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	
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.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
		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	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.
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- 10). No accidents reported so far.
		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-11) 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

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
								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
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.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			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 harvesting	Loss of vegetation and deforestation	Construction workers prohibited from harvesting wood in the project area during their employment, (apart from locally employed staff continuing current legal activities)	Illegal wood /vegetation harvesting (area in m ² , number of incidents reported)	Complaints by local people or other evidence of illegal harvesting – every 2 weeks	IA (Contractor through contract provisions) (Sec-II. 2.3)	Construction period	Complied/Being complied. 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	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/

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			pond or other nearby barren land with agreement of local communities					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-4.
		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) Statutory approvals	Amount of ground disturbance – every 2 weeks Statutory approvals for tree clearances - once for each site	IA (Contractor through contract provisions) (Sec-VII, 9.3, 10.3)	Construction period	Complied/Being Complied. Already explained at clause no. 23.
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.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
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 action taken to control and clean up spill)	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 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 construction sites were found to be well within permissible standard. (refer Plate - 9)
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.

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 compliants 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. 7.73 million & Rs 77.58 million have been paid for tree/crop and land compensation respectively to approx. 787 affected persons till reporting period. (refer Table- 8)
34	Uncontrolled erosion/silt runoff	Soil loss, downstream siltation	Need for access tracks minimised, use of existing roads.	Design basis and construction	Incorporating good design and	IA (Contractor through	Construction period	Complied/Being complied. Wherever needed appropriate

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			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.	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])	construction management practices – once for each site	contract provisions) (Sec-II, 2.7)		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.
35	Nuisance to nearby properties	Losses to neighbouring land uses/values	Contract clauses specifying careful construction practices. As much as possible existing access ways will be used Productive land will be reinstated following completion of construction	Contract clauses Design basis and layout Reinstatement of land status (area affected, m ²)	Incorporating good construction management practices – once for each site Incorporating good design engineering practices– Consultation with affected parties – twice – immediately after completion of construction and after the first harvest	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.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
		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.
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 – once for each site	IA (Contractor through contract provisions) (Sec-II, 2.9)	Construction period	Complied/Being complied. Already explained at clause no. 26.

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
39	Health and safety	Injury and sickness of workers and members of the public	<p>Safety equipment's (PPEs) for construction workers</p> <p>Contract provisions specifying minimum requirements for construction camps</p> <p>Contractor to prepare and implement a health and safety plan.</p> <p>Contractor to arrange for health and safety training sessions</p>	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.
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	<p>Complied/Being Complied</p> <p>All employees engaged in project execution including designated Environment Officers have been adequately trained. (refer Section 3.1.5.)</p> <p>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 provide with a dedicated designated Environment Officers for proper monitoring and implementation of safeguards measures. Recruitment</p>

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			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			process has been under way to fill the posts that have fallen vacant in two states i.e. Meghalaya & Manipur.
			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) .
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	Not applicable currently. Will be complied during O & M stage
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,	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	- do-

Cl. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
			insulating jumper loops, obstructive perch deterrents, raptor hoods etc., if applicable					
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	- do-
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	- do-
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	- do-

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
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	- do-
			Safety awareness raising for staff.	Training/awareness programs and mock drills	Number of programs and percent of staff /workers covered – once each year			- do-
			Preparation of fire emergency action plan and training given to staff on implementing emergency action plan	Provision of facilities	Complaints received from staff /workers			- do-
			Provide adequate sanitation and water supply facilities					- 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 incidents, lost work days)	Preparedness level for using these technology in crisis – once a month	State Utility	Design and Operation	- do-
			Security fences around substations	Maintenance of fences	Report on maintenance – every 2 weeks			- do-
			Barriers to prevent climbing on/	Maintenance of barriers				- do-
			Appropriate warning signs on facilities	Maintenance of warning				- do-
			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			- do-

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
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. Preparation and training in the use of O&M manuals and standard operating practices	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	- do-
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	- do-
50	Equipment specifications and design parameters	Release of chemicals and gases in receptors (air, water, land)	Processes, equipment and systems using chlorofluorocarbons (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	- do-
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	- do-

Cla. No.	Project activity/stage	Potential impact	Proposed mitigation measures	Parameter to be monitored	Measurement & frequency	Institutional responsibility	Implementation schedule	Compliance Status
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-monsoon/post-monsoon)	State Utility	Operations	- do-
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	- do-

ENCLOSURES

Appendix-2 : Sample copy of notice/memo to contractor for compliance of EHS conditions

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



Dongtich, Lower Nongrah, Lapalng, (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/113/2019/ २७०

Date. 18.11.2019

To,

The Project in-charge
M/s Necon Power & Infra (P) Ltd.
C/O. POWERGRID CORPORATION OF INDIA LTD,
132/33kV Tangla New Sub-Station,
Assam -784521

Sub: Safety Check / Audit.

Dear Sir,

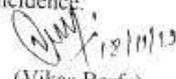
Under signed has visited 132/33kV new sub-station at Tangla Site, Assam on 13.11.2019. The Safety check / Audit has been carried out along with your Site Engineers. During the Safety Check / Audit, some lapses pertaining to safety related aspects have been observed.

The observations are mentioned as under:

1. During audit it has been observed that the oil pits of transformers & steel rods kept at site were not barricaded, needs to be properly barricaded.
2. One pole was observed temporarily erected using bamboo support, it is to be either permanently erected or kept horizontally on ground.
3. Two nitrogen cylinder observed lying on the ground at site, these shall be kept with valve cap & chain barrier.
4. Regular safety inspection record was not available at site, needs to be maintained.
5. Filled oil drums stored haphazardly at site and no rampage/slope was found for unloading of filled oil drums.
6. Clamp on the Nitrogen tube was missing while it was connected to transformer for filling.
7. No trolley was observed at site for transportation and handling of filled nitrogen cylinder.
8. Temporary electrical supply panel at labor camp found in damaged condition, electrical cable having joints & wire were connected in it without plug pin, the panel/cable to be replaced & pin needs to be installed.
9. Oil spillage was witnessed on the concrete mixture kept near control room building area, needs to be cleaned.
10. Scrap yard area needs to be designated and all scrap items shall be stored in it.
11. Fire extinguishers needs to be kept near DG set & Fire buckets observed half filled, to be filled full with sand.
12. Bulb socket at the cement godown entrance observed broken, needs to be replaced with new one.
13. 33kV Panel door with danger sign board observed detached near cement godown, needs to be fixed properly.
14. Grass cutting to be done & Safety posters and safety slogans needs to be displayed at the site.

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,


(Vikas Barfa)
Engineer (Safety), RHQ, Shillong.

Copy to:

1. CGM, NERPSIP, Guwahati – For kind information
2. Sr. GM (I/C AM), NERTS - For kind information
3. GM (FQA, ESM, Safety), NERPSIP, Guwahati – For kind information
4. CM (Safety), Shillong – For kind information
5. Mgr, NERPSIP, Tangla, Assam

पंजीकृत कार्यालय: पी. 19, कुतुब इन्स्टीटयुशनल एरिया, कतवारिया सराय, नई दिल्ली- 110016, एपीएक्स- 6560121, फोन: 011-6560009, आर. 'नॉटग्रीड'
Registered Office: B-9, Qutub Institutional Area, Katwaria Sarai, New Delhi- 110016, EPBAX: 6560121, Fax: 011-6560039 Gram: "NATGRID"

पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)

POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)



(NORTH EASTERN REGION POWER SYSTEM IMPROVEMENT PROJECT)
NAGALAND, KOHIMA
NORTH EASTERN REGION

NERPSIP/KOH/5010/01/ 2019-20/17 83

Dated 18.10.2019

To

M/S Shyama Power India Limited
Naga Cottage, Circular Road
Dimapur-797112
Nagaland.

Kind Attn.: Sri A K Chamoli

Sub: - Deployment of Safety officers and subordinates at work sites- regarding

Sir,

Under the NERPSIP Kohima project altogether 4 (four) work packages have been awarded for construction of EHV transmission lines and substation. The locations and work sites are spread out far and wide across the state. In spite of our constant persuasion you have appointed only one safety officer as on date against the requirement for all the separate packages along with subordinate staff to look after the work. It has been observed in many instances that construction activities have been carried out without any safety officials and proper norms. No proper action has been taken from your side so far in spite of our repeated advice. The matter is looked into seriously and we are bound to take necessary stringent action against violation of the safety norms as per the terms of the contract.

As such, henceforth it is requested that no construction activities are taken without the supervision of your safety personnel and proper PPE at sites. It is also requested for appointment of safety personnel for separate work packages.

With regards,

Sincerely Yours,

L. A. Sharma

GM, NERPSIP, Nagaland.

