

**COMPENSATION PLAN FOR
TEMPORARY DAMAGES (CPTD)
FOR
T & D NETWORK IN EAST KHASI HILLS &
RI-BHOI DISTRICTS, MEGHALAYA**



Prepared By

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For

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TABLE OF CONTENTS

SECTION	PARTICULARS	PAGE
	EXECUTIVE SUMMARY	I-VI
I	INTRODUCTION AND PROJECT DESCRIPTION	1-8
1.1	Project Background	1
1.2	Project Components	2
1.3	Objective of CPTD	5
1.4	Scope and Limitation of CPTD	5
1.5	Measures to Minimize Impact	6
1.6	Route Selection and Study of Alternatives	7
II	SOCIO-ECONOMIC INFORMATION AND PROFILE	9-17
2.1	General	9
2.2	Socio-Economic Profile	9
III	LEGAL & REGULATORY FRAMEWORK	18-23
3.1	Overview	18
3.2	Statutory Requirements	18
3.3	MePTCL/MePDCL's ESPPF	20
3.4	Basic Principles for the Project	21
3.5	World Bank environment & Social Safeguard Policies	22
IV	PROJECT IMPACTS	24-33
4.1	General	24
4.2	Impact Due to construction of Substation & Bay Extension	27
4.3	Temporary Impacts Caused due to Transmission Lines (Right of Way)	28
4.4	Details on Affected Persons	31
4.5	Other Damages	32
4.6	Impact on Indigenous Peoples	32
4.7	Summary Impacts	33
V	ENTITLEMENTS, ASSISTANCE AND BENEFITS	34-39
5.1	Entitlements	34
5.2	Entitlement Matrix	34
5.3	Procedure of Tree/crop compensation	35
5.4	Land Compensation for Tower Footing & RoW Corridor	37
5.5	Compensation for Structure	37
5.6	Compensation Disbursement Module	37
VI	INFORMATION DISCLOSURE, CONSULTATION & PARTICIPATION	40-42
6.1	Consultations	40
6.2	Plan for further Consultation and Community Participation during Project Implementation	41
6.3	Information Disclosure	42
VII	INSTITUTIONAL ARRANGEMENTS	43-47
7.1	Administrative Arrangement for Project Implementation	43
7.2	Review of Project Implementation Progress	44
7.3	Arrangement for Safeguard Implementation	45
7.4	Responsibility Matrix to manage RoW Compensation	46
VIII	GRIEVANCE REDRESS MECHANISMS	48-49
IX	BUDGET	50-52
9.1	Compensation for Land for Tower Base and RoW Corridor	50
9.2	Compensation for Crops & Trees	51
9.3	Summary of Budget	51
X	IMPLEMENTATION SCHEDULE	53
XI	MONITORING AND REPORTING	54
11.1	Status of Compensation (Tree/ Crop / Land / Structures)	56
11.2	Status of Grievances	56

LIST OF TABLES

TABLE	PARTICULAR	PAGE
Table 2.1	Land Use Pattern in Meghalaya	9
Table 2.2	Details on Total population	15
Table 2.3	Details on Male & Female Population	16
Table 2.4	Details of Percentage SC/ST	16
Table 2.5	Literate & Illiterate Population	16
Table 2.6	Details on Workers	17
Table 2.7	Details on Households	17
Table 3.1	World Bank's Operational Policies	21
Table 4.1	Details of Substation	28
Table 4.2	Type and Use of Land within Corridor of ROW (in Km/Hectare)	28
Table 4.3	Estimation on Loss of Land for Crop Damage due to Overhead Lines	29
Table 4.4	Estimation of Actual Loss of Land for Crop Tower Base & Pole	30
Table 4.5	Land area for RoW Compensation	30
Table 4.6	Loss of Trees	31
Table 4.7	Loss of Other Assets	31
Table 4.8	Number of Affected Persons	32
Table 4.9	Summary Impacts	33
Table 5.1	Entitlement Matrix	34
Table 5.2	Compensation Disbursement Module	38
Table 6.1	Details of Consultations	40
Table 6.2	Plan for Future Consultations	41
Table 7.1	Agencies Responsible for CPTD Implementation	46
Table 9.1	Cost of Land Compensation for Tower Base & RoW Corridor	51
Table 9.2	Compensation for Crops & Trees	51
Table 9.3	Summary of Budget	52
Table 10.1	Tentative Implementation Schedule	53

LIST OF FIGURES

FIGURE	PARTICULAR	PAGE
Figure-1.1	Power Map along with Proposed Project	3
Figure-1.2	Proposed T & D Network in West Garo Hills & South West Garo Hills District under NERPSIP	4
Figure-4.1	Typical Plan of Transmission Line Tower Footing	25
Figure-4.2	33 kV line Depicting Base Area Impact	26
Figure-5.1	Tree/Crop Compensation Process	39
Figure-8.1	Flow Chart of Grievance Redress Mechanism	49
Figure-11.1	MePTCL/MePDCL Support Structure Safeguard Monitoring	54

LIST OF ANNEXURES

ANNEXURE	PARTICULAR
Annexure-1	Comparative details of Three Alternatives
Annexure-2	Tower/Pole Schedule of Proposed Lines
Annexure-3	NoC from Land owner/Headman/ Village Council
Annexure-4	Sample copy of Compensation
Annexure-5	Details of Public Consultation

LIST OF ABBREVIATIONS

ADC	:	Autonomous District Council
AP	:	Affected Person
CEA	:	Central Electricity Authority
Ckt-Km	:	Circuit-kilometer
CGWB	:	Central Ground Water Board
CP	:	Compensation Plan
CPTD	:	Compensation Plan for Temporary Damages
CPIU	:	Central Project Implementation Unit
CRM	:	Contractor Review Meeting
DC	:	District Collector
D/c	:	Double Circuit
DL	:	Distribution Line
DM	:	District Magistrate
DMS	:	Distribution Management System
EHV	:	Extra High Voltage
EHS	:	Environment Health & Safety
EMP	:	Environment Management Plan
E&S	:	Environmental & Social
ESPP	:	POWERGRID's Environmental and Social Policy & Procedures
ESPPF	:	MePTCL/MePDCL's Environmental and Social Policy & Procedures Framework
Gol	:	Government of India
GRC	:	Grievance Redress Committee
GRM	:	Grievance Redress Mechanism
Ha	:	Hectare
HPC	:	High Powered Committee
IA	:	Implementing Agency
INRs	:	Indian National Rupees
IP	:	Indigenous People
IR	:	Involuntary Resettlement
JCC	:	Joint Coordination Committee
kV	:	Kilo volt
Km	:	Kilometer
LA	:	Land Acquisition
MCM	:	Million Cubic Meter
MePDCL	:	Meghalaya Power Distribution Corporation Ltd.
MePTCL	:	Meghalaya Power Transmission Corporation Ltd.
MoP	:	Ministry of Power
M&E	:	Monitoring and Evaluation
NoC	:	No Objection Certificate
NER	:	North Eastern Region
NERPSIP	:	North Eastern Region Power System Improvement Project
O&M	:	Operation and Maintenance
OP	:	Operational Policy
PAP	:	Project Affected Person
POWERGRID	:	Power Grid Corporation of India Limited
PPIU	:	PMC Project Implementation Unit
RFCTLARRA	:	The Right to Fair Compensation and Transparency in Land, Acquisition, Rehabilitation and Resettlement Act, 2013
RoW	:	Right of Way
RP	:	Resettlement Plan

R&R	:	Resettlement and Rehabilitation
S/c	:	Single Circuit
SC	:	Scheduled Caste
Sq.M.	:	Square Meters
SMF	:	Social Management Framework
SPCU	:	State Project Coordination Unit
ST	:	Scheduled Tribe
T & D	:	Transmission & Distribution
TL	:	Transmission Line
USD	:	United States Dollar
WB	:	The World Bank

GLOSSARY

Regional Council/Autonomous District Council/ Village Council	:	An autonomous body/institution formed under the provisions of 6 th Schedule of Constitution of India which provides tribal people freedom to exercise legislative, judicial, executive and financial powers.
Village Headman	:	Elected head of the Village Council
Zila/District	:	It is the first administrative division at the State level.
Sub-division	:	A revenue sub-division, within a district
Block	:	An administrative sub-division within a district
Panchayat	:	The third tier of decentralized governance

EXECUTIVE SUMMARY

i. The Compensation Plan for Temporary Damages (CPTD) has been prepared for Transmission & Distribution (T & D) network in East Khasi Hills & Ri-Bhoi districts of Meghalaya state under the North Eastern Region Power System Improvement Project (NERPSIP) which is being funded by Govt. of India (GoI) and the World Bank (WB). The Implementing Agency (IA) is Power Grid Corporation of India Limited (POWERGRID). The present CPTD is based on the Environmental and Social Policy & Procedures Framework (ESPPF) of Meghalaya Power Transmission Corporation Ltd. (MePTCL) & Meghalaya Power Distribution Corporation Ltd. (MePDCL)'s.

ii. The project components include construction of one 220 kV D/C line of 126.5 km length, along with associated 220/132 kV substations and four new 33kV distribution lines of total 40.54 km length along with 4 nos. of 33/11 kV substations in East Khasi Hills & Ri-Bhoi Hills districts of Meghalaya. The present CPTD has been prepared based on the detailed survey/ investigation. However, the temporary impacts on land and loss of crops/trees occurred only during the project implementation/construction. Therefore, the CPTD remains as draft, as actual temporary impacts on crop/tree including details of Affected Persons (AP) shall be ascertained during check survey and tower spotting once the construction contractor is mobilized for implementation. MePTCL/ MePDCL/ POWERGRID¹ provide compensation for actual damages after assessment by revenue authority. Check survey is done progressively during the construction of the transmission/distribution line. Normally the work is done in off season when there is no standing crop. The compensation for damage is assessed in actual after construction activities of transmission/distribution lines in three stages i.e. after completion of foundation, tower erection and stringing of conductor. The payment of compensation is also paid in three instances, if there are damages during all the above three stages. Assessment of damages at each stage and subsequent payment of compensation is a continuous process. Hence, CPTD updating will also be a continuous process during construction and updated data on APs shall be disclosed through semi-annual E & S monitoring report submitted by MePTCL & MePDCL/POWERGRID.

iii. The project components under the scope of present CPTD include following transmission/ distribution lines and associated substations;

A. Transmission System Components:

1. Kiling (Byrnihat) - Mawngap - New Shillong 220 kV D/C line - 126.5 km

¹ For the purpose of CPTD, MePTCL/ MePDCL and POWERGRID may be referred as SPCU and PPIU respectively. For further details, please refer Chapter - VII Institutional arrangements.

2. Establishment 220/132/33 kV GIS substation (New) at New Shillong
3. Upgradation of 220/132 kV GIS substation at Mawngap & Extension of 220/132 kV Byrnihat substation

B. Distribution System Components:

1. 2 x 33 kV line from 33 /11kV Mawpat (New) - 220/132/33 kV New Shillong (New) substation (10.72 km) and extending up to existing SE Falls 33/11 kV substation (2.33km) - 13.05 km
2. 33 kV line from 33/11 kV New Shillong (New) substation - 220/132/33 kV New Shillong substation - 3.862 km
3. 2 x 33 kV line from 33/11 kV Mawryngkneng substation (New) - 220/132/33 kV New Shillong substation(New) – 17.23 km
4. Reconductoring of 33kV Jowai – Landonogkrem - Jongksha - 35.0 km
5. 33 kV line from 33/11 kV Mawkynrew substation(New)- 33/11 kV Jongksha substation (Existing) – 6.4 km
6. Establishment of 33/11kV substation at Mawpat, New Shillong, Mawryngkneng & Mawkynrew.

iv. As per existing law, land for tower/pole and right of way is not acquired² and agricultural activities are allowed to continue after construction activity. Land requirements for erecting tower/poles for transmission lines are quite minimal and require placing of four legs which need an area of 4-6 sq- ft. Thereby, the actual impact is restricted to 4 legs of the tower and some constraints in area coming in between these 4 legs of the tower. Further, line alignments are done in such a way so as to avoid settlements, structures etc. Hence, no relocation of population on account of construction of line is envisaged. In case of Autonomous District Council (ADC) area is involved, No Objection Certificate (NoC) from concerned land owner/ Headman /Village Council shall be obtained. Most of the impacts are temporary in nature in terms of loss of standing crops/trees and other damages for which compensation will be paid to the affected persons including cost of land below tower area to its owner without acquisition or transfer of title as per provisions of law and Entitlement matrix defined in ESPPF.

v. For the temporary loss of crops, only agricultural land and private plantation land are considered for estimation. Though Right of Way (RoW) for 220 kV & 33 kV line are 35 meter & 15 meter respectively but average affected width/corridor would be limited to maximum 27 meter for 220 kV & 10 meter for 33 kV line. Accordingly, actual impacted area for crops and other damages worked out to be approx. 1031.22 acre. Total number of trees to be affected is approx 13,268.

² *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.*

Private trees will be compensated as per the entitlement matrix. The total number of affected persons is estimated to be 699.

v. Public participation and community consultations have been taken up as an integral part of the project's social and environmental assessment process. Public is informed about the project at every stage of execution. During survey also MePTCL & MePDCL & POWERGRID's site officials meet people and informed them about the routing of transmission/distribution line. During the construction, every individual, on whose land tower is erected and people affected by RoW, are consulted. There were many informal group and public consultation meetings conducted during survey of the entire routes of transmission/distribution lines and substation site. The process of such consultation will be continued during project implementation and even during Operation & Maintenance (O&M) stage. The draft CPTD/summary CPTD shall be disclosed to the affected households and other stakeholders by placing it on the website. To maintain the uninterrupted communication channel, MePTCL & MePDCL & POWERGRID's site officials are meeting APs and inform about norms and practices of damage assessment and compensation thereof. For wider circulation executive summary of the CPTD and Entitlement Matrix will be translated in local language and placed at construction offices/ sites.

vi. Grievance Redress Mechanism (GRM) is an integral part of project implementation, operation and maintenance stage of the project. For handling grievance, Grievance Redress Committee (GRC) has been established at two places; project/scheme level and corporate/head quarter level. The GRCs include members from MePTCL & MePDCL, POWERGRID, Local Administration, Village Panchayat Members, Affected Persons representative and reputed persons from the society and representative from the autonomous district councils selected/decided on nomination basis under the chairmanship of project head. The composition of GRC has been disclosed in Panchayat/village council office and concerned district headquarter for wider coverage. In case of any complaint, GRC meeting shall be convened within 15 days. If project level GRC is not able to take decision it may refer the complaint to corporate GRC for solution. GRC endeavours to pronounce its decision within 30-45 days of receiving grievances. In case complainant/appellant is not satisfied with the decision of project level GRC they can make an appeal to corporate GRC for review. The proposed mechanism does not impede access to the country's judicial or administrative remedies at any stage. Further, grievance redressal is also in built tree/crop compensation in the 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 also provides forum for raising the grievance towards any irregularity/complaint.

vii. The CPTD is based on the MePTCL & MePDCL's ESPPF. Being a transmission project, the relevant national laws applicable for this project are (i) The Electricity Act, 2003 and (ii) The Indian Telegraph Act, 1885. The compensation principles adopted for the project shall comply with applicable laws and regulations of the Governments of India, MePTCL & MePDCL's ESPPF as well as World Bank Safeguard Policies.

viii. APs will be entitled for compensation for temporary damages to crops/trees/structures etc. as per the Entitlement Matrix (EM) given in E-1. Temporary damage will occur during construction of transmission lines for which compensation will be paid as per eligibility criteria of EM and other applicable norms. All APs are paid compensation for actual damages irrespective of their religion, caste and their economic status including non-title holders. However vulnerable households are provided additional one time lump-sum assistance on recommendation of State/local Authorities. As per policy provision construction contractors shall be encouraged to hire local labor that has the necessary skills.

E-1: Entitlement Matrix

Sl.	Type of Issue/ Impact	Beneficiary	Entitlement Options
1.	Land area below tower base (#)	Owner	100% land cost at market value as ascertained by revenue authorities or based on negotiated settlement without actual acquisition/ title transfer.
2.	Loss/ damage to crops and trees in line corridor	Owner/ Tenant/ sharecropper / leaseholder	Compensation to actual cultivator at market rate for crops and 8 years income for fruit bearing trees*. APs will be given advance notice to harvest their crops. All timber* will be allowed to retain by the owner.
3.	Other damages (if applicable)	All APs	Actual cost as assessed by the concerned authority.
4.	Loss of structure		
(i)	House	Titleholders	Cash compensation at replacement cost (without deduction for salvaged material and depreciation value) plus Rs. 25,000/- assistance (based on prevailing GOI norms for weaker section housing) for construction of house plus transition benefits as per category-5 below.
(ii)	Shop/ Institutions/ Cattle shed	Individual/ Titleholders	Cash compensation plus Rs. 10000/- for construction of working shed/shop plus transition benefits as per category-5 below

Sl.	Type of Issue/ Impact	Beneficiary	Entitlement Options
(iii)	Losses during transition under (i) & (ii) above for Shifting / Transport	Family/ unit	Provision of transport or equivalent cash for shifting of material/ cattle from existing place to alternate place
(iv)	Tribal/ Vulnerable APs	Vulnerable APs ³	One time additional lump sum assistance not exceeding 25% of total compensation on recommendation of State Authority/ADC/VC.

(#)As decided by State Govt./MePTCL only land compensation for tower base shall be paid as per prevailing practice

** Assistance/help of Forest department for timber yielding trees and Horticulture department for fruit bearing trees shall be taken for assessing the true value.*

ix. Due to inherent flexibility in routing of line, no major damages to structures or physical displacement is envisaged in transmission/distribution line. Hence, there are no adverse impacts such as permanent loss of assets, livelihood loss or physical resettlement/relocation due to project intervention. However, in case it is completely unavoidable, compensation for structures as decided by committee based on government norms and entitlement matrix shall be provided. A notice for damage is issued to APs and the joint measurement by MePTCL & MePDCL/ POWERGRID and is carried out before start of construction and same is assessed and verified by revenue official during/after construction for estimation of compensation against actual damages. Hence, compensation is paid in parallel with the construction activity of transmission/distribution line. The cost estimate for the project includes eligible compensation for loss of crops, trees and support cost for implementation of CPTD, monitoring, other administrative cost etc. The budget estimation presented in CPTD is tentative and may get revised during the course of implementation. The total indicative cost is estimated to be INR 867.02 Lakhs equivalent to USD 1.34 million.

x. The implementation and monitoring are critical activities which shall be followed as per Implementation Chart/Schedule provided in Chapter-X. POWERGRID will be the Implementing Agency (IA) for the Project. For the day to day implementation of Project activities, PMC Project Implementation Units (PPIUs) located in each participating State, has been formed including members of Utility on deputation, with its personnel being distributed over work site & working in close association with the State Project Coordination Unit (SPCU) / Central Project Implementation Unit (CPIU). PPIU report to State level "Project Manager" nominated by the Project-in-Charge of IA. The IA will have a Core team stationed at the CPIU on permanent basis and other IA officers (with required skills) will visit as and when required by this core team. This team shall represent IA and shall be responsible for all coordination with SPCU, PIU, within IA and MoP, GoI. CPIU shall also assist MoP, GoI in monitoring project progress and in its coordination with The Bank.

³ Vulnerable APs include scheduled tribes residing in scheduled areas/ physically handicapped/ disabled families etc.

xi. Monitoring will be the responsibility of both MePTCL & MePDCL & IA. MePTCL & MePDCL/ POWERGRID will submit semi-annual monitoring reports on their implementation performance and submit the reports to The World Bank. If required, MePTCL & MePDCL / POWERGRID will engage the services of an independent agency/external monitoring for which necessary provisions have been kept in the budget.

I. INTRODUCTION AND PROJECT DESCRIPTION

1.1. Project Background

1. Recognizing that intrastate T&D systems in the North Eastern States (NER) states have remained very weak and that there is a critical need to improve the performance of these networks, the Central Electricity Authority (CEA) developed a comprehensive scheme for the NER in consultation with POWERGRID and the concerned state governments. This scheme is intended to (a) augment the existing T&D infrastructure to improve the reliability of service delivery across all the NER states and (b) build institutional capacity of the power utilities and departments in the NER. This scheme is part of the Gol's wider efforts to develop energy resources in the NER for electricity supply within the region, to strengthen transmission networks, expand and strengthen sub-transmission systems, and extend last mile electricity connectivity to household.

2. Gol requested for World Bank's support in implementing a set of priority investments in six NER states. In 2016, the World Bank (WB) has approved a loan (IBRD 470 USD Million) to the Government of India (Gol) for North Eastern Region Power System Improvement Project (NERPSIP) which aims to create a robust intrastate transmission and distribution network in all the six (6) North Eastern States including Meghalaya. The project being funded on 50:50 (World Bank loan: Gol) basis except the component of capacity building for Rs.89 crore, which Gol will bear entirely. The scheme is to be taken up under a new Central Sector Plan Scheme of Ministry of Power (MoP).

3. Ministry of Power, Gol has appointed POWERGRID as Implementing Agency (IA) to six North Eastern States for the said project. However, the ownership of the assets shall be with the respective State Utilities/State Government which upon progressive commissioning shall be handed over to them for taking care of Operation and Maintenance of assets.

4. The project will be implemented over a seven-year period and has two components, namely Component A: Priority Investments for Strengthening Intrastate Transmission, Sub-transmission, and Distribution Systems, and Component B: Technical Assistance for Capacity Building and Institutional Strengthening (CBIS) of Power Utilities and Departments of Participating States.

5. The scope of work under NERPSIP in state of Meghalaya include construction of 416 km of 220/132 kV transmission lines & associated 4 nos. new substation and 198 ckm of 33 kV distribution lines & associated 11 nos. substation along with augmentation & strengthening of

transmission and sub-transmission spread across the State. The power map of Meghalaya indicating the existing intra-state transmission network along with proposed project under Tranche-1 of NERPSIP is presented in **Figure 1.1**.

1.2. Project Components

6. The project components under the scope of present CPTD include following transmission/distribution lines proposed in East Khasi Hills & Ri-bhoi districts of Meghalaya State;