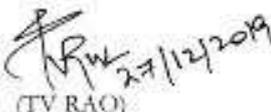
Copy to:-

1. CGM, NERPSIP, Guwahati
2. Sr.GM (PESM), NERPSIP, Ghy.

पंजीकृत कार्यालय: बी-9, कृतम इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली-110016, दूरभाष: 26560121 फॅक्स: 011-26560039 तार: 'natgrid'Registered
Office: B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110 016, Tel.: 26560121 Fax : 011-26560039 Gram: 'NATGRID'
स्वहित एवं राष्ट्र हित में ऊर्जा बचाएँ

Save Energy for Benefit of Self and Nation

Appendix-2a : Sample copy of Penalty notice/memo issued to contractor for non - compliance of EHS Conditions

 <p>पावरग्रिड POWERGRID</p>	<p>पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड (एक स्वतंत्रता का प्रयास) POWER GRID CORPORATION OF INDIA LIMITED (A Government of India Enterprise)</p>
<p>Ref: NERPSIP/Mizoram/S&W/Safety/F-118/2019/675</p> <p>To, The Project Head T&D East, M/s Sterling & Wilson Pvt. Ltd, Kolkata</p> <p style="text-align: center;"><u>Attn: Mr. Indrajit Das Gupta</u></p> <p>Sub: Non-compliance of Safety aspects, Unsafe work conditions, Non-compliance of safety instructions regd.</p> <p>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</p> <p>Dear Sir,</p> <p>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.</p> <p>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.</p> <p>This is for your kind information and needful action.</p>	<p>Date: 27.12.2019</p> <div style="text-align: right; margin-top: 100px;">  (TV RAO) DGM/NERPSIP AIZAWL. </div>
<p>Encl: As mentioned above</p> <p>Copy To: 1) COO, S&W, Mumbai - For kind information. 2) Project Manager, S&W, Aizawl</p>	
<p><small>साइट-ऑफिस: अइजवल (एन ई आर पी एस, आई पी), गुइवांगिड, बी. पी. रोड, तहिल, जिला: आइजवल, मिजोरम-७८५००९, ईमेल: nerpsip.mizoram@powergrid.co.in Site Office: Aizawl (NERPSIP), Tuivamth, B.P.O- Takhil, Dist: Aizawl, Mizoram-786009 email: nerpsip.mizoram@powergrid.co.in केन्द्रीय कार्यालय: सेक्टर-२९, प्लॉट नं. २, सेक्टर -२९, गुरुग्राम -१२००३१, अजिंक्यपुरी इलाका: ०१२४-२५७१७००-७१९ Corporate Office: 'Saudamini', Plot No. 2, Sector-29, Gurugram-122001, Haryana Tel: 0124-2571700-719 पंजीकृत कार्यालय: बी -९, कृष्ण नदी-प्रदेशीय क्षेत्र, कटारिया सराय, नई दिल्ली -११००१६, दूरभाष: ०११-२६५६०११२, २६५६०१२१, २६५६४८१२, २६५६४८९२, ईमेल: 140101DL1989G0038121 Registered Office: B-9, Qutab Institutional Area, Kataria Sarai, New Delhi-110 016, Tel: 011-26560112, 26560121, 26564812, 26564892, CIN : 140101DL1989G0038121 Website: www.powergrid.co.in</small></p>	

Appendix-3 : Sample Case of Compensation Process

DEPARTMENT OF POWER, GOVT. OF NAGALAND
 Executing Agency : Power Grid Corporation of India Ltd.,
 (A Govt of India Enterprise)


 पावर गिड्स

NOTICE CUM COMPENSATION CERTIFICATE FOR CROP AND TREE

Sl. No.: Sl. No. 097
 Date: 28/08/2019

To,
 Shri/Ms. Theno Jaso S/W/o Khonkhu Jasi Village Tequngvu
 Tahsil District Kohima State Nagaland

Subject : Construction of 220 kV Power Transmission System from New Kohima To Mokokehury Under NERPSIP.

Sir/Madam,
 Under the power vested in The Electricity Act 2003, Section 68 and 164 read with part III of Indian Telegraph Act 1885 and The Central Electricity Authority (measures relating to Safety and Electric Supply) Regulation 2010, A Notice is hereby given that 220 kV New Kohima (relating to Mokokehury) Transmission Line will go through your property.

Certain minimum unavoidable damage of Crop / Tree is likely to take place during the Foundation / Erection / Stringing works of the aforesaid transmission line. The tree(s) or crop(s) so fell/Cut or dealt with will be handed over to you. You are therefore requested to remain present to receive the same personally. The compensation for yield component of the tree(s) so fall and the crop(s) actually/ damaged will be paid to you as assessed by the Executive Magistrate/ Revenue Department or any other Competent Authority specified by the appropriate Government in this behalf.

S NO	LOCATION/ SPAN	DETAIL OF DAMAGES DURING CONSTRUCTION				REMARKS
		LAND KHASARA/DAG/ PATA NO	NAME OF THE CROP OR TREES	AREA OR NOS	*Girth	
	<u>AP-69</u>					<u>Paddy field</u>

* GIRTH OF THE TREE MEANS CIRCUMFERENCE AT CHEST LEVEL.

Received Notice with consent for work. For and On behalf of Department of Power Govt. of Nagaland

Owner's Signature Signature of POWERGRID

Sign of Witness I
 Sign of Witness II
 Chairman

VERIFICATION BY REVENUE AUTHORITY

Certified that Land under Khasara / Dag / Patta no. of Village Tahsil
 District State belongs to Sri / Smt Son / Wife of
 He / She is sole / shared owner of the above mentioned Land / property.

Seal & Signature of

Notice Served to Affected Person

DEPARTMENT OF POWER, GOVT. OF NAGALAND
 Executing Agency : Power Grid Corporation of India Ltd.,
 (A Govt of India Enterprise)


 पावर गिड्स

NOTICE CUM COMPENSATION CERTIFICATE FOR LAND

Book no. 001 Sl. No.: NK/132 KV NK-NS/ LAND/04 Sl. No. 004
 Date: 12/11/2019

To,
 Shri/Ms. NEIZELIE S/W/o LE. SAZHUO Village ZHADIMA
 Tahsil District KOHIMA State NAGALAND

Subject : Construction of 33 kV Power Transmission System from NEW KOHIMA To Under NERPSIP.

Sir/Madam,
 Under the power vested in The Electricity Act 2003, Section 68 and 164 read with part III of Indian Telegraph Act 1885 and The Central Electricity Authority (measures relating to Safety and Electric Supply) Regulation 2010, A Notice is hereby given that 33 kV NEW KOHIMA (RELATING TO ZHADIMA) Transmission Line will go through your property.

The said line is passing through your area and transmission line tower no. AP26 will be constructed on your land. The compensation of the land required for tower footing shall be paid to you by Powergrid Corporation of India Limited at the rates as fixed by the Deputy Commissioner KOHIMA as per the notification of the Govt. Of Nagaland for compensation of land for construction of EHV transmission line.

S NO	LOCATION/ SPAN	DETAIL OF LAND AFFECTED AT TOWER FOOTING / ROW DURING CONSTRUCTION			REMARKS
		LAND KHASARA/DAG/ PATA NO	NAME OF THE CROP OR TREES	AREA OR NOS	
<u>1.</u>	<u>AP26</u>	<u>NA</u>	<u>Enclosed AS ANNEXURE - IX</u>	<u>623.85 T Sq. feet</u>	<u>Foundation work.</u>

Received Notice with consent for work. For and On behalf of Department of Power Govt. of Nagaland

Owner's Signature NEIZELIE Sub-Divisional Officer and Transmission Sub-Division Kohima - Nagaland

Sign of Witness I
 Sign of Witness II
 Chairman

VERIFICATION BY REVENUE AUTHORITY

Certified that Land under Khasara / Dag / Patta no. of Village Tahsil
 District State belongs to Sri / Smt Son / Wife of
 He / She is sole / shared owner of the above mentioned Land / property.

Seal & Signature of
 Circle Officer, District Administration Kohima - Nagaland

POWERGRID CORPORATION OF INDIA LTD
COMPENSATION ASSESSMENT SHEET

Name of the Transmission Line: 132kV D/C New Kohima-New Secretariat Complex Transmission Line

Part-A

Sl No.	Loc No./Span	Notice No./Date	Name of Cultivators with Father's name	Village, Tahsil, District	Area (sq ft)	Rate in Rs. Per Unit	Compensation Payable(Land) in Rs.	Compensation Payable(Crop/tree) in Rs.	TOTAL(In Rs)	Remarks
1	AP2	Notice No-NL/132KV NK-NS/LAND/26 Dated:20.02.2019	Landowner's name- PEZACHILIE Father's Name- KHREHIE	Zhadima	1237.403	95	117553.285	4050	121603.285	
2	AP3	Notice No-NL/132KV NK-NS/LAND/77 Dated:20.02.2019	Landowner's Name-KESOVILHOU ANGAMI Father's Name-Lt.Mohie	Zhadima	623.837	95	59264.515	1025	60289.515	
3	AP12	Notice No-NL/132KV NK-NS/LAND/73 Dated:15.02.2019	Landowner's Name-THENLIORIE-O KHOUVEVE Father's Name-Lt. DELIEZHII	Zhadima	623.837	95	59264.515	4975	64239.515	
4	AP19	Notice No-NL/132KV NK-NS/LAND/02 Dated:18.01.2019	Landowner's Name- KHRESAMHALIE SORINVOU Father's Name-Lt. DONIELIE	Zhadima	1335.541	95	126876.395	6450	13326.395	
5	AP20	Notice No-NL/132KV NK-NS/LAND/03 Dated:18.01.2019	Landowner's Name-NIEZELIE Father's Name-Lt.SAZHU-O	Zhadima	737.968	95	70105.96	9750	79856.96	
6	AP21	Notice No-NL/132KV NK-NS/LAND/07 Dated:18.01.2019	Landowner's Name- VISAZOLIE ANGAMI Father's Name-Lt. LHOURELIE	Zhadima	623.837	95	59264.515	8100	67364.515	
7	AP22	Notice No-NL/132KV NK-NS/LAND/01 Dated:18.01.2019	Landowner's Name-THEKRUNEILHOU MERE Father's Name-Lt. KHRIEO	Zhadima	988.632	95	93920.04	6750	100670.04	
8	AP24	Notice No-NL/132KV NK-NS/LAND/28 Dated:23.04.2019	Landowner's Name-NIESAKHOTUO MEPTHOU Father's Name-LHUPULIE	Zhadima	1298.09	95	123318.55	4250	127568.55	
9	AP26	Notice No-NL/132KV NK-NS/LAND/04 Dated:18.01.2019	Landowner's Name-NEIZELIE Father's Name-Lt. LHOURELIE	Zhadima	623.857	95	59266.415	3000	62266.415	
TOTAL									817185.19	

Part-B

I. Establishment & Administrative cost	8%	65374.82
II. Contingency charges	2%	16343.7
TOTAL I+II		81718.53
Grand Total (Part-A+Part-B)		898903.72

Rupees Eight Lakhs Ninety Eight Thousand Nine Hundred Three and Seventy Two Paise.

Seal and Signature of POWERGRID

एच. के. चुतिया / H.K. Chutia
उप. प्रबंधक / Dy. Manager
एन. ई. आर. पी. एस. आई. पी. / (NERPSIP)
पावरग्रिड / POWERGRID
कोहिमा - नागालैंड / Kohima : Nagaland

Seal and Signature of the Revenue
Officer Kohima, Nagaland
Office of the Deputy Commissioner
Kohima : Nagaland

Seal and Signature of the Deputy
Commissioner Kohima, Nagaland
Office of the Deputy Commissioner
Kohima, Nagaland

Land Compensation Assessment duly certified by Revenue Authority & Dy. Commissioner

POWERGRID CORPORATION OF INDIA LTD
Crop and Tree COMPENSATION ASSESSMENT SHEET

Name of the Transmission Line: 132kV D/C New Kohima-New Secretariat Complex Transmission Line

Sl No.	Loc No./Span	Notice No./Date	Name of Cultivators with Father's name	Village, Tahsil, District	Khasar/dag/ Patta No.	Detail of Damage Crop/tree	Girth(in feet)	Qty/Area(l)	Rate in Rs. Per Unit	Compensation Payable in Rs.	Bank Details	Remarks
1	AP2	Notice No-NL/132KV NK-NS/LAND/26 Dated:20.02.2019	Landowner's name- PEZACHILIE Father's Name- KHREHIE	Zhadima		Chiete	1.98	1	150	150		
						Chiezie	3.3	1	150	150		
						Chiezie	1.98	1	150	150		
						Jaja	0.99	2	150	300		
						Thepfil	2.64	1	200	200		
						Megu	1.8	2	200	400		
						Kerimfil	4.29	1	75	75		
						paratha	0.9	5	75	375		
						paratha	1.8	2	75	150		
						Paratha	2.3	1	75	75		
						jaga	2.97	1	150	150		
						jaga	2.4	2	150	300		
						jaga	0.9	3	150	450		
						Thepfil Mecie	1.19	3	150	450		
						Thepfil Mecie	0.9	2	150	300		
						Thepfil Mecie	1.3	1	150	150		
						Pedo	1.9	1	150	150		
Paratha	1.3	1	75	75								
Total										4050		

Seal and Signature of POWERGRID

एच. के. चुतिया / H.K. Chutia
उप. प्रबंधक / Dy. Manager
एन. ई. आर. पी. एस. आई. पी. / (NERPSIP)
पावरग्रिड / POWERGRID
कोहिमा - नागालैंड / Kohima : Nagaland

Seal and Signature of the
Department of Public
Sub-Divisional Officer
Transmission Sub-Division
Kohima : Nagaland

Seal and Signature of Circle
Officer/District Administration
Revenue Officer
Office of the Deputy Commissioner
Kohima : Nagaland

Tree Compensation Assessment duly certified by Revenue Authority

Scheduled Time 27-Jul-2019 12:00 IST

Direct Debit

Reports

Site Map

Date 27-07-2019

PAY 0000010530522383

MAKER BK BARUA

ACCOUNT NO 0000034553441171

Rs. 898904.00

STATE BANK OF INDIA

GUWAHATI MEDICAL COLLEGE

CTG6132656

DEBASIS SAHOO Authorizer 1

RABI SANKAR PATRA Authorizer 2

2400141074191101

Counterfoil Description

Transaction Type Third Party Transfer

Debit Account Details

Account Number	Branch	Amount
0000034553441171	GUWAHATI MEDICAL COLLEGE	898904.00

Credit Account Details

Account No. / Name	Amount	Credit Status
0000010530522383	898904.00	Success

Online Transfer of Compensation amount to Affected Person

GOVERNMENT OF NAGALAND
OFFICE OF THE DEPUTY COMMISSIONER
KOHIMA: NAGALAND

NO. REV/PWR/2014/____/11

Dated Kohima the March 2019

14/11

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

**Notification/Fixation of Rate by
Concerned authority**

NO. REV/PWR/2014/____/11

Dated Kohima the March 2019

14/11

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

NO. REV/PWR/2014/____/11

Dated Kohima the March 2019

14/11

Copy to:

1. The Commissioner, Nagaland: Kohima for information.
2. The Principal Chief Forest Conservator of Forest, Nagaland for information.
3. The Executive Engineer Transmission, Kohima Division for information.
4. The SDO (C), Sechü, Zubza for information.
5. The General Manager, Power Grid Corporation of India Limited, Dimapur for information.
6. All Village Chairman(s) and landowners concerned for information.
7. Office copy.

(ANOOP KHINCHI)IAS
Deputy Commissioner
Kohima: Nagaland

Appendix- 4: 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		Existing/registered borrow site
9	132/33 kV GMC	9100		Existing/registered borrow site
10.	132/33 kV Paltan Bazaar	2265		Existing/registered borrow site
Meghalaya				
1	33 kV Mawkynew	1068	25°24'47.89" N 91°59'52.16" E	Community land utilized for development of road in agreement with community.
Tripura				
1.	132/33kV Mohanpur	1344	23°57'0.57" N 91°23'4.05" E	Borrowed earth from private land with due consent from land owner.
2.	132/33kV Rabindranagar	814	23°27'35.76" N 91°16'22.36" E	
3	33/11kV Golaghati	3182	23°41'47.50" N 91°21'59.80" E	
3	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	

34
DUPLICATE FORM-O (SEC-RULE 46 I)
 BOOK NO. 2160
 FORM OF TRANSIT OF MINOR MINERAL
 Assmt. Conservator of Forest Karbi Anglong East District ID: 141414

KARBI ANGLONG AUTONOMOUS COUNCIL
 (WEST DISTRICT OFFICE)
 KARBI ANGLONG

Name and address of the lease / permit holder: Shri Arunika Dasgupta

Detail of the quarry / Lease / Permit No.: 22160-11/2467 dt. 04/09/2017

Name of Minor Mineral: Sample Soil

Name and address of the person Contractors to whom material has been sold and supplied: Neccon Power Infra Limited AT. Kaas. Jorhat

Quantity: 10x107m³ (one hundred)

Truck No. / R.R. No. Carried No.: AS-0192/4599

Name And address of the Driver in the Minor Minerals is to be transported By road: None

Place of delivery of Materials: Sarupathar 132 kv/33kv Substation

Date and Time of dispatch: 03/05/2018

Valid up to: 03/05/2018

Signature of the lease / permit holder: [Signature]

Signature of the Forest Officer: [Signature]
 Deputy Forest Officer
 Lokesh M C Bora, District
 KJA East Division

TRANSIT CHALLAN Duplicate
DIBRUGARH FOREST DIVISION

Book No.: **6**
 Assistant Conservator of Forests
 Dibrugarh Division
 Date: _____

- Name and address of the Permit Holder: Shri Arunika Dowerah Chowkidinghee, Dibrugarh.
- Details of the area of Permit: Nowjan Habi Gaon, Dag No. 90x91 Patta No. : 28
- Location of area: Khawang Range
- Range of the Division where the materials is located: Khawang Range Under Dibrugarh Division
- Name of the Minor Minerals: Earth
- Permit No. & Date of issue: DBR 14/6/6/2018/1157-60
- Date of expiry of permit: 15/11/2018
- Name & address of the Persons to whom materials has been sold & Supplied: Neccon Power & Infra A.T. Road. Jorhat.
- Quantity of materials being transported under this transit Challan: 10 cm (Ten)
- Vehicle No.: AS-06 BC-1777
- Name & Address of the Driver: Samikan Das
- Place of delivery of materials: 220kv/132 kv Behiating & Sarupathar
- Date & time of despatch: 15/12/18
- DEIAA Dibrugarh Letter No.: DDO 55/2016/88-A/1060 dtd-28.3.17

Signature of permit holder: [Signature]
 Seal of the Office

Sample of transit challan of borrowed earth for 220/132 kV Behiating & 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 Khongnangkhang, Imphal vide T.R. V No. 465926 dt. 20/03/2018.