A. Transmission System Components:

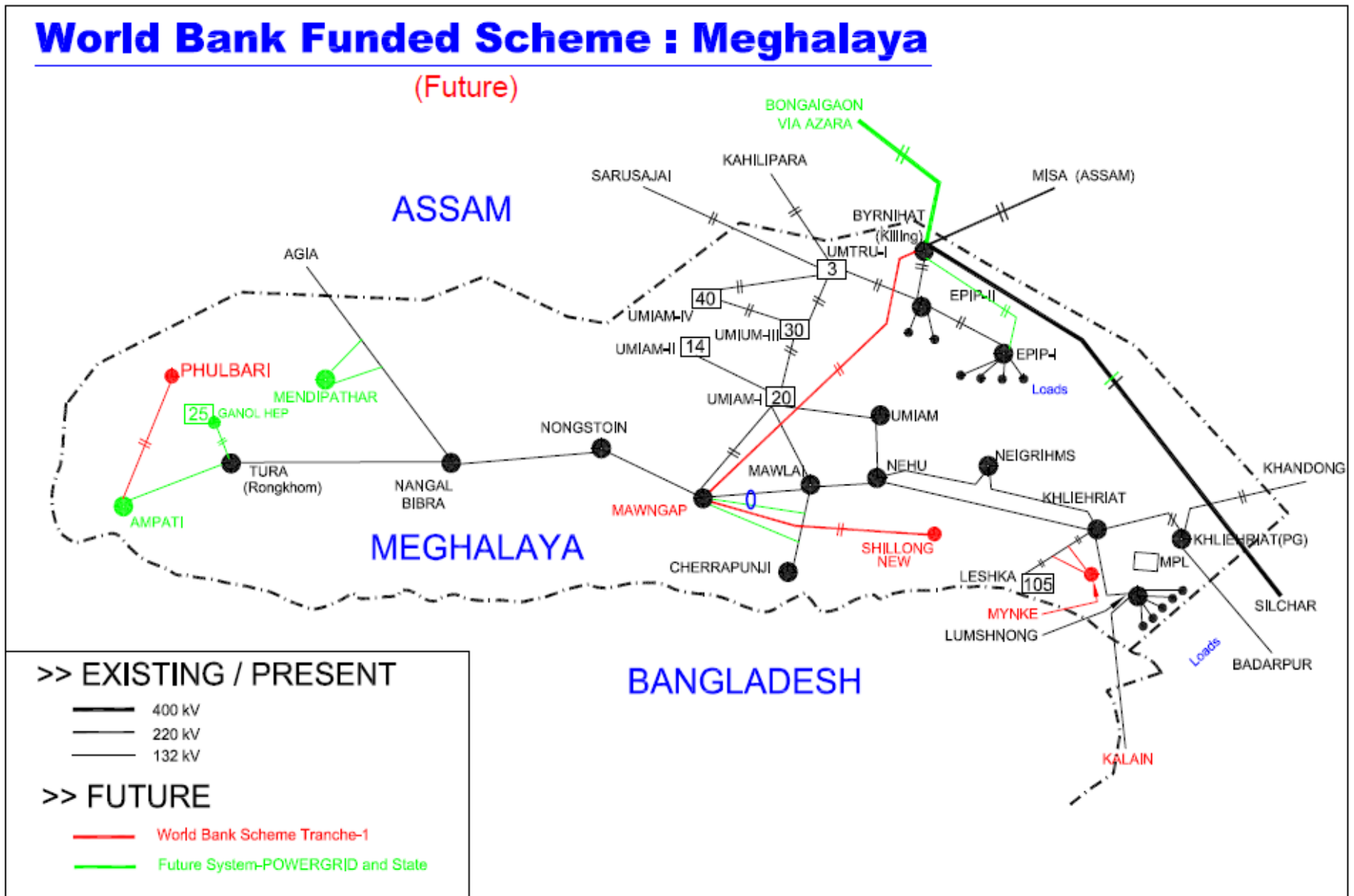
1. Kiling (Byrnihat) - Mawngap - New Shillong 220 kV D/C line - 126.5 km
2. Establishment 220/132/33 kV GIS substation (New) at New Shillong
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B. Distribution System Components:

1. 2 x 33 kV line from 33 /11kV Mawpat (New) - 220/132/33 kV New Shillong (New) substation (10.72 km) & extending up to existing SE Falls 33/11 kV substation (2.33km) - 13.05 km
2. 33 kV line from 33/11 kV New Shillong (New) substation - 220/132/33 kV New Shillong substation - 3.862 km
3. 2 x 33 kV line from 33/11 kV Mawryngkneng substation (New) - 220/132/33 kV New Shillong substation(New) – 17.23 km
4. Reconductoring of 33kV Jowai – Landonogkrem - Jongksha - 35.0 km
5. 33 kV line from 33/11 kV Mawkynrew substation(New)- 33/11 kV Jongksha substation (Existing) – 6.4 km
6. Establishment of 33/11kV substation at Mawpat, New Shillong, Mawryngkneng & Mawkynrew.

7. The schematic diagram of proposed transmission and distribution network under Tranche-1 of NERPSIP is shown in **Figure 1.2**:

Figure 1.1: Power Map of Meghalaya along with proposed project



1.3. Objective of Compensation Plan for Temporary Damages (CPTD)

8. The primary objective of the CPTD is to identify impacts/damages and to plan measures to mitigate losses likely to be caused by the projects. The CPTD is based on the general findings of field visits, preliminary assessments and meetings with various project-affected persons in the project areas. The CPTD report includes (i) introduction and project description (ii) socio-economic information and profile (iii) legal & regulatory framework (iv) project impacts,(v) entitlement, assistance and benefit (vi) information disclosure, consultation and participation (vii) institutional arrangements (viii) grievance redress mechanism (ix) budget (x) implementation schedule & (xi) monitoring and reporting.

1.4. Scope and Limitation of the CPTD

9. Based on the assessment of proposed project components and intervention as well as provisions of existing law/regulations, it has been established that no permanent land acquisition is involved and only temporary impacts on land and loss of standing crops/ trees are anticipated. The present CPTD has been prepared based on the detailed survey/ investigation. However, the temporary impacts on land and loss of crops/ trees occurred only during the project implementation/ construction. Therefore, the CPTD remains as draft, as actual temporary impacts on crop/tree including details of Affected Persons (AP) shall be ascertained during check survey and tower spotting once the construction contractor is mobilized for implementation. MePTCL/ MePDCL/ POWERGRID⁴ provide compensation for actual damages after assessment by revenue authority. Check survey is done progressively during the construction of the transmission/distribution line. Normally the work is done in off season when there is no standing crop. The compensation for damage is assessed in actual after construction activities of transmission lines in three stages i.e. after completion of foundation, tower erection and stringing of conductor. The payment of compensation is also paid in three instances, if there are damages during all the above three stages. Assessment of damages at each stage and subsequent payment of compensation is a continuous process. Hence, CPTD updating will also be a continuous process during construction and updated data on APs shall be disclosed through semi-annual E & S monitoring report submitted by MePTCL & MePDCL/POWERGRID.

1.5. Measures to Minimize Impact

⁴ For the purpose of CPTD, MePTCL/ MePDCL and POWERGRID may be referred as SPCU and PPIU respectively. For further details, please refer Chapter - VII Institutional arrangements.

10. In keeping with provisions of ESPPF and Bank's Safeguard Policies, State Utilities/ POWERGRID has selected and finalized the routes of transmission line with due consideration of avoidance and minimization to the extent possible and same principles shall also be followed during construction stages of project to further restrict the possibility of temporary damages on crops/ trees/ structures etc. in the Right of Way (RoW). Similarly, the route of distribution lines are mostly selected/ finalized along the existing roads (PWD roads/ Village roads etc.) involving minimum habituated areas and also through barren lands wherever possible. Regular field visits and public consultations helped in developing the measures for further minimizing the possible social impacts.

11. For transmission/distribution line there is no permanent land acquisition involved as per applicable legal framework i.e. in exercise of the powers under Indian Telegraph Act-1885. Part 3, section 10 to 16 conferred under Section 164 of the Electricity Act, 2003 through Deptt. of Power, Govt. of Meghalaya vide notification dated 5th February 2016, MePTCL & MePDCL have the mandate to place and maintain transmission lines under/ over/ along or across and posts in or upon, any immoveable property. However, clause 10 (d) of same act stipulates that the user agency shall pay full compensation to all interested for any damages sustained during the execution of said work. Therefore, State Utilities/ POWERGRID have developed a procedure which is designed to minimize impacts, during the preliminary survey/ investigation (for screening & scoping of the project with at least 3 alternative route alignments), thereafter during detailed survey (spot)/design followed by foundation work, tower erection and during the stringing of conductors.

12. All tower foundations and tower footings are dug and laid, including transportation of material and land clearance, generally at the end of a crop season to avoid impacts on cultivations and need for compensation. After construction of transmission towers, farmers are allowed to continue agricultural activity below tower.

13. Because the concrete needs time to dry and settle, all towers are erected normally three weeks after casting of foundation. Thus, both foundation and erection works are generally completed in one gap between two crop seasons.

14. Given the limited time needed for the stringing, the latter can be done right after the tower construction, before the following crop season.

15. For this reason no household is significantly affected due to the project. Thus, productive loss due to construction is negligible. However, due care shall be taken to avoid damages to

crop/trees by taking up the construction activities during lean period or post-harvest season. As per the prevailing norms farming activity shall be allowed after the construction work is completed. All affected farmers will be compensated for all sorts of damages during construction as per the laid down procedure.

1.6. Route Selection and Study of Alternatives

16. For selection of optimum route, the following points are taken into consideration:

- (i) The route of the proposed transmission/distribution lines does not involve any human displacement/rehabilitation.
- (ii) Any monument of cultural or historical importance is not affected by the route of the transmission/distribution line.
- (iii) The proposed line route does not create any threat to the survival of any community with special reference to Tribal Community.
- (iv) The proposed line route does not affect any public utility services like playgrounds, schools, other establishments etc.
- (v) The line route does not pass through any National Parks, Sanctuaries etc.
- (vi) The line route does not infringe with area of natural resources.

17. In order to achieve this, MePTCL & MePDCL /POWERGRID undertake route selection for individual line in close consultation with representatives of concerned Forest Department and the Department of Revenue. Although under the law, State Utilities have the right of eminent domain yet alternative alignments are considered, keeping in mind, the above-mentioned factors during site selection, with minor alterations often added to avoid environmentally sensitive areas and settlements at execution stage.

- a. As a rule, alignments are generally cited away from major towns, whenever possible, to account for future urban expansion.
- b. Similarly, forests are avoided to the extent possible, and when it is not possible, a route is selected in consultation with the local Divisional Forest Officer, that causes minimum damage to existing forest resources.
- c. Alignments are selected to avoid wetlands and unstable areas for both financial and environmental reasons.

18. In addition, care is also taken to avoid National Parks and Wildlife Sanctuaries and any other forest area rich in wildlife. Keeping above in mind the route of proposed lines have been so

aligned that it takes care of above factors. As such different alternatives were studied with the help of Govt. published data like Forest atlas, Survey of India topo maps, satellite imageries etc. to arrive at most optimum sections of the route which can be taken up for detailed survey and assessment of environmental & social impacts for their proper management.

19. The comparative details of three alternatives in respect of proposed lines are presented in **Annexure-1**.

II. SOCIOECONOMIC INFORMATION AND PROFILE

2.1. General

20. The socio-economic profile of the project area is based on general information collected from various secondary sources. As the assets of any sorts will not be acquired but for temporary damage to crops/trees or any other structures adequate compensation as per norms shall be paid to all APs. This chapter provides broad socio-economic profile in terms of demography, literacy, employment and other infrastructure etc. in the State of Meghalaya and project districts in particular i.e. East Jaintia Hills & Ri-Bhoi through which the various lines will traverse. It may be noted that the East Jaintia Hills district, previously a part of Jaintia Hills district and became a district in year 2012. Due to non-availability socio-economic information separately for East Jaintia Hills, data of undivided Jaintia Hills district has been provided in this chapter. Following section briefly discuss about the socio-economic profile.

2.2. Socio-Economic Profile

2.2.1. Land Use Pattern Meghalaya

21. Meghalaya has a geographic area of 2.24 million ha, which constitutes 6.82% of the country's total area. It is situated between latitude 24°58' N to 26°07' N and longitude 89° 48' E to 92° 51'E. The state has most of its land covered by hills interspersed with gorges and small valleys with elevation ranging between 150 m to 1,950 m. In terms of tribal composition, the state has three distinct regions, namely, Garo Hills, Khasi Hills and Jaintia Hills. The general land use pattern of the state is given in **Table 2.1**.

Table-2.1 Land use Pattern

Land Use	Area in '000 ha	Percentage
Total geographical area	2,243	
Reporting area for land utilization	2,243	100.00
Forests	946	42.21
Not available for cultivation	239	10.66
Permanent pastures and other grazing lands	00	00
Land under misc. tree crops & groves	164	7.31
Culturable wasteland	391	17.44
Fallow lands other than current fallows	155	6.91
Current Fallows	60	2.67
Net area sown	285	12.71

Source: Land use statistics, Ministry of Agriculture, GOI, 2011-12

2.2.1.1 East Khasi Hills District

22. East East Khasi Hills District forms a central part of Meghalaya and covers a total

geographical area of 2,748 km². It lies approximately between 25°07" & 25°41" N Latitude and 91°21" & 92°09" E Longitude.

23. Geomorphologically, the East Khasi hills comprises of denudational high and low hills with deep gorges. The district represents a remnant of ancient plateau of Indian Peninsular Shield which is deeply dissected suggesting several geotectonic and structural deformities that the plateau has undergone. The northern portion of the district is a dissected Shillong plateau gradually rising southwards to the rolling grasslands with gentle river valleys, then falls sharply in the Southern portion forming deep gorges and ravines in Mawsynram and Shella-Bholaganj, bordering Bangladesh. In the southern border areas, there are fringes of alluvial plains that are localized in nature.