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

১৯-০৩-২০১৮
 ডিবি. অফিস
 অফিস, ইম্ফাল

বিষয়: জমি উত্তোলন চুক্তি।

সংক্রান্ত,
 আবেদন করা হয়েছে যে আবেদনকারী জিজ্ঞাসিত আবেদন
 জন্য কিছু জমি হস্তান্তর করেছেন। আবেদনকারী কতিপয় নিম্নলিখিত
 আবেদনকারী জমি থেকে যদি কিছু জমি আবেদনকারী উত্তোলন
 করে এবং এগুলি আবেদনকারী পুর্বে উত্তোলন করে এবং
 স্থানীয় সরকারের কাছে রাখেন। নিম্ন আবেদনকারী কতিপয়
 আবেদনকারী।

আবেদনকারী কতিপয় কতিপয় নিম্নলিখিত বিষয়সমূহ:-
 জমি - উত্তোলন, পরিষ্কার ক. ২০১৬,
 মজুরি - ৩০০০, পরিষ্কার - ৩০০০
 (কতিপয়) আবেদন - জিজ্ঞাসিত।

ইতি
 অফিস অফিস
 ডিবি. অফিস

F.R. 5 No. V 465926

Received from DGM, Lokendra
 with bill No. (Win power Pvt. Ltd)
 Dated _____

the sum of Rupees two thousand eight hundred
eighty eight only
 in cash on account of transportation charge
 in payment of 4 earth 110 cum.

Royalty - Rs. 2750
 2.5% GST Rs. 69
 2.5% GST Rs. 69

2888/-
 Initial Designation
30/3/18

Consent from land owner for Borrowed Earth

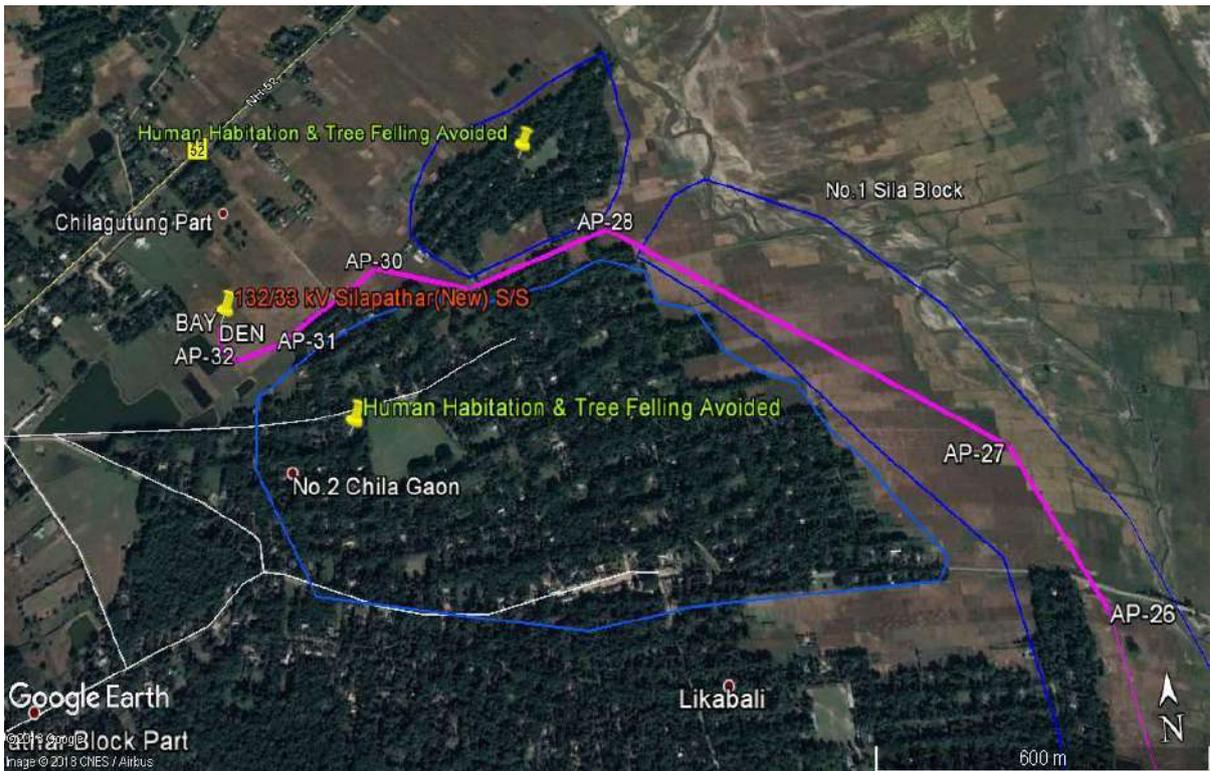


Development of Borrow Area into a Pond as desired by Local Villagers near 132/33 KV Tezpur Substation

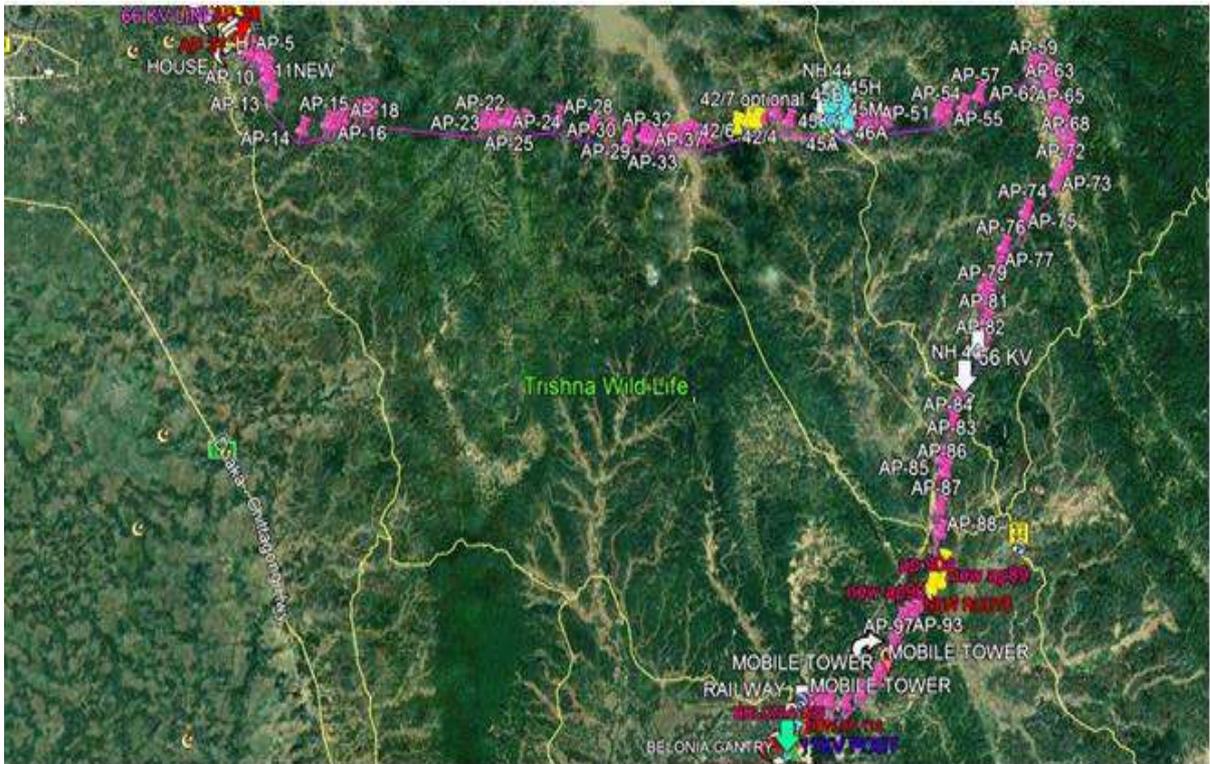


Borrow Earth Site for Lamphel & Andro site in Manipur

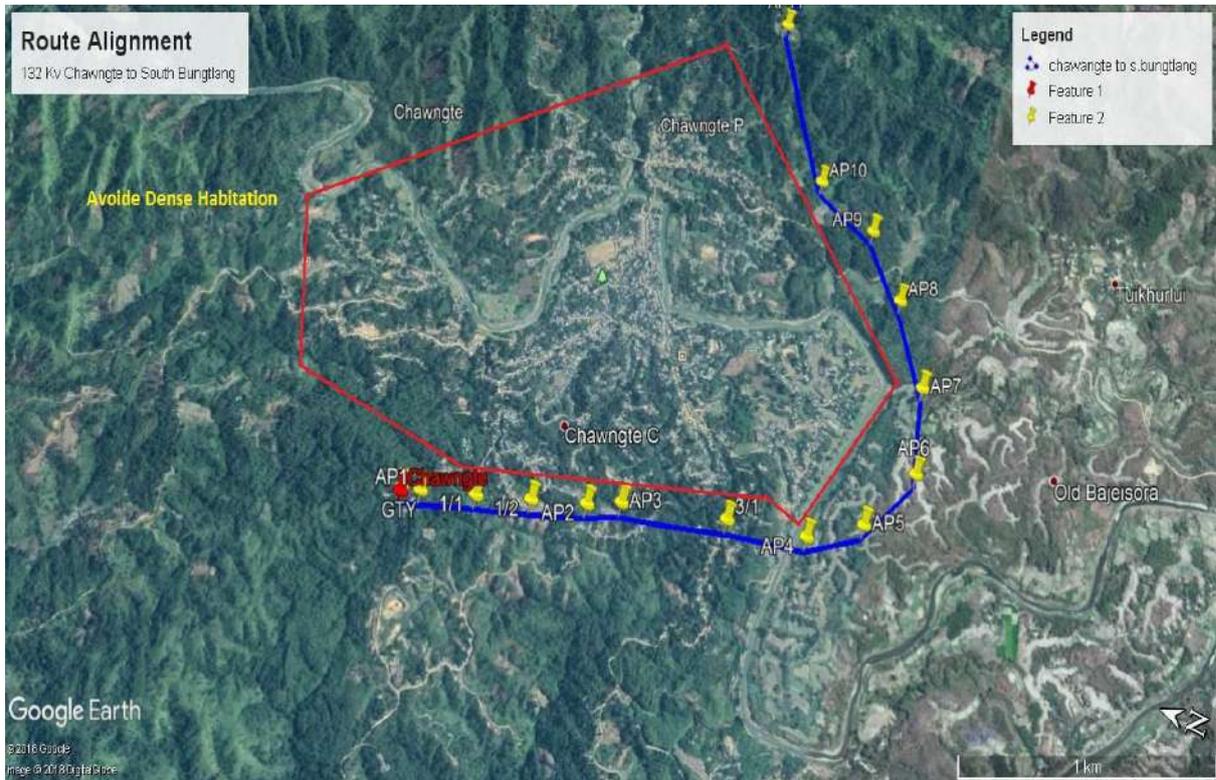
Plate 7: Avoidance of Environmentally and Socially Sensitive Areas



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



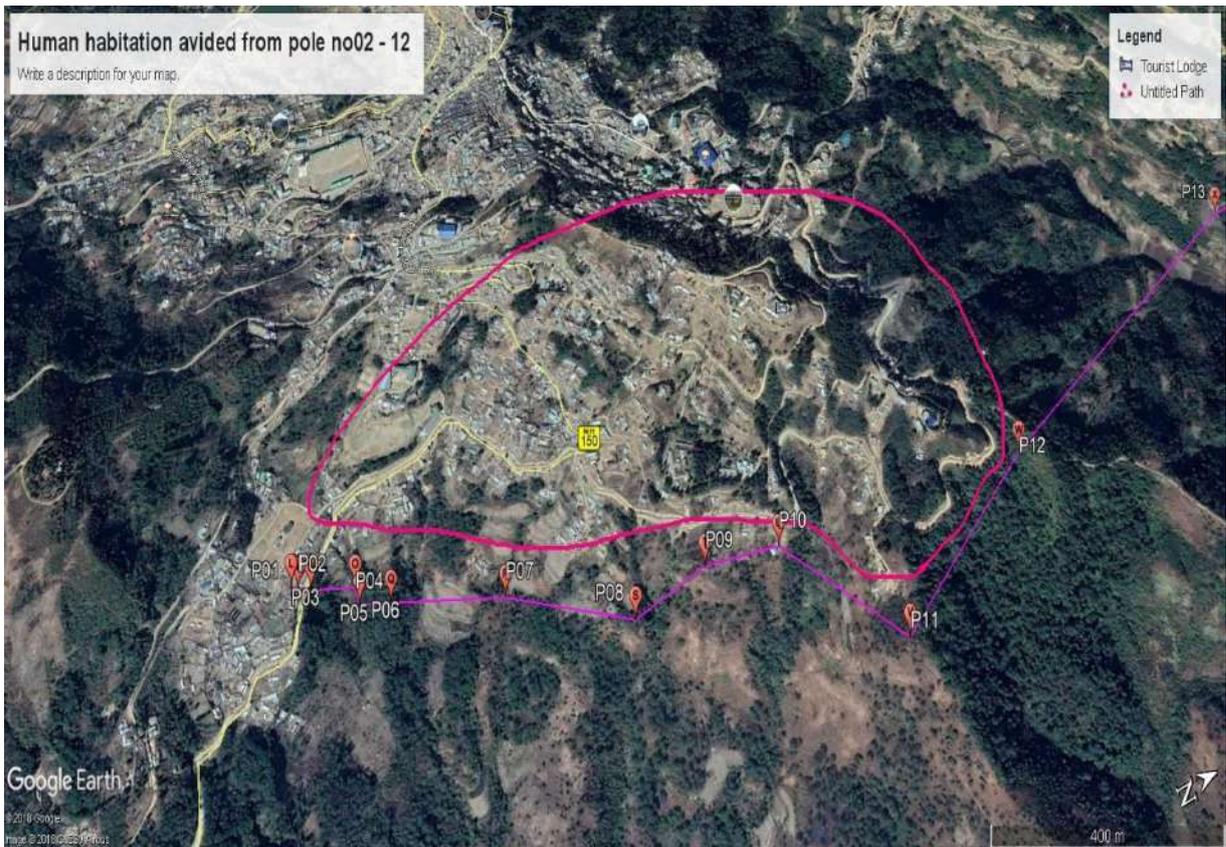
Complete Avoidance of Trishna Wildlife Sanctuary by adopting even more circuitous route (AP-14 to AP-109) for Rabindranagar- Belonia 132kV line in Tripura



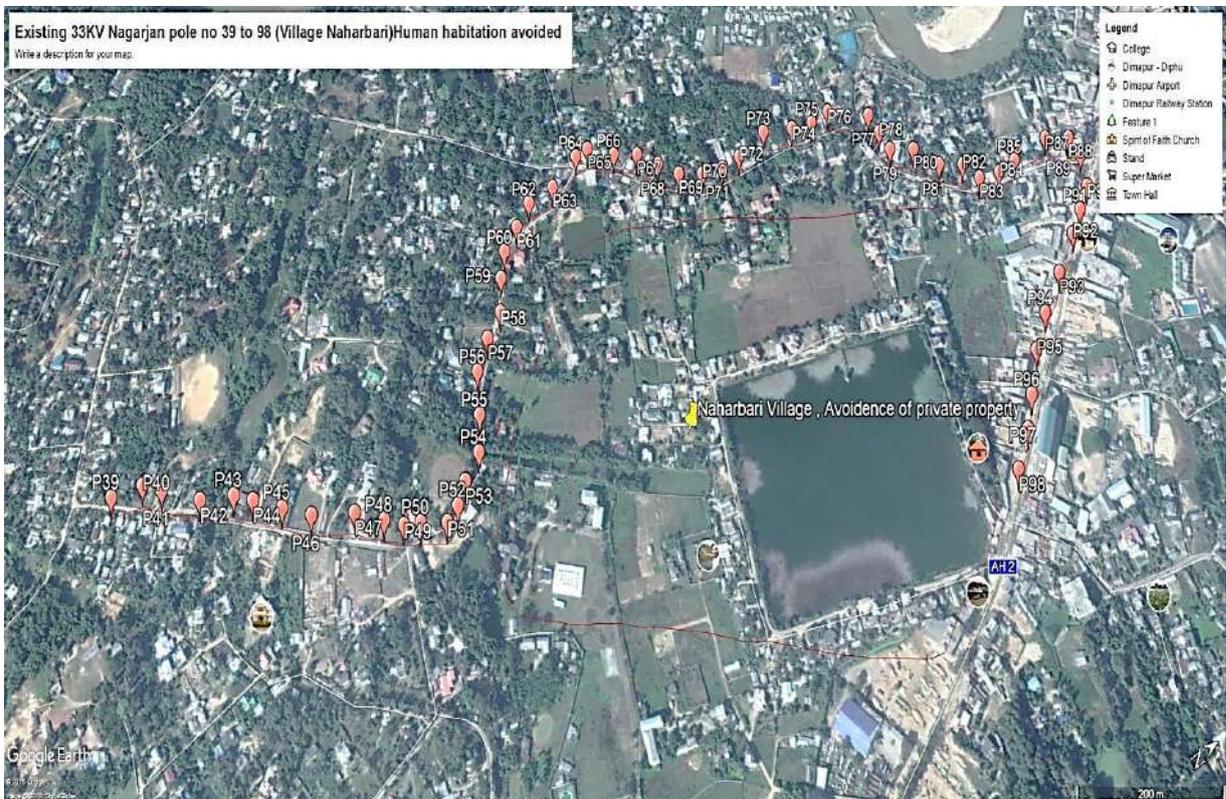
Avoidance of dense habitation area (AP-1 to AP-15) for Chawngte-S. Bungtlang 132kV line in Mizoram