2.2.1.2 Ri-Bhoi District

24. Ri-Bhoi District is one of the youngest districts of Meghalaya which came into existence and assumed the hierarchical status of the district on the 4th June 1992 by upgrading the former Civil Sub-Division. The District was carved out from the erstwhile East Khasi Hills District and covers an area of 2448 km². It lies between 90°55'15 to 91°16' latitude and 25°40' to 25°21' longitude.

25. Geo-morphologically, Ri-Bhoi district is a hilly one with intermontane valleys. The western and northern part of the district comprises of the denudational high hills with deep, narrow intermontane valleys covered with or without colluvium. Lithologically, the hills comprise Archaean Gneissic complex rocks, which are highly deformed, fractured and fissured in nature. These rocks also form highly dissected plateau with steep slopes and deep, narrow valleys exposed in the south-western part of the district. In the central and eastern parts, denudational high hills with deep valleys are found to exist which comprise intrusive Granites. Further in the south eastern part, denudational low hills are found to occur with valleys and comprise granite with fracture zones. Large number of narrow intermontane valley occurs mostly in the southern part of the district, which are good recharge areas and have highly productive shallow aquifer zone.

2.2.2 Climate

26. The State enjoys a temperate climate. It is directly influenced by the South-West Monsoon and the northeast winter wind. The climate varies with altitude. The four seasons of Meghalaya are: Spring - March and April, Summer & Monsoon - May to September, Autumn -October and November and Winter - December to February. The Jaintia Hills district enjoys a remarkable pleasant climate, influenced by South West Monsoon.

27. The climate of the East Khasi Hills district ranges from temperate in the plateau region to the warmer tropical and sub-tropical pockets on the Northern and Southern regions. The whole of the district is influenced by the south-west monsoon which begins generally from May and continues till September. The weather is humid for the major portion of the year except for the relatively dry spell usually between December and March. Ri Bhoi district experiences different types of climate ranging from tropical climate in the areas bordering Assam to the temperate climate adjoining the East Khasi Hills District.

28. **Rainfall:** The Monsoon usually starts by the third week of May and continues right to the end of September and sometimes well into the middle of October. There is a great variation of rainfall over central and southern Meghalaya. Mawsynram platform, receives the heaviest rainfall in the world. At Sohra (Cherrapunjee), the average annual rainfall is as high as 12000 millimetres, but Shillong located at a distance of about 50 km from Sohra receives an average of 2200 mm of rainfall annually. The average annual rainfall of sub project area districts is around 2935 mm.

29. **Temperature:** The temperature in summer (April to October) is usually 15°C minimum to 23°C maximum and in winter (November to March) it is 3°C minimum to 15°C maximum. The temperature of subproject districts ranges from 10°C in December to 30°C in the month of July and August as recorded in Umsning Station, whereas in Byrnihat station. Normally January and August record minimum (12.3°C) and maximum (35.2°C) temperatures respectively.

2.2.3 Water Resources:

30. **River System:** The river system of Meghalaya comprises mainly of rivers draining to the Brahmaputra Basin in the north and the Meghna Basin in the South. Brahmaputra Basin comprises of sub-basin of Dilni, Ganol, Jinjiram, Ringgi, Ghagua, Didak, Damring, Krishnai, Dudhnoi, Ronggre, Umsiang, Umkhri, Umiam, Umiew, Umlarem and Meghna Basin comprises of sub- Basin of Kangra, Simsang, Dareng, Darong, Ronglk, Kynshi, Umngi, Myntdu, Lubha. Meghalaya is dominated by the Brahmaputra river (length: 2900 km). Its drainage area is roughly 935,500 sq. km. The availability of surface water has been roughly estimated at 63.204BCM by referring to data from various sources. The ground water resources of the state have been assessed by the Central Ground Water Board and the Annual replenish able ground water is 1.15BCM.

31. The important rivers flowing subproject districts are Umtrew, Umiam, Um Khen, Um Song, Umngot, Umngi, Um Sohryngkew, Um Krem etc. However, the project activity is not going to impact these water bodies in any way as the route alignment of proposed T/L are quite far from these rivers.

2.2.4 Soil

32. The soils of the hills are derived from gneissic complex parent materials; they are dark brown to dark reddish-brown in colour, varying in depth from 50-200 cm. The texture of soils varies from loamy to fine loamy. The soils of the alluvial plains adjacent to the northwest and southern plateau are very deep, dark brown to reddish-brown in colour and sandy-loam to silty-clay in texture. Meghalaya soils are rich in organic carbon, which is a measure of nitrogen supplying potential of the soil, deficient in available phosphorous and medium to low in available potassium. The reaction of the soils varies from acidic (pH 5.0 to 6.0) to strongly acidic (pH 4.5 to 5.0). Most of the soils occurring on higher altitudes under high rainfall belt are strongly acidic due to intense leaching. Base saturation of these soils is less than 35 %. These soils are not suitable for intensive crop production.

33. There is not much difference in fertility classes of the soils of the State. Four soils fertility classes, namely, High Low Medium (HLM), High Medium Medium (HMM), Medium Medium Low (MML), Medium Low Medium (MLM) have been established from the soil test data so far compiled in the Soil Testing Laboratory of the State. A study conducted by the Indian council of Agricultural Research (ICAR) Complex, Shillong revealed that about 40% of the soils of the state contain micronutrients below the critical level.

34. Soil in Ri Bhoi district may broadly classified into hill and plain soils. It can be found out patches of black loamy soil and lime silt constitutes the major portion. This soil is much suitable for growing both local and improved varieties of crops. East Khasi hills have deep, excessively drained, fine soils on moderately sloping side-slopes of hills having loamy surface with moderate erosion hazard and moderately deep, excessively drained, coarse-loamy soils on gently sloping hill tops with very severe erosion hazard and strong stoniness.

2.2.5 Minerals

35. Meghalaya with its wealth of mineral deposits has tremendous industrial potential. There are extensive deposits of coal, limestone, granite, clay and other minerals. Coal deposits are available in all districts and particularly in the southern slopes of the state. The coal bears low ash content and its calorific value ranges between 6500 to 7500 kcal/kg. The total estimated reserve of coal in the region is of the order of 640 million tonnes. The coal is mainly of sub-bituminous type and can be utilized in varied industries ranging from power, fertilizer, cement and textile to paper, rubber, brick burning and also pottery based industries. The coal that is found in the State can also be converted into coke to recover value added chemicals like light, medium and heavy oil, phenol

and producer gas.

36. Limestone is another mineral that occurs in an extensive belt (approx. 200 km. long) along the Southern border of Meghalaya. The quality of limestone found here varies from cement grade to chemical grade having three brands as well. Total inferred reserve limestone within the State is about 5,000 million tonnes. The quality of limestone in the state has CaO content of 53% and can be of use in steel, fertilizer and chemical industries. Granite of excellent quality is at present being mined in the East and West districts of Khasi hills. Sizeable deposits are estimated and can be found in various shades and colours. Clay of various types such as Kaolin (China clay), white clay, and fire clay are found in various parts of the states. These clays are suitable for the ceramic, paper, rubber and refractory industries. It has been estimated that there are a few hundred million tonnes of clay reserved in the state. Beside the above, other economically viable minerals like gypsum, phosphorite, glass-sand, base metals, quartz and feldspar can be located in various parts of the state. The State is also credited with having one of the most valuable sillimanite deposits in the world.

37. The East Khasi Hills district is rich in mineral deposits like limestone and therefore many Cement factories have been set up in the district. Ri bhoi district is stores 50.0 million m³ of granite reserves.

2.2.6 Ecological Resources

38. The recorded forest area is 9,496 sq. km which constitutes 42.34% of the geographic area of the state. According to legal status, Reserved Forests constitute 11.72 % and Un-classed Forest 88.15% of the total forest area. The state has eight forest types as per Champion & Seth Classification system (1968), belonging to five forest type groups, viz. Tropical Wet Evergreen, Tropical Semi Evergreen, Tropical Moist Deciduous, Subtropical Broadleaved Hill and Subtropical Pine Forests. Apart from normal tree sp. of Bamboo, cane, banana, orchid, betel nut, broom grass, packing leaf other major species of forest comprises of *Tectona grandis*, *Shorea robusta*, *Terminalia myricarpa*, *Gmelina arborea*, *Pinus khasiana*, *Michelia champaca*, *Toona ciliata*, *Acrocarpus froxinifolius*, *Bischofia javanica*, *Dillenia indica*, *D. pentagyna*, *Dysoxylum binectariferum*, *Elaeocarpus floribunda*, *Alcimandra cathcartii*, *Betula alnoides*, *Castanopsis sp.*, *Lithocarpus elegans*, *Manglietia insignis*, *Talauma phellocarpa*, *Elaeocarpus prunifolius*, *Ficus nemoralis*, *Lithocarpus fenestratus*, *Myrica esculenta* etc. There are 2 National Parks and 3 Wildlife Sanctuaries in the State, covering an area of 304 sq. km which constitutes 1.36% of the total geographic area of the State. Meghalaya is amongst the states having the highest density of

elephants and there are 6 elephant corridors in the state. Besides, the State also has 09 Important Bird Areas (IBA) sites. The important faunal species reported from reserve forest and protected areas are Tiger (*Panthera tigris*), clouded leopard (*Pardofelis nebulosa*), Asian elephant (*Elephas maximus*), wild dog (*Cuon alpinus*), Malayan sun bear (*Ursus malayanus*), sloth bear (*Melursus ursinus*), smooth-coated otter (*Lutrogale perspicillata*), large Indian civet (*Viverra zibetha*), Indian pangolin (*Manis crassicaudata*), Assamese macaque (*Macaca assamensis*), bear macaque (*Macaca arctoides*), capped leaf monkey (*Semnopithecus pileatus*) and hoolock gibbon (*Hylobates hoolock*). This may contain many threatened and endemic species. The important avian fauna of the state includes Rufous-necked hornbill (*Aceros nipalensis*), white-winged duck (*Cairina scutulata*), ferruginous pochard (*Aythya nyroca*), Pallas's fish-eagle (*Haliaeetus leucoryphus*), marsh babbler (*Pellorneum palustre*), tawny-breasted wren-babbler (*Spelaeornis longicaudatus*), Manipur bush-quail (*Perdicula manipurensis*), bristled grassbird (*Chaetornis striatus*), Blyth's kingfisher (*Alcedo hercules*), greater spotted eagle (*Aquila clanga*), black-breasted parrotbill (*Paradoxornis flavirostris*), dark-rumped swift (*Apus acuticauda*), and beautiful nuthatch (*Sitta formosa*).

39. The proposed transmission lines shall pass through East Khasi Hills & Ribhoi district having forest cover of 64.40 % and 88.22% respectively and don't pass through any protected areas like national parks, sanctuaries, elephant reserves/corridors and biosphere reserves etc. as all such areas have been completely avoided through careful route selection.

2.2.7 Crops

40. Agriculture is the main occupation of the people of East Khasi Hills district. Rice, Maize, oranges (Khasi Mandarin), pineapple, banana, jackfruits, plums, potato, turmeric, ginger, black pepper, arecanut, betelvine, tapioca, short staple cotton, jute and mesta, mustard and rapeseed are the major crops that are cultivated mostly in the area. The main agriculture crops in the Ri-Bhoi district are paddy, maize, ginger, turmeric, varieties of chillies, pumpkin, pineapple, and variety of vegetables etc.

2.2.8 Human and Economic Development

41. Meghalaya is predominantly an agrarian economy. Agriculture and allied activities engage nearly two-thirds of the total work force in Meghalaya. However, the contribution of this sector to the State's NSDP is only about one-third. Agriculture in the state is characterized by low productivity and unsustainable farm practices. Despite the large percentage of population engaged in agriculture, the state imports food from other Indian states. The service sector is made up of real

estate and insurance companies. Infrastructural constraints have also prevented the economy of the state from creating high income jobs at a pace commensurate with that of the rest of India.