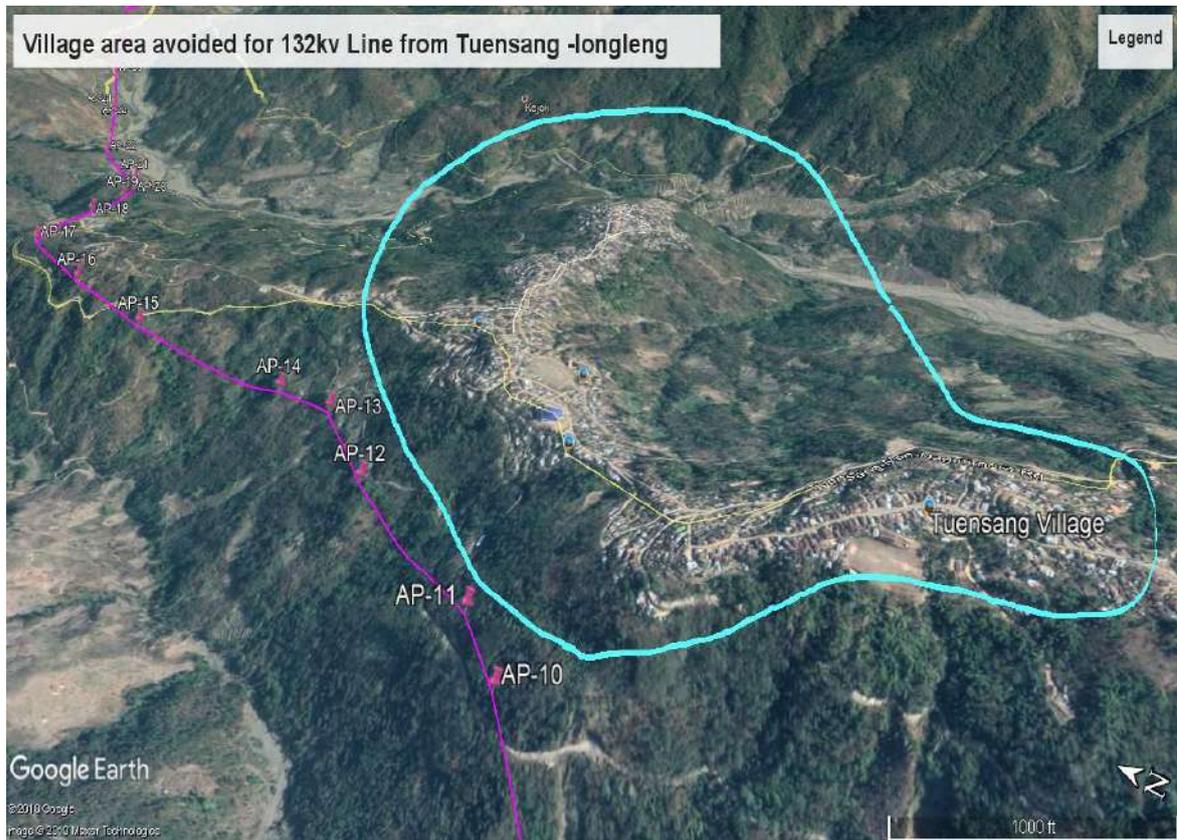
Avoidance of habitation area (AP-1 to AP-16) for West Phaileng- Marpara 132kV line in Mizoram



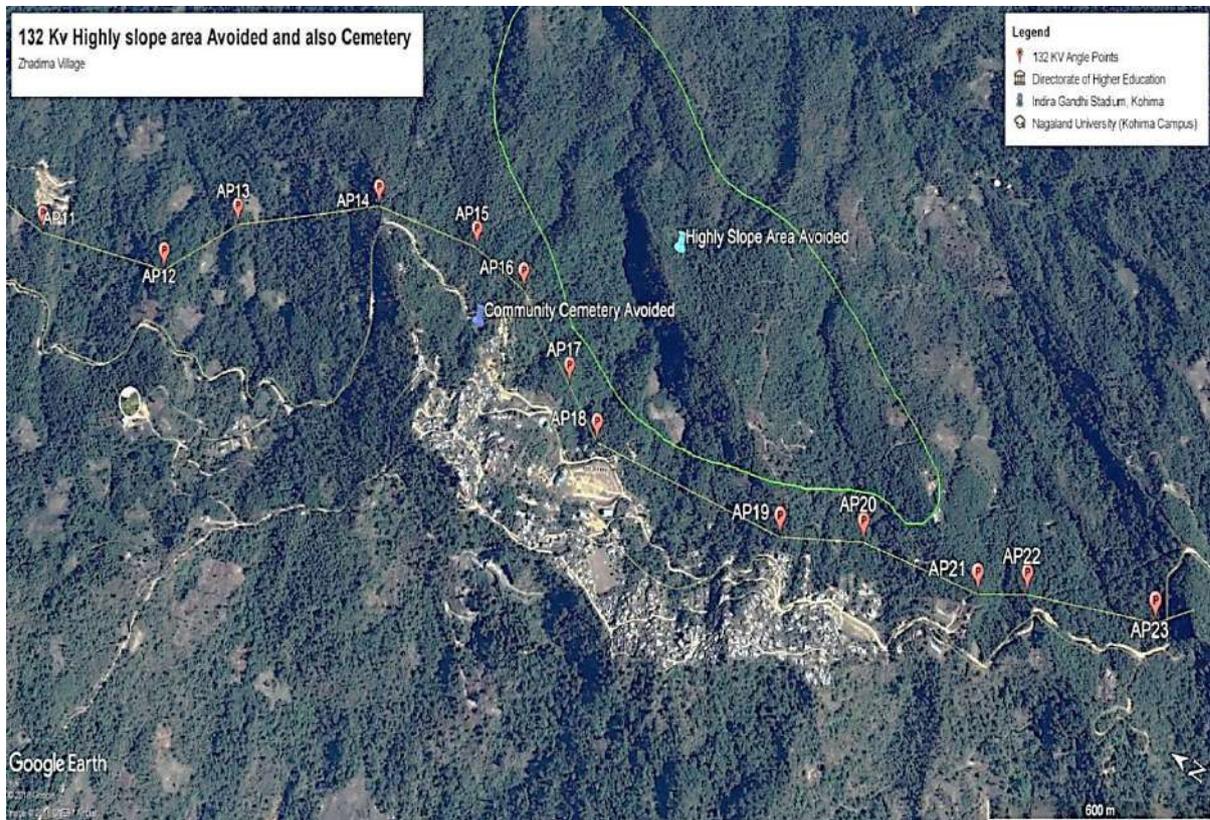
Avoidance of dense habitation area (Pole- 2 to Pole-12) for Pftusero - Pftusero 33 kV line in Nagaland



Avoidance of dense habitation area (Pole- 52 to Pole-98) even adopting more circuitous route for Nagarjan -Padam pukhri 33 kV line in Nagaland



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 : NoC/Consent from ADC/VDC/Land Owners

**OFFICE OF THE
TSEMINYU VILLAGE VILLAGE COUNCIL
P.O TSEMINYU – 797109 KOHIMA: NAGALAND**

Ref. No. TS 30719 Date 30.07.2019

NO OBJECTION CERTIFICATE

This is to certify that construction of upcoming 220 KV line from AP-73/0 to AP-89/0 under the jurisdiction of Tseminyu (ur) is well known from every location as proposed by your company for the purpose, using my authority I have no objection towards the execution of work any time at your own convenience.

Wishing the Project grand success.

[Signature]
Chairman
(NRILOKHING)
Tseminyu Village Council
Chairman

DORBAR SHNONG MAWPDANG
KHYRIM SYIEMSHIP
SHILLONG - 793018, EAST KHASI HILLS

Ref. No. : Date : 22/8/17

The Deputy Manager
Power Grid,NERPSIP
Nongrah,Lapalang
Shillong.

SUB:- No Objection Certificate (NOC) for 220KV

Sir,

With reference to the subject cited above, we would like inform you that the Dorbar Shnong Mawpdang has no objection for the construction of 220KV Line passing through our Village land and our jurisdiction as per your Map and Drawing.

We therefore, the undersigned issued this Certificate to your Office as per the following terms and conditions:-

1. That the Power GRID Corporation of India Ltd, should compensate to all the lands where the Towers is to be erected as per the rate approved by the District Council.
2. That the Power GRID Corporation of India Ltd, should compensate to all the Trees, Crops, Vegetables and Etc where the Line is passing through and affected as per the rate approved by the Government authorized Offices.
3. That the Power GRID Corporation of India Ltd, should inform from time to time in relation to any complaint or disputes to the headman of the Dorbar Shnong Mawpdang in the future to come.

Thanking You

[Signature]
Stai Siam Syiem
Sardar Shnong Mawpdang
Dorbar
Shnong Mawpdang
Khyrim Syiemship
East Khasi Hills

[Signature]
Robinson Syiem
Gen. Secy Shnong Mawpdang
General Secretary
Shnong Mawpdang
Khyrim Syiemship
East Khasi Hills

**OFFICE OF THE
TEROGVUNYU VILLAGE COUNCIL**

P.O. TSEMINYU - 797109
Dist. Kohima : Nagaland

Ref. No.

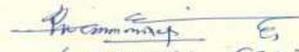
Date: 14th July 2015

NO OBJECTION CERTIFICATE

The Terogvunyu Village Council has no objection in regard to survey (erection of power Tower) by the power grid co-operation of India within its village jurisdiction.

The village council is also acknowledge the department for extending any possible land/ property damage compensation to the affected owner.

The village council wish all the success.


 (DANIEL TEP)
 Chairman
 Terogvunyu Village Council

**OFFICE OF THE
CHAIRMAN VILLAGE COUNCIL TESOPHENYU**
District Kohima: Nagaland

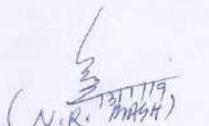
Ref. No.

Date: 13/11/19

TO WHOM IT MAY CONCERN.

This is to certify that construction of AP 90- AP 102 under Tesophenyu village jurisdiction is well known to me from any location as proposed by your company hence the village authority has duly issue no objection for execution of work any time as your own convenient.

I wish the project a grand success.


 (N.K. MASH)
 Chairman
 Tesophenyu Village Council
 Dist. Kohima : Nagaland

Name of the landowners from AP 90 - AP 102

1. AP 90 - Kwachung Chung - 8575555812
2. AP 91 - Yan Chinghi Kath (Rayamo Kath)
3. AP 92 - NKiilo Kemp.
4. AP 93 - Bodayi Tep 8914844191
5. AP 94 - Ashi's Meah
6. AP 95 - Yantoshu Kath
7. AP 96 - Keffishi Kath
8. AP 97 - Nyokha Kaz 8837358282
9. AP 98 - Shunthuzi Kath 9383088530
10. AP 99 - AChandi Kaz 9436401884
11. AP 100 - Honthuni Meah
12. AP 101 - Alpha Ragma 9612727980
13. AP 102 - Vihoghe - 9672247611

NO OBJECTION CERTIFICATE

030

I Shri/Smti [✓] Sopola Hajong
W/o Babul Hajong
aged about 44 years
old and residing at Arjungee, West Garo Hills
District and Owner of Land mentioned hereunder at clause (I), hereby on this day the
20th of November, 2017 solemnly affirm and declare as follows:

- 1) That I have no objection whatsoever for MePTCL/PGCIL to construct 132KV Phulbari-Ampati Transmission Line passing through my land located at Arjungee
Village West Garo Hills District Meghalaya.
- 2) That I am making this declaration sincerely and conscientiously, believing the same to be true and with full knowledge that it is on the strength of this declaration that MePTCL/PGCIL has agreed to pay compensation to me, in accordance with the schedule of rates issued by the Deputy Commissioner West Garo Hills District / West Garo Hills District Council.


Land Owner

Witness :

1. Aniply Hajong
2. Nomali Hajong

Plate- 9 Noise Level & Water Quality at Different Construction Sites

WINPOWER INFRA PVT LTD							
C/o - POWER GRID CORPORATION OF INDIA LIMITED							
Noise Measurement Report							
Name of Substation: HIYANGTHANG S/S IN S/S							
Month: March, 2018							
Sl. No	Noise Reading (dB)						
Week	Area without machine	Average Reading	Mixer machine, Vibrator etc.	Average Reading	JCB, Hydra etc.	Average Reading	Remarks
1st	65.75	65.68	-	NA	-	NA	Reading taken every five minutes interval
	64.98						
	65.51						
	66.20						
	66.03						
2nd	64.71	64.66	70.25	70.02	78.53	78.96	Reading taken every five minutes interval
	64.32						
	64.79						
	64.85						
	65.11						
3rd	67.52	67.18	70.56	70.98	-	NA	Do
	67.50						
	67.15						
	66.36						
	67.06						
4th	66.05	66.63	70.23	69.57	79.25	79.82	Do
	66.05						
	67.09						
	66.37						
	66.80						

For Hiyangthang S/S (Manipur)

WINPOWER INFRA PVT LTD							
C/o - POWER GRID CORPORATION OF INDIA LIMITED							
Noise Measurement Report							
Name of Substation: KWAKTA S/S IN S/S							
Month: March, 2018							
Sl. No	Noise Reading (dB)						
Week	Area without machine	Average Reading	Mixer machine, Vibrator etc.	Average Reading	JCB, Hydra etc.	Average Reading	Remarks
1st	69.75	69.04	70.59	69.98	-	NA	Reading taken every five minutes interval
	69.91						
	68.85						
	69.31						
	69.17						
2nd	67.82	67.82	-	NA	-	NA	Do
	67.55						
	66.73						
	66.45						
	67.20						
3rd	67.88	67.11	70.36	70.57	-	NA	Do
	68.26						
	68.17						
	68.01						
	68.11						
4th	68.46	68.30	71.85	71.52	79.42	79.42	Do
	68.30						
	68.17						
	68.34						
	68.15						

For Kwakta S/S (Manipur)

राष्ट्रीय प्रौद्योगिकी संस्थान अगस्तला
NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA
CIVIL ENGINEERING DEPARTMENT

Phone No: (0381) 2346630, 2348522 Fax No: (0381) 2346360
Sub. No. C-127/17

Test Report of Noise level

Name of Client: PGCIL
Sites: Gokulnagar, Rabindranagar & Mohanpur.
Date of Test: 22/11/2017

Table 1: Results

SITE NAME	AREA WITH HEAVY MACHINES	AREA WITH LIGHT MACHINES	AREA WITHOUT MACHINES
GOKUL NAGAR	88.56 dB	81.96 dB	69.60 dB
RABINDRA NAGAR	85.00 dB	73.73 dB	67.36 dB
MOHANPUR	79.30 dB	67.66 dB	65.00 dB

Dr. S.K. Pal (Asstt. Professor, CE Dept)
Dr. Partha Pratim Sarkar (Asstt. Professor, CE Dept)
Dr. Jayanta Pal (Asstt. Professor, CE Dept)
Dr. Rajib Saha (Asstt. Professor, CE Dept)
Dr. Dipankar Sarkar (Asstt. Professor, CE Dept)

National Institute of Technology Agartala
Bajuda, Jhaida, West Tripura, PIN- 799046

For Rabindranagar S/S (Tripura)

SPML Engineering Life
C/o: Power Grid Corporation of India Limited

Noise Test Report

132/33/THAN Sub-Station: Gokulnagar Month: November-2017

Week	Noise Reading					Remarks
	Area without Machines	Total Average Reading	Area with Light Machines	Total Average Reading	Area with Heavy Machines	
1st	98.4	99.53 db	41.5	41.0 db	-	
	40.7					
	39.7					
2nd	-	-	-	-	-	
	-					
	-					
3rd	-	-	-	-	-	
	-					
	-					
4th	36.2	38.7 db	-	-	-	
	38.7					
	41.2					

Reading Taken At: Site Location: Power Grid Station

KESHAV SAH St. Engineer - Surveying
Nayan Kumar
Rahul

The Noise level observed is below from maximum allowance in the morning area.