42. Meghalaya's gross state domestic product for 2012 was estimated at Rs. 16173 crore (US\$2.6 billion) in current prices. As of 2012, according to the Reserve Bank of India, about 12% of total state population is below poverty line with 12.5% of the rural Meghalaya population is below the poverty line; while in urban areas, 9.3% are below the poverty line.

43. The economy of the sub-project districts area is predominantly agrarian. Majority of the people of the region depends on Agriculture and allied activities. In spite of the problems such as the geographical isolation, the infrastructural deficiencies, socio – economic structures, etc. there are most potentialities for the development of agriculture in the areas.

2.3 Demography Features

2.3.1. Total Population

44. Total population in Meghalaya stands at 29,66,889 of which 23,71,439 (79.93%) population belong to rural area and 5,95,450 (20.07%) population belong to urban area. The East Khasi Hills district has a total of 8,25,922 population which is constituting 27.84% of State's population. The rural and urban population constitute 55.63% and 44.37% of total populations of the district. However Ri-Bhoi district has total population of 2,58,840 constituting 90.24% of rural and 9.76% of urban population. Details are given in **Table 2.2**.

Table 2.2: Details on Total Population

Name/Particulars	Total Population	Total (Rural)	Total (Urban)	Percentage (Rural)	Percentage (Urban)
Meghalaya	29,66,889	23,71,439	5,95,450	79.93	20.07
East-Khasi Hills	8,25,922	4,59,441	3,66,481	55.63	44.37
Ri-Bhoi	2,58,840	2,33,587	25,253	90.24	9.76

Source: Census of India, 2011

2.3.2 Male and Female Population

45. Out of total population 29,66,889 of the State, male population constitutes 14,91,832 (50.27%) and female population is 14,75,057 (49.73%). Total population in East Khasi Hills district stands at 8,25,922 of which male population stands at 4,10,749 (49.73%) and female population stands at 4,15,173 (50.27%). The sex ratio of the district stands at 1011 females per thousand male which is higher than State's average of 989. Total population in Ri-Bhoi district stands at

2,58,840 of which male population stands at 1,32,531 (51.20%) and female population stands at 1,26,309 (48.80%) with a sex ratio of 953 females per thousand male which is lower than State's average of 989. Details are given in **Table 2.3**.

Table 2.3: Details on Male/ Female Population

Name /Particulars	Total Population	Total Male	Total Female	Percentage (Male)	Percentage (Female)	Sex Ratio
Meghalaya	29,66,889	14,91,832	14,75,057	50.27	49.73	989
East-Khasi Hills	8,25,922	4,10,749	4,15,173	49.73	50.27	1011
Ri-Bhoi	2,58,840	1,32,531	1,26,309	51.20	48.80	953

Source: Census of India, 2011

2.3.3 Scheduled Caste (SC) and Scheduled Tribe (ST) Population

46. As per census 2011, the Scheduled Caste (SC) & Scheduled Tribe (ST) population of the State stands at 17,355 (0.89%) and 25,55,861 (86.14%) respectively. The East Khasi Hills district has a total SC population of 5,642 (0.68%) and ST population of 6,61,158 (80.05%). In Ri-Bhoi district SC and ST population stands at 590 (0.23%) and 2,30,081 (88.89%) respectively. Details are given in **Table 2.4**.

Table 2.4: Details on Percentage SC/ST

Name/Particulars	Total Population	Total SC Population	Percentage of SC Population	Total ST Population	Percentage of ST Population
Meghalaya	29,66,889	17,355	0.89	25,55,861	86.14
East-Khasi Hills	8,25,922	5,642	0.68	6,61,158	80.05
Ri-Bhoi	2,58,840	590	0.23	2,30,081	88.89

Source: Census of India, 2011

2.3.4 Literacy

47. The literacy rate of East Khasi Hills district stands at 70% which is significantly higher than State's average and the female literacy rate (51.20%) of the district is slightly higher than the male literacy rate (49.70%) of the district. In Ri-Bhoi district literacy rate (60.21%) is slightly higher than the State literacy rate, however female literacy rate lower than that of the male. Details are given in **Table 2.5**.

Table 2.5 : Literate Population

Name/Particulars	Total Population	Total Literate	Percentage of Literate	Percentage (Male)	Percentage (Female)
Meghalaya	29,66,889	17,85,005	60.16	51.20	48.80
East-Khasi Hills	8,25,922	5,78,030	70.00	49.70	50.3
Ri-Bhoi	2,58,840	1,55,859	60.21	51.96	48.04

Source: Census of India, 2011

2.3.5 Total Workers (Male and Female)

48. Total population into work in Meghalaya stands at 11,85,619 of which total Male (work) population stands at 7,03,709 (59.35%) and total female (Work) population stands at 4,81,910 (40.65%). The East Khasi Hills district has a total work population of 3,26,786 of which total male (work) population stands at 2,04,303 (62.52%) and total female (Work) population stands at 1,22,483 (37.48%). Total work population of Ri-Bhoi district stands at 1,06,473 which constitutes 63,871 (60%) of male (work) and 42,602 (40%) female (work) population. Details are given in **Table 2.6**.

Table 2.6: Details on Workers

Name/ Particulars	Total Population (Work)	Total Male (Work)	Total Female (Work)	Percentage (Male)	Percentage (Female)
Meghalaya	11,85,619	7,03,709	4,81,910	59.35	40.65
East-Khasi Hills	3,26,786	2,04,303	1,22,483	62.52	37.48
Ri-Bhoi	1,06,473	63,871	42,602	60.00	40.00

Source: Census of India, 2011

2.3.6 Households

49. Total Households in Meghalaya stands at 5,48,059 of which 4,30,573 (78.56%) households belong to rural area and 1,17,486 (21.44%) households belong to urban area. East Khasi Hills district has a total of 1,64,046 households of which 86,985 (53.02%) households belong to rural area and 77,061 (46.98%) households belong to urban area whereas in Ri-Bhoi district, the total number of households stands at 46,872 of which 42,412 (90.48%) belong to rural area and 4,460 (9.52%) belong to Urban area. Details are given in **Table 2.7**.

Table 2.7: Details on Households

Name/ Particulars	Total Households	Total (Rural)	Total (Urban)	Percentage (Rural)	Percentage (Urban)
Meghalaya	5,48,059	4,30,573	1,17,486	78.56	21.44
East-Khasi Hills	1,64,046	86,985	77,061	53.02	46.98
Ri-Bhoi	46,872	42,412	4,460	90.48	9.52

Source: Census of India, 2011

III. LEGAL & REGULATORY FRAMEWORK

3.1. Overview

50. In India, compensation for land acquisition (LA) and rehabilitation for project affected persons/families is directed by the National law i.e. “The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (hereafter RFCTLARR, 2013”), effective from 1st January 2014. Since in case of transmission line project, land for tower/pole and right of way is not acquired and ownership of land remains with the owner this act is not applicable. However, as per existing laws⁵ compensation for all damages are paid to the individual land owner. The relevant national laws applicable for transmission/distribution project are (i) The Electricity Act, 2003 and (ii) The Indian Telegraph Act, 1885. The compensation principles adopted in the Entitlement Matrix for this project comply with applicable laws /regulations of the GOI/ State Govt., World Bank’s Safeguard Policies and MePTCL & MePDCL’s ESPPF.

3.2. Statutory Requirements

51. Transmission lines are constructed under the ambit of The Electricity Act, 2003. The provisions stipulated in section 67-68 of the Electricity Act, 2003 read with section 10 & 16 of the Indian Telegraph Act, 1885 governs the compensation as MePTCL & MePDCL has been vested with the powers of Telegraph Authority vide Deptt. of Power, Govt. of Meghalaya notification dated 5th February 2016, under Section - 164 of the Electricity Act. As per the provision of Indian Telegraph Act, 1885 under section 10 (b), MePTCL & MePDCL is not authorized to acquire any land hence land under tower is not acquired. However, compensation for all damages are paid to the individual land owner as per the provision of Section-10 (d) of Indian Telegraph Act, 1885.

52. The provisions in the Electricity Act, 2003 and Indian Telegraph Act, 1885 regarding compensation for laying of transmission lines are as follows:

3.2.1. The Electricity Act, 2003, Part-VIII, Section 67 & 68

Quote:

Section 67 (3-5):

(3) A licensee shall, in exercise of any of the powers conferred by or under this section and the rules made thereunder, cause as little damage, detriment and inconvenience as may be, and

⁵ 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

shall make full compensation for any damage, detriment or inconvenience caused by him or by any one employed by him.

- (4) *Where any difference or dispute [including amount of compensation under sub-section (3)] arises under this section, the matter shall be determined by the Appropriate Commission.*
- (5) *The Appropriate Commission, while determining any difference or dispute arising under this section in addition to any compensation under sub-section (3), may impose a penalty not exceeding the amount of compensation payable under that sub-section.*

Section 68 (5 & 6):

- (5) *Where any **tree standing or lying near an overhead line or where any structure or other object which has been placed or has fallen near an overhead line** subsequent to the placing of such line, interrupts or interferes with, or is likely to interrupt or interfere with, the conveyance or transmission of electricity or to interrupt or interfere with, the conveyance or transmission of electricity or the accessibility of any works, an Executive Magistrate or authority specified by the Appropriate Government may, on the application of the licensee, cause the tree, structure or object to be removed or otherwise dealt with as he or it thinks fit.*
- (6) *When disposing of an application under sub-section (5), an Executive Magistrate or authority specified under that sub-section shall, in the case of any tree in existence before the placing of the overhead line, **award to the person interested in the tree such compensation as he thinks reasonable, and such person may recover the same from the licensee.***

Explanation. - For purposes of this section, the expression “tree” shall be deemed to include any shrub, hedge, jungle growth or other plant.

Unquote.

3.2.2. The Indian Telegraph Act, 1885, Part-III, Section 10 :

Quote:

Section 10 – *The telegraph authority may, from time to time, place and maintain a telegraph line under, over, along, or across, and posts in or upon any immovable property, Provided that*

- a) *the telegraph authority shall not exercise the powers conferred by this section except for the purposes of a telegraph established or maintained by the [Central Government], or to be so established or maintained;*
- b) ***the [Central Government] shall not acquire any right other than that of user only in the property under, over, along, across in or upon which the telegraph authority places any telegraph line or post; and***

- c) *except as hereinafter provided, the telegraph authority shall not exercise those powers in respect of any property vested in or under the control or management of any local authority, without the permission of that authority; and*
- d) *in the exercise of the powers conferred by this section, the telegraph **authority shall do as little damage as possible, and, when it has exercised those powers in respect of any property other than that referred to in clause (c), shall pay full compensation to all persons interested for any damage sustained by them by reason of the exercise of those powers.***

Unquote.

Section 16 of the Indian Telegraph Act, 1885 which stipulates as under:

16. *Exercise of powers conferred by section 10, and disputes as to compensation, in case of property other than that of a local authority:*

- (1) *If the exercise of the powers mentioned in Section 10 in respect of property referred to in clause (d) of that section is resisted or obstructed, the District Magistrate may, in his discretion, order that the telegraph authority shall be permitted to exercise them.*
- (2) *If, after the making of an order under sub section (1), any person resists the exercise of those powers, or, having control over the property, does not give all facilities for this being exercised, he shall be deemed to have committed an offence under section 188 of the Indian Penal Code (45 of 1860).*

3.3. MePTCL/MePDCL's ESPPF

53. To address the environmental and social issues related to its power transmission and distribution projects under NERPSIP, MePTCL & MePDCL has adopted an Environmental and Social Policy & Procedures Framework (ESPPF) in 2015 based on the principles of avoidance, minimization, and mitigation. The ESPPF had been developed by POWERGRID on behalf of the State Utility based on ESPP of POWERGRID who has proven credentials in management of environmental and social issues of large number of power transmission projects both within and outside the country after a comprehensive review of Utility's existing policies/provisions and consultation with stakeholders.