For Gokul Nagar S/S (Tripura)

D.G. 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
1	D.G	08.06.18	11:10 AM	73 db	<i>[Signature]</i>	<i>[Signature]</i>	
2	D.G	19.06.18	10:10 AM	72 db	<i>[Signature]</i>	<i>[Signature]</i>	
3	D.G	26.06.18	9:30 AM	70 db	<i>[Signature]</i>	<i>[Signature]</i>	
4	D.G	14.07.18	9:50 AM	70 db	<i>[Signature]</i>	<i>[Signature]</i>	
5	D.G	18.07.18	10:00 AM	71 db	<i>[Signature]</i>	<i>[Signature]</i>	
6	D.G	18.08.18	10:00 AM	71 db	<i>[Signature]</i>	<i>[Signature]</i>	
7	D.G	5.09.18	10:00 AM	70 db	<i>[Signature]</i>	<i>[Signature]</i>	
8	D.G	22.09.18	11:00 AM	70 db	<i>[Signature]</i>	<i>[Signature]</i>	
9	D.G	30.09.18	10:00 AM	72 db	<i>[Signature]</i>	<i>[Signature]</i>	
10	D.G	01.10.18	6:00 AM	72 db	<i>[Signature]</i>	<i>[Signature]</i>	
11	D.G	04.10.18	11:40 AM	70 db	<i>[Signature]</i>	<i>[Signature]</i>	
12	D.G	04.11.18	9:25 AM	70 db	<i>[Signature]</i>	<i>[Signature]</i>	
13	D.G	10.12.18	12:00 AM	70 db	<i>[Signature]</i>	<i>[Signature]</i>	
14	D.G	11.12.18	10:00 AM	70 db	<i>[Signature]</i>	<i>[Signature]</i>	
15	D.G	24.12.18	10:30 AM	70 db	<i>[Signature]</i>	<i>[Signature]</i>	
16							
17							
18							
19							
20							

Mobile Batching Plant(ALPHA & PRIMAX) 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	MIXER MACHINE (PRIMAX)	09/06/18	11:10 AM	74 db	<i>[Signature]</i>	<i>[Signature]</i>	
2	MIXER MACHINE (PRIMAX)	09/06/18	10:20 AM	75 db	<i>[Signature]</i>	<i>[Signature]</i>	
3	MIXER MACHINE (PRIMAX)	10/06/18	10:25 AM	73 db	<i>[Signature]</i>	<i>[Signature]</i>	
4	MIXER MACHINE (PRIMAX)	26/06/18	10:12 AM	72 db	<i>[Signature]</i>	<i>[Signature]</i>	
5	MIXER MACHINE (PRIMAX)	18/07/18	11:40 AM	71 db	<i>[Signature]</i>	<i>[Signature]</i>	
6	MIXER MACHINE (PRIMAX)	18/08/18	10:30 AM	71 db	<i>[Signature]</i>	<i>[Signature]</i>	
7	MIXER MACHINE (PRIMAX)	05/09/18	2:40 PM	71 db	<i>[Signature]</i>	<i>[Signature]</i>	
8	MIXER MACHINE (PRIMAX)	22/09/18	10:00 AM	70 db	<i>[Signature]</i>	<i>[Signature]</i>	
9	MIXER MACHINE (PRIMAX)	30/09/18	11:45 AM	75 db	<i>[Signature]</i>	<i>[Signature]</i>	
10	MIXER MACHINE (PRIMAX)	01/10/18	6:30 AM	75 db	<i>[Signature]</i>	<i>[Signature]</i>	
11	MIXER MACHINE (PRIMAX)	04/10/18	9:45 AM	73 db	<i>[Signature]</i>	<i>[Signature]</i>	
12	MIXER MACHINE (PRIMAX)	04/11/18	10:12 AM	72 db	<i>[Signature]</i>	<i>[Signature]</i>	
13	MIXER MACHINE (PRIMAX)	10/12/18	12:10 AM	72 db	<i>[Signature]</i>	<i>[Signature]</i>	
14	MIXER MACHINE (PRIMAX)	11/12/18	9:30 AM	73 db	<i>[Signature]</i>	<i>[Signature]</i>	
15	MIXER MACHINE (PRIMAX)	24/12/18	11:20 AM	71 db	<i>[Signature]</i>	<i>[Signature]</i>	

Noise Level Monitored periodically at different Noise Source Point at 132/33 kV Tangla Substation (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 : Cheokidingee, 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 / Bacteriological

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				
pH	6.5 to 8.5	No. relaxation	7.41	The parameters of the water sample are within the permissible limit.
Iron as (Fe)	0.3	1	0.54	Mg/Ltr
Alkalinity as (CaCO ₃)	200	600	104	Mg/Ltr
Total Hardness as (CaCO ₃)	300	600	168	Mg/Ltr
Total Dissolved Solids	500	2000	94.93	Mg/Ltr
Residual Chlorine	0.2	--	absent	Mg/Ltr
Nitrate as (NO ₃)	45	45	0.57	Mg/Ltr
Fluorides as (F)	1	1.5	0.21	Mg/Ltr
Chlorides as (Cl)	250	1000	14	Mg/Ltr
Calcium as (Ca)	75	200	48	Mg/Ltr
Magnesium as (Mg)	30	150	25.37	Mg/Ltr

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

EMS:-
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: *[Signature]*
Signature: *[Signature]*
Signature: *[Signature]*
In-charge, Laboratory: Dibrugarh Sub-Division, Dibrugarh
Asst. Executive Engineer (PHE): Dibrugarh Sub-Division, Dibrugarh

Name of the Division	Report No.			
Analytical Chemistry Group, MSTD	CSIR-NEIST-Jorhat/QSP/MB/20/Ac/CTR-313/11-2019			
TEST REPORT OF WATER SAMPLE	DATE: 22/11/2019 PAGE: 3 of 3			
2. RESULT				
Sl. No.	Sample Identification Details	Dimensional Detail / Parameters	Strength / Tested Value with Unit.	Remarks/Value as Per IS : 10500, 2017
01.	Water Sample (Deep tube well boring)	01) pH 02) Turbidity (NTU) 03) Total Hardness as CaCO ₃ 04) Calcium as Ca 05) Magnesium as Mg 06) Iron as Fe 07) Sulphate as SO ₄ 08) Chloride as Cl 09) Phenolphthalein Alkalinity 10) Methyl Orange Alkalinity 11) Total Dissolved Solids 12) Total Suspended Solids	7.07 at 25.0°C Not detected 75.0 mg/l 1.4 mg/l Trace (< 1.0 mg/l) Not detected Not detected 1.5 mg/l Not detected 122.5 mg/l 116.0 mg/l Trace (< 10.0 mg/l)	6.5 - 8.5 1 NTU (MAX) 200 mg/l (MAX) 75 mg/l (MAX) 30 mg/l (MAX) 0.3 mg/l (MAX) 250 mg/l (MAX) 250 mg/l (MAX) 200 mg/l (MAX) 500 mg/l (MAX) ---
TEST CONDUCTED BY: <i>[Signature]</i> E. Gupta (Tech. Asst.)		CHECKED BY: <i>[Signature]</i> Dr. P. J. Saha (JL, Analytical Chemistry Group, MSTD)		APPROVED BY: <i>[Signature]</i> Dr. G. G. Gogoi (Chemical, Testing Report Controller)

Water Quality Monitoring Report by Third Party for 132/33 kV Teok and Sarupathar Substation (Assam)

Plate- 10: Community/Villagers Safety



Display of Signage Board



Proper Barricading of Work Area



Safety Awareness and Information dissemination before start of work

Plate -11 : Permission/Way Leave for Rail/Road Crossing

N. F. Railway

Office of the
Sr. Divisional Engineer/Co-ord,
Maligaon, Guwahati-11

Handwritten signature and date: 22/06/17

No. W/214/Way leave/PG/G/APDCL/Pt.I

Date: 22.06.2017

To
Chief Executive Officer
Guwahati Electrical Circle-I
APDCL (LAR), Ulubari
Guwahati-781007.

Sub:- Way leave facility in connection with laying and underground crossing of Railway track by 33 KV electric line at Km.9/1-2 & Km.9/9-10/0 of KYQ-GHY section by APDCL, Ulubari, Guwahati-7.

Ref:- APDCL online application ID Nos.
(i) NFR-LMG-2016-117 dtd.16.11.2016 and (ii) NFR-LMG-2016-118 dtd.21.11.2016.

Sir,

In terms of the above, enclosed please find herewith the agreement copies executed between the Railway and APDCL (LAR), GEC-I, Ulubari, Guwahati-7 alongwith blue print copies of the Sr.DEN.C/MLG's approved plan Nos. SK/06/2017 & SK/07/2017 in connection with laying and underground crossing of Railway track by 33 KV electric line at Km.9/1-2 & Km.9/9-10/0 of KYQ-GHY section by APDCL, Ulubari, Guwahati-7. It is requested to execute the work in accordance with the provisions as laid in the plan and agreement.

Before energisation of the U/G electric line, a separate agreement may be made with electrical deptt. at the office of the Sr.DEE/GHY.

With regards.

Yours Sincerely,

DA:- As above.

(Ajay Kumar)
Sr.Divisional Engineer/W/GHY
N. F. Railway, Maligaon

Copy to:-

Sr.DSTE/MLG } for information please.
Sr.DEE/GHY }
ADEN/T/GHY }
ADEN/W/GHY, SSE/W/GHY }
SSE/P-Way/GHY, SSE/P/GHY }
SSE/Tele/GHY, SSE/Sig/GHY }

for information and necessary action
in this regard please.

Sr Divisional Engineer/W/GHY
N. F. Railway, Maligaon

Misc Letter