54. ESPPF's outlines Utility's approach and commitment in dealing with the environmental and social issues relating to its transmission projects, lays down the management procedures and protocols for the purpose that includes the framework for identification, assessment, and management of environmental and social concerns at both organizational and project levels.

55. ESPPF's provides compensation to affected persons in respect of temporary damages like crop/tree/structure etc during construction of transmission line as per the eligibility criteria stipulated in Entitlement Matrix (EM) (**Table-5.1**). Accordingly, compensation is paid to eligible APs for actual damages including non-title holders such as squatter, encroacher etc. As regard land compensation for transmission line, as per prevailing practice only compensation @100% of land cost for tower base shall be paid to affected land owner.

56. Specifically on social, the following criteria and approach are considered in the ESPPF:

- (i) Take due precautions to minimize disturbance to human habitations, tribal areas and places of cultural significance.
- (ii) Take due care of Project Affected Persons (PAP).
- (iii) Involve affected people from inception stage to operation and maintenance.
- (iv) Consult affected people in issues of RoWs, land acquisition or loss of livelihood.
- (v) Encourage consultation with communities in identifying environmental and social implications of projects.
- (vi) Guarantee entitlements and compensation to affected people as per entitlement matrix.
- (vii) Share information with local communities about environmental and social implications.
- (viii) Always maintain highest standards of health and safety and adequately compensate affected persons in case of any eventuality.

3.4. Basic Principles for the Project

57. The basic principles adopted for the Project are:

- (i) Avoid negative impacts of land acquisition and involuntary resettlement on persons affected by the Project to the extent possible.
- (ii) Where negative impacts cannot be avoided, assist affected persons (AP), in improving or at least regaining their standard of living and income.
- (iii) Carry out meaningful consultations with affected persons and inform all displaced persons of their entitlements and resettlement options. Ensure their participation in planning, implementation and monitoring of the Project
- (iv) Disclose all information related to, and ensure AP participation in resettlement planning and implementation.
- (v) Provide compensation for acquired assets at replacement/market value in accordance with the RP/CPTD.
- (vi) Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets.

- (vii) Provide resettlement assistance and income restoration to APs.
- (viii) Provide for APs not present during enumeration. However, anyone moving into the project area after will not be entitled to assistance.
- (ix) Develop procedures in a transparent, consistent, and equitable manner if land acquisition is through negotiated settlement to ensure that those people who enter into negotiated settlements will maintain the same or better income and livelihood status.
- (x) Provide compensation and resettlement assistance prior to taking possession of the acquired lands and properties.
- (xi) Establish grievance redress mechanisms to ensure speedy resolution of disputes.
- (xii) Ensure adequate budgetary support to cover implementation costs for CPTD.
- (xiii) Monitoring of the implementation of CPTD.

58. Additionally, the issues related to the Right of Way (RoW) for the transmission/ distribution lines will be dealt with proper care especially for the temporary loss. For the loss of crops and trees and land cost for tower base area due compensation will be paid either by cheque/ through online transfer during construction works. Similarly, compensation (by cheque/ online transfer) to the APs for any temporary loss of crop and trees, if occurred, during the time of major maintenance and repair shall also be disbursed.

3.5. World Bank's Environmental & Social Safeguard Policies

59. The objective of Bank's policies is to prevent and mitigate undue harm to people and their environment in the development process. Safeguard policies provide a platform for the participation of stakeholders in project design, and act as an important instrument for building ownership among local populations. Operational Policies (OP) are the statement of policy objectives and operational principles including the roles and obligations of the Borrower and the Bank, whereas Bank Procedures (BP) is the mandatory procedures to be followed by the Borrower and the Bank. Apart from these, World Bank Group Environmental, Health, and Safety (EHS) General Guidelines and EHS Guidelines for Electric Power Transmission and Distribution are also relevant for environmental protection and monitoring of transmission projects. The WB's relevant social safeguard policies and their objective are given in **Table – 3.1**.

Table 3.1: World Bank’s Operational Policies for Social Safeguard

Operational Policy (OP)	Policy Objectives
OP 4.11 - Physical Cultural Resources (PCR)	To preserve PCR and in avoiding their destruction or damage. PCR includes resources of archeological, paleontological, historical, architectural, and religious (including graveyards and burial sites), aesthetic, or other cultural significance.
OP 4.12 – Involuntary Resettlement	To avoid or minimize involuntary resettlement and, where this is not feasible, assist displaced persons in improving or at least restoring their livelihoods and standards of living in real terms relative to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.
OP 4.10 – Indigenous Peoples	To ensure that the Indigenous Peoples receive social and economic benefits that is culturally appropriate and gender and inter generationally inclusive. The project shall ascertain broad community support for the project based on social assessment and free prior and informed consultation with the affected Tribal community, if any.

IV. PROJECT IMPACTS

4.1. General

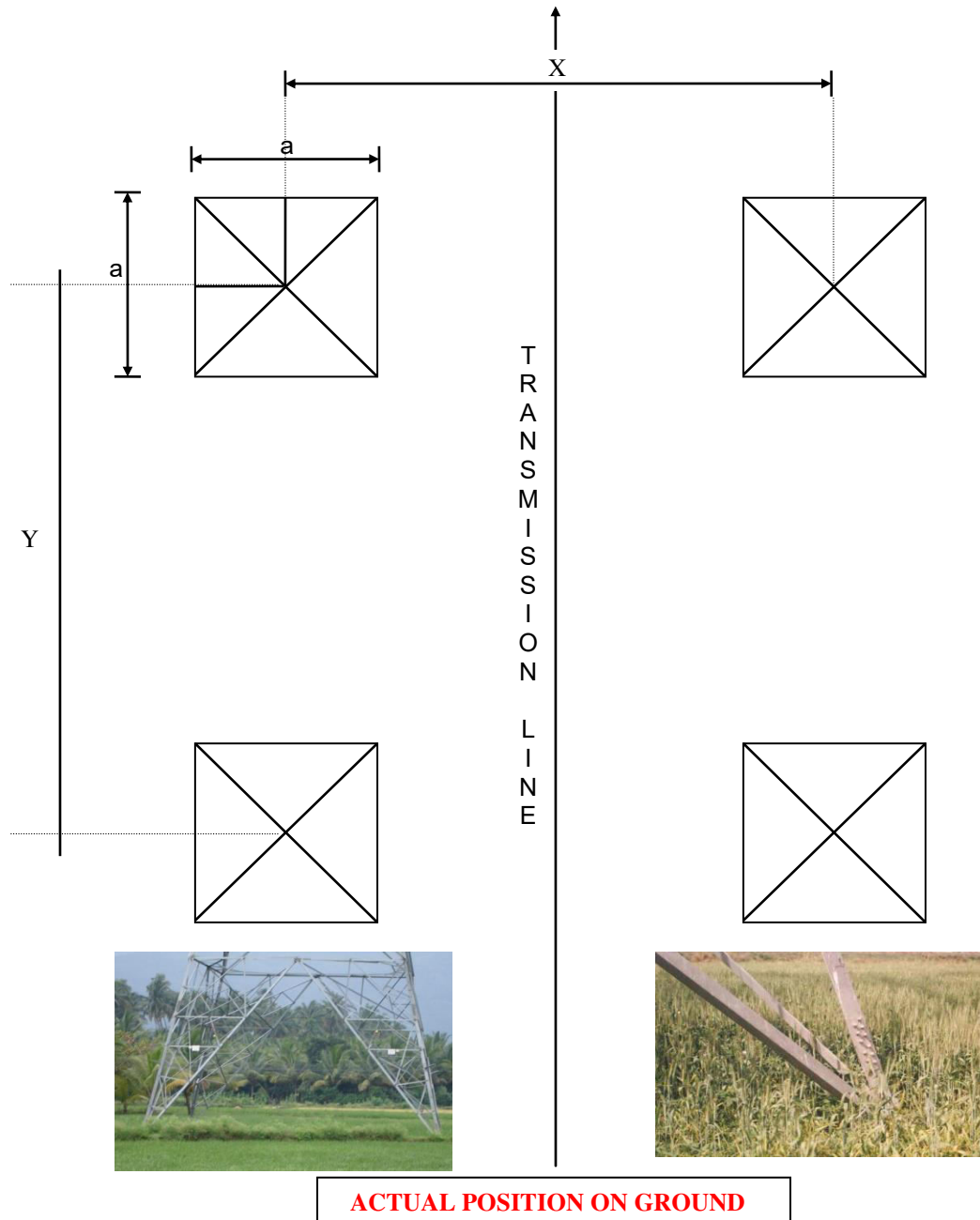
60. The project does not require any private land acquisition for construction of transmission/distribution lines. Due to inherent flexibility in routing of line, no major damages to structures or physical displacement is envisaged. Hence, there are no adverse impacts such as permanent loss of assets, livelihood loss or physical resettlement/relocation due to project intervention. However, there are some social impacts due to construction of lines/placing of towers & poles which are temporary in nature in terms of loss of standing crops/trees/structures in the RoW. Preliminary investigation/survey has been carried out for transmission/distribution line to estimate/arrive at the selection of one best feasible alignment route out of at least 3 alternative alignments studied, for detailed survey to be undertaken during execution of main contracts. The details of tower/pole schedule depicting location & its coordinate including major crossings of proposed route alignment is placed as **Annexure-2**. The compensation for damage is assessed in actual after construction activities of transmission lines in three stages i.e. after completion of foundation, tower erection and stringing of conductor. The payment of compensation is also paid in three instances, if there are damages during all the above three stages. Assessment of damages at each stage and subsequent payment of compensation is a continuous process. Hence, CPTD updating will also be a continuous process during construction. The details of land use have been gathered to have an idea about the temporary damages that might occur during construction of the transmission and distribution lines. The corridor of width (Right of Way) required for 220 KV D/C transmission line is 35 meter whereas, the 33 kV distribution lines it is considered as 15 meter.

61. Soil & Surface Geology: In plain areas impact on soil & geology will be almost negligible as the excavated pit material is stacked properly and back filled as well as used for resurfacing the area. On hill slopes where soil is disturbed will be prone to erosion is suitably protected by revetment, breast walls, and proper drainage. Besides extensive leg /chimney extension shall be used to avoid benching or cutting of slopes to minimize the impact on slope stability.

62. The land requirement for erection of tower legs is very small i.e. for each leg of tower actual construction is done on a small square area with side length ranging from 0.20 to 0.30 meter depending on the types of tower. Four such square pieces of land will be required to place the legs of tower. The area that becomes unavailable because of the erection of tower legs for an average 220 kV D/c transmission tower ranges from 0.16-0.36 sq.m. of land. Thus, the actual impact is restricted to 4 legs of the tower and agriculture can continue as clearly depicted in the **Figure-4.1**.

In case of 33 kV distribution line area that becomes unavailable because of the erection of pole is insignificant as approx. 1 sq. ft. land area is occupied for one pole (refer **Figure. 4.2** depicting

Figure- 4.1: Typical Plan of Transmission Line Tower Footing

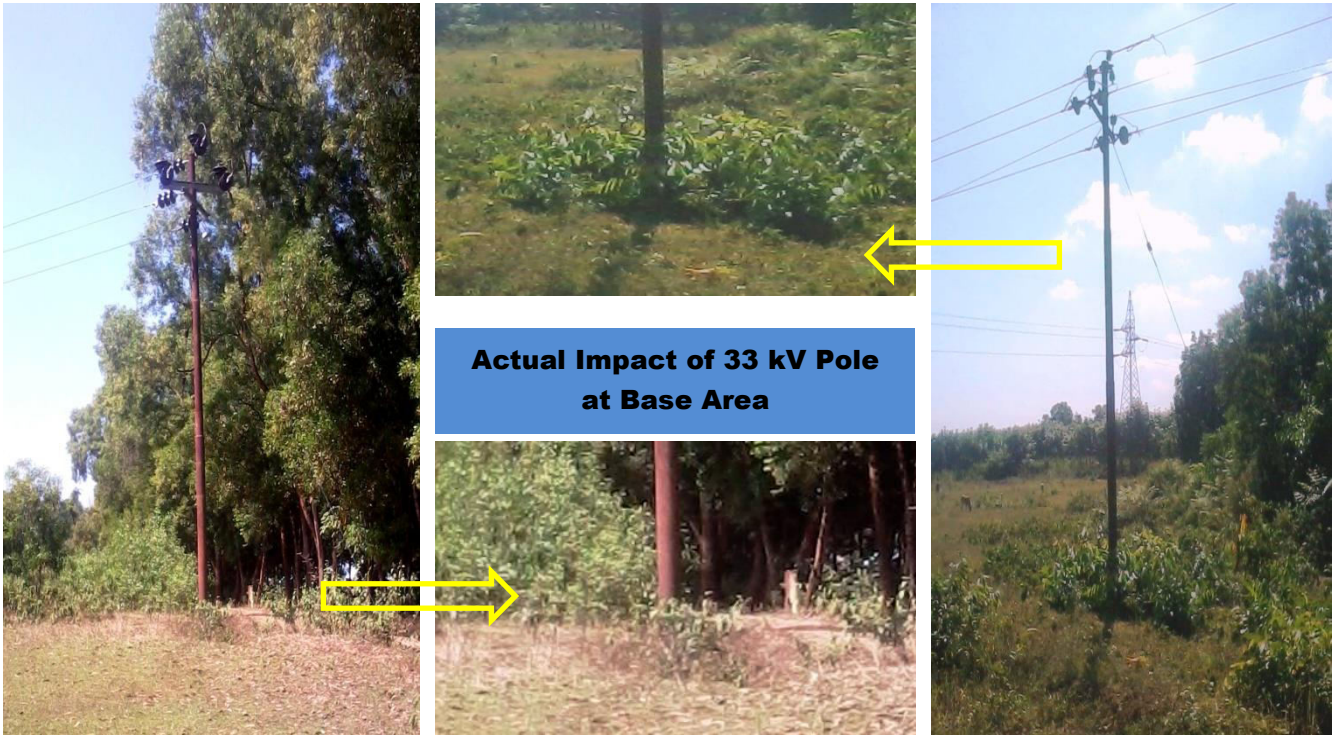


INDICATIVE MEASURES

X & Y = 5-10 METERS

a = 200- 300 mm

Figure- 4.2: 33 KV lines (Single & H pole) depicting base area impact



C 33 kV line inside city area of Assam

istrict, 33 kV (H Pole) line inside substation

actual base area impact). Due diligence confirms that land is either agricultural or barren, and current land use is not altered and resumed after construction. Since Govt. of Meghalaya has not approved the adoption of said guidelines no payment will be paid for land compensation for RoW corridor. However, only land compensation @ 100% of land cost for tower base area shall be paid as per prevailing practice in the State in addition to normal crop and tree damages.

63. Crops: Construction of line in crop season is avoided as far as possible. In case when installation of towers/poles impacts on agricultural activity, detailed assessment/survey is conducted looking at existing crops, general crop patterns, seasonal particulars, nature and extent of yield. This data is compiled and analysed to study the extent and nature of impact. The compensation is in terms of yield/hectare and rate/quantity for prevailing crops in the area. Based on this, total compensation is calculated in consultation with revenue authorities. Compensation is paid to the owners and their acknowledgement obtained.

64. Trees: Construction of line in fruit bearing season is avoided as far as possible. Tree compensation is calculated on the basis of tree enumeration, tree species and an estimate of the yield. In case of fruit bearing trees compensation will be calculated on the basis of 8 years yield (assessed by revenue/horticulture department). Market rates of compensation are assessed by the relevant government authorities. The total estimate is submitted for approval of the competent authority. Payments are made to owners in the presence of local revenue authorities or village head/ Sarpanch and respective acknowledgements are obtained.

65. Other Damages such as damage to bund, water body, fish pond, approach path, drainage and irrigation canal etc. are at best avoided. However, if damaged the Revenue Department assess the cost of damage as per State Govt. norms. The total estimate is submitted for approval to the competent authority. Payments are made to owners in the presence of local revenue authorities or village headman/ Sarpanch and respective acknowledgements are obtained and POWERGRID/ MePTCL & MePDCL pay the compensation. Hindrances to power, telecom carrier & communication lines etc. shall be paid as per Govt. norms.

4.2. Impact due to construction of New Substation and Bay extension

66. The project comprises of establishment of 1 new 220/132kV substation, extension/updation of 2 nos 220/132kV substations and 4 nos. of 33/11 kV substations in East Khasi Hills & Ri-Bhoi Hills districts of Meghalaya. Land for all substations already in possession with MePTCL & MePDCL. Since no fresh land acquisition is involved, R&R will not be an issue in the instant project. The details are provided in **Table-4.1**.

Table-4.1: Details of Substation

Name of substation	Permanent Impact on Land Use	Temporary Impact on loss of crops	Impact on Loss of Trees	Details of Land			
				Land Area (acre)	No. of Land owner	Compensation (Rs. Million)	Land Type/ Securing method
220/132/33 kV GIS at New Shillong	Yes	Nil	Nil	6.214	2	30.148	Direct Purchase through "Willing Buyer Willing Seller" basis on negotiated rate
Upgradation of 220/132 kV GIS at Mawngap	No	Nil	Nil	NA	NA	NA	MePTCL existing land
Ext.of 220/132 kV at Byrnihat	No	Nil	2	NA	NA	NA	
33 /11kV Mawpat	Yes	Nil	Nil	0.30	1	5.993	Direct Purchase through "Willing Buyer Willing Seller" basis on negotiated rate
33 /11kV New Shillong	Yes	Nil	Nil	1.0	NA (Comm-unity land)	3.496	
33 /11kV Mawryngkneng	Yes	Nil	Nil	0.61	1	0.220	
33 /11kV Mawkynrew	Yes	Nil	Nil	1.18	1	1.600	

4.3. Temporary Impacts Caused due to Transmission/Distribution Line (Right of Way)

4.3.1. Type and Use of Land within Corridor Right of Way

67. The line corridor will pass through mixed land uses which are generally agricultural land, private plantation/forest land, govt. land etc. The calculations are based on detailed survey/ investigation carried out along the route of transmission/distribution lines and considering the total line length of the line and its right of way. The total line length is 202.13 kilometre (km) which will impact an estimated of 1374.79 acre⁶ of land and all lines are passing through private plantation .A brief description about the type and use of land in the corridor is given in **Table 4.2**.

Table 4.2: Type and Use of Land within Corridor of RoW (in Km/Hectare)

Sl. No.	Name of the Line	RoW Width (in mtr)	Agricultural land	Private Plantation/ Forest	Riverine	Govt Land/ Barren	Total
A. Transmission Line							
1	Kiling (Byrnihat) - Mawngap - New Shillong 220 kV D/C	35	5.65 km/ (48.86 acre)	120.942 km (1045.95 acre)	Nil	Nil	126.592 km/ (1094.81 acre)
B. Distribution Line							

⁶ Total Line Length (kilometers) X Right of Way (meters)X1000/ 4,047= Area in Acre

2	Mawpat - New Shillong (New) 2 x 33 kV line	15	2.0 km/ (7.41 acre)	11.05 km/ (40.96 acre)	Nil	Nil	13.05 km/ (48.37 acre)
3	New Shillong - New Shillong 33 kV line		0.5 km/ (1.85 acre)	3.362 km/ (12.46 acre)	Nil	Nil	3.862 km/ (14.31 acre)
4	Mawryngkneng - New Shillong 2 x 33 kV line		Nil	17.23 km/ (63.86 acre)	Nil	Nil	17.23 km/ (63.86 acre)
5	Reconductoring of 33kV Jowai – Landonogkrem - Jongksha		2.1 km/ (7.78 acre)	32.9 km/ (121.94 acre)	Nil	Nil	35 km/ (129.72 acre)
6	Mawkynrew - Jongksha 33 kV line		Nil	6.4 km/ (23.72acre)	Nil	Nil	6.4 km/ (23.72 acre)
Total			10.25 km/ (65.90 acre)	191.88 km (1308.89 acre)	Nil	Nil	202.13 km (1374.79 acre)

Source: Detailed Survey

4.3.2 Total loss of crop area (RoW Corridor & Tower/Pole)

68. For the temporary loss of crops, only agricultural land and private plantation land are considered for estimation. The damages are not done in complete RoW of line (35 m for 220 kV D/c) but mostly restricted to tip to tip of the conductor and tower base area where average affected width/corridor would be limited to 27 meter (maximum). In 33 kV distribution lines, damages are minimal (mostly near bi-pole//quad-pole structure) however, 10 meter corridor is considered for accessing the damages. Moreover, all efforts are made to reduce the damages to crops and to minimize the impacts whatsoever. One of the reasons is that schedules of construction activities are undertaken in lean season or post-harvest periods. As the assets of any sorts will not be acquired but during construction, only temporary damages will occur for which the compensation shall be paid to affected persons as per entitlement matrix.

69. Based on the above estimation, the total land considered for crop compensation for transmission/distribution line corridor and tower/pole foundation for the entire subproject covered under the scope of above CPTD is 1031.22 acre. Details of estimated impacted area for crop damages are given in **Table 4.3**.

Table 4.3: Estimation on Loss of Land for Crop Damage due to Overhead Lines

Name of the line	Width Considered for Estimation of Loss of Crops & other impacts (Meter)	Total Agricultural Land (km)	Total Private Plantation (km)	Total Line Length Considered for Crop Compensation (km)	Total Land Area considered for Crop Compensation (Acre)
Kiling (Byrnihat) - Mawngap - New Shillong 220 kV D/C line	27	5.65	120.942	126.592	844.57
Mawpat - New Shillong (New) 2 x 33 kV line	10	2.0	11.05	13.05	32.25
New Shillong - New Shillong 33 kV line		0.5	3.362	3.862	9.54

Mawryngkneng - New Shillong 2 x 33 kV line		Nil	17.23	17.23	42.57
Reconductoring of 33kV Jowai – Landonogkrem - Jongksha		2.1	32.9	35	86.48
Mawkynrew - Jongksha 33 kV line		Nil	6.4	6.4	15.81
Total		10.25	191.884	202.134	1031.22

Source: Detailed Survey

4.3.3 Actual loss of land for Tower Base & Pole

70. As already explained, the impact of transmission line is restricted to 4 legs of the tower and agriculture can continue after construction activity is over. The average land area will be unavailable for erection of one 220 kV T/L tower and one pole for 33 kV D/L is approx. 0.25 sq.m & 0.092 sq.m. respectively. Based on above, total land loss for construction of 126.592 km of 220 kV transmission line and 40.53 km of 33 kV distribution line proposed under the present scheme is estimated to be 0.053 acre. However, compensation toward loss land shall be provided to APs which is part of RoW compensation. Details of land loss for tower base & pole are given in **Table-4.4.**

Table 4.4: Estimation of Actual Loss of Land for Crop Tower Base & Pole

Name of the line	Line length (km)	Total Tower/Pole (Nos.)	Land loss per tower/ pole base (sq.m.)	Total land loss area for tower & pole base (sq.m.)
A. Transmission line				
Kiling (Byrnihat) - Mawngap - New Shillong 220 kV D/C line	126.592	389	0.25	97.25
Total - A				97.25 \cong 0.024 acre
B. Distribution line				
Mawpat - New Shillong 2 x 33 kV line	13.05	538	0.092	49.496
New Shillong-New Shillong 33 kV line	3.862	118	0.092	10.86
Mawryngkneng-New Shillong 2x 33 kV	17.23	413	0.092	38.00
Reconductoring of 33kV Jowai – Landonogkrem - Jongksha	35	NA	NA	NA
Mawkynrew - Jongksha 33 kV line	6.4	199	0.092	18.31
Total - B				116.666 \cong 0.0289 acre

4.3.4 Land area for RoW compensation as per MoP Guidelines

71. Since Govt. of Meghalaya has not approved the adoption of MoP guidelines dated 15.10.2015 no payment will be paid for land compensation for RoW corridor area. However, as per prevailing practice in the State compensation @ 100% land value for tower base shall be paid to the affected persons/land owners. Details of estimation of land areas to be considered for such

compensation are given in **Table 4.5**.

Table 4.5 Land area for RoW Compensation

Name of the line	Line length (km)	Nos. of Tower	Land area for Tower base per km (in acre)	Total land area for tower base (In acre)
Kiling (Byrnihat) - Mawngap - New Shillong 220 kV D/C line	126.592	389	0.077	9.75

4.3.5. Loss of Trees

72. It is estimated that approx. 13,268 private trees likely to be affected due to construction proposed lines. The major species are Arcea Nut (*Areca catechu*), Teak (*Tectona grandis*), Sal (*Shorea robusta*), Bamboo (*Bambusa vulgaris*), almond (*Terminalia myriocarpa*), Gamhar (*Gmelina arborea*), Needlewood (*Schima wallichii*) etc. During construction all these private trees will be compensated as per the entitlement matrix. Details on number of trees for each line are given in **Table 4.6**.

Table 4.6: Loss of Trees

Name of Line	Trees in Private Area (Nos.)	Trees in Govt. Area (Nos.)	Total Trees (Nos.)
Kiling (Byrnihat) - Mawngap - New Shillong 220 kV D/C line	12750	Nil	12750
Mawpat - New Shillong 2 x 33 kV line	250	Nil	250
New Shillong-New Shillong 33 kV line	Nil	Nil	Nil
Mawryngkneng-New Shillong 2 x 33 kV line	223	Nil	223
Reconductoring of 33kV Jowai – Landonogkrem - Jongksha	45	Nil	45
Mawkynrew - Jongksha 33 kV line	Nil	Nil	Nil
Total	13,268	Nil	13,268

Source: Detailed Survey

4.3.6. Loss of Other Assets (Small Shed in Agriculture Fields)

73. It has been observed during survey that 6 nos. structures including small storage sheds/huts used for storage of agricultural purpose exist along the right of way any proposed lines. However, such structure encountered during construction shall be are compensated as per the entitlement matrix. Details on impacts on small structures in the instant case are given in **Table 4.7**.

Table 4.7: Loss of Other Assets

Name of Line	Total no. of storage sheds/huts
Kiling (Byrnihat) - Mawngap - New Shillong 220 kV D/C line	2
Mawpat - New Shillong 2 x 33 kV line	1
New Shillong-New Shillong 33 kV line	1

Mawryngkneng-New Shillong 2 x 33 kV line	1
Reconductoring of 33kV Jowai-Landonogkrem-Jongksha	Nil
Mawkynrew - Jongksha 33 kV line	1
Total	6

Source: Detailed Survey

4.4. Details of Affected Persons

74. It is estimated that total number of affected persons which may be impacted temporarily will be approximately 699. Details are given in **Table 4.8**. The number of APs in the table refers to the most conservative option. However, State Utilities/ POWERGRID will schedule civil works in such a way to minimize impacts and substantially reduce the damages to crops and therefore the number of affected persons and Agricultural Households (AHH).

Table 4.8: Number of Affected Persons

Name of Line	Total APs
Kiling (Byrnihat) - Mawngap - New Shillong 220 kV D/C line	489
Mawpat - New Shillong 2 x 33 kV line	102
New Shillong-New Shillong 33 kV line	12
Mawryngkneng-New Shillong 2 x 33 kV line	63
Reconductoring of 33kV Jowai-Landonogkrem-Jongksha	15
Mawkynrew - Jongksha 33 kV line	18
Total	699

Source: Detailed Survey

4.5 Other Damages

75. As far as possible damages to bunds, water bodies, fish ponds, approach paths, drainage and irrigation canals etc. are avoided. However, if damaged during construction activities, compensation as per practice is paid after assessment of the cost of damage by the State Govt. Revenue Department. The total estimate is submitted for approval to the competent authority. State Utilities/POWERGRID pays the compensation to owners in the presence of local revenue authorities or Village head/Sarpanch and respective acknowledgements are obtained. Any hindrances to power, telecom carrier & communication lines etc. shall also be paid as per Govt. norms.

4.6 Impact on Indigenous People

76. Government of India, under Article 342 of the Constitution, considers the following characteristics to define indigenous peoples [Scheduled Tribes (ST)]:

- (i) tribes' primitive traits;
- (ii) distinctive culture;
- (iii) shyness with the public at large;
- (iv) geographical isolation; and
- (v) social and economic backwardness before notifying them as a Scheduled Tribe.

77. Essentially, indigenous people have a social and cultural identity distinct from the 'mainstream' society that makes them vulnerable to being overlooked or marginalized in the development processes. STs, who have no modern means of subsistence, with distinctive culture and are characterized by socio-economic backwardness, could be identified as Indigenous Peoples. Indigenous people are also characterized by cultural continuity. Constitution of India identifies schedule areas which are predominately inhabited by such people. In the whole Meghalaya State, special provisions also have been extended to the Tribal Areas under the 6th Schedule [Articles 244(2) and 244(A) of the constitution] in addition to basic fundamental rights. The Sixth Schedule provides for administration of tribal areas as autonomous entities. The administration of an autonomous district is vested in a District Council and of an autonomous region, in a Regional Council.

78. The project is being implemented in the tribal areas governed by Khasi Hills Autonomous District Council (KHADC) as per the provisions of Sixth Schedule of the Indian Constitution. Around 86% of the population of Meghalaya belongs to Schedule Tribes. So, the benefits arising out of the project will largely accrue to tribal population. However, in such ADC area No Objection Certificate (NoC) from concerned land owner/ Headman /Village Council shall be obtained (**Annexure-3**). Besides, all social issues shall be dealt separately in accordance with the provisions of Social Management Framework (SMF, A-C) placed in the ESPPF of MePTCL/MePDCL.

4.7. Summary of Impacts

79. Based on the above assessment, temporary impacts on loss of crops, trees, other structures and number of APs are summarized below in **Table 4.9**.

Table 4.9: Summary of Impacts

Particulars	Details	
	Transmission Lines	Distribution Lines
Length of Transmission/Distribution Line (Km)	126.592	75.542
Number of Towers/ Poles (Nos.)	389	1268

Total Area under Tower base (in acre)	9.75	Nil
Total APs (Nos.)	489	210
Affected Structures (Small Sheds for agricultural purpose)(Nos.)	2	4
Area of Temporary Damages for crop compensation (in acre)	844.57	186.65
Total Trees (Nos.)	12750	518

Source: Detailed Survey

V. ENTITLEMENTS, ASSISTANCE AND BENEFITS

5.1. Entitlements

80. There is no involuntary acquisition of land involved; only temporary damage will occur during construction of transmission/distribution lines for which compensation is paid as per relevant regulations/norms. APs will be entitled for compensation for land loss and other towards temporary damages to crops/trees/structures etc. as per the Entitlement Matrix given in **Table 5.1**. Compensation towards temporary damages to all eligible APs including non-title holders is paid after assessment by relevant authorities of State Govt.

81. All APs are paid compensation for actual damages irrespective of their religion, caste and their economic status. One time additional lump sum assistance will be paid to vulnerable households not exceeding 25% of total compensation on recommendation of State Authority/ADC/VC. As an additional assistance, construction contractors are encouraged to hire local labour that has the necessary skills.

5.2. Entitlement Matrix

82. An Entitlement Matrix for the subprojects is given in **Table 5.1**.

Table 5.1: Entitlement Matrix

Sl.	Type of Issue/ Impact	Beneficiary	Entitlement Options
1.	Land area below tower base (#)	Owner	100% land cost at market value as ascertained by revenue authorities or based on negotiated settlement without actual acquisition/ title transfer.
2.	Loss/ damage to crops and trees in line corridor	Owner/ Tenant/ sharecropper /leaseholder	Compensation to actual cultivator at market rate for crops and 8 years income for fruit bearing trees*. APs will be given advance notice to harvest their crops. All timber* will be allowed to retain by the owner.
3.	Other damages (if applicable)	All APs	Actual cost as assessed by the concerned authority.
4.	Loss of structure		
(i)	House	Titleholders	Cash compensation at replacement cost (without deduction for salvaged material and depreciation value) plus Rs. 25,000/- assistance (based on prevailing GOI norms for weaker section housing) for construction of house plus transition benefits as per category-5 below.

Sl.	Type of Issue/ Impact	Beneficiary	Entitlement Options
(ii)	Shop/ Institutions/ Cattle shed	Individual/ Titleholder s	Cash compensation plus Rs. 10000/- for construction of working shed/shop plus transition benefits as per category-5 below
(iii)	Losses during transition under (i) & (ii) above for Shifting / Transport	Family/ unit	Provision of transport or equivalent cash for shifting of material/ cattle from existing place to alternate place
(iv)	Tribal/ Vulnerable APs	Vulnerable APs ⁷	One time additional lump sum assistance not exceeding 25% of total compensation on recommendation of State Authority/ADC/VC.

(#)As decided by State Govt./MePTCL only land compensation for tower base shall be paid as per prevailing practice

** Assistance/help of Forest department for timber yielding trees and Horticulture department for fruit bearing trees shall be taken for assessing the true value.*

5.3. Procedure of Tree/crop compensation

83. In exercise of the powers conferred by section 164 of the Electricity Act, 2003, Deptt. of Power, Govt. of Meghalaya vide notification dated 5th February 2016, has authorized MePTCL & MePDCL to exercise all the power vested in the Telegraph Authority under part-III of the Indian Telegraph Act, 1885, to place and maintain transmission lines under over along or across and posts in or upon, any immovable property. However, the provisions of same act in Section 10 (d) stipulates that the user agency shall pay full compensation to all interested for any damages sustained during the execution of said work. Accordingly, MePTCL & MePDCL / POWERGRID shall pay compensation to land owners towards damages, if any for tree, crop etc. during implementation of project as well as during operation and maintenance phase. The procedure followed for such compensation is as follows:

84. MePTCL & MePDCL follows the principle of Avoidance, Minimization and Mitigation in the construction of line in agricultural field and cropping areas due to inherent flexibility in phasing the construction activity and tries to defer construction in cropped area to facilitate crop harvesting. However, if it is unavoidable and is likely to affect project schedule, compensation is given at market rate for standing crops. All efforts are also taken to minimize the crop damage to the extent possible in such cases.

85. As regard of trees coming in the Right of Way (RoW) following procedure is adopted for enumeration:

- All the trees which are coming within the clearance belt of RoW on either side of the center

⁷ Vulnerable APs include scheduled tribes residing in scheduled areas/ physically handicapped/ disabled families etc.

line are identified and marked/numbered from one AP to the other and documented.

- Type, Girth (Measured 1 m. above ground level), approximate height of the tree is also noted for each tree
- Trees belonging to Govt., Forest, Highways and other local bodies may be separately noted down or timely follow up with the concerned authorities for inspection and removal.
- Guava, Lemon, and other hybrid trees which are not of tall growing nature are not marked for cutting since these trees can be crossed using standard tower extensions if required.

86. A notice under Electricity Act, 2003/ Indian Telegraph Act, 1885 is served to the landowners informing that the proposed transmission line is being routed through the property of the individual concerned. The notice shall contain the particulars of the land, ownership details and the details of the trees/crops/land inevitably likely to be damaged during the course of the construction of the proposed transmission line and acknowledgement received from land owners. A copy of said notice is further issued to the Revenue Officer/SDM, who has been authorized by the Meghalaya Govt. for the purpose of assessment/valuation and disbursement of compensation to the affected parties.

87. The revenue officer shall further issue a notice of intimation to the concerned land owner and inspect the site to verify the documents related to the proof of ownership and a detailed Mouja list is prepared for the identified trees/ crops/ land for tower footing inevitably damaged during the course of the construction. For assessing the true value of timber yielding trees help of forest officials is taken and for fruit bearing trees help of Horticulture department is taken.

88. The Mouja list contained the land owner details; type of tree/crop, its present age, variety, yielding pattern etc. and the same is prepared at site in the presence of the land owner. These Mouja lists are further compiled and a random verification was conducted by the concerned DC or his authorized representative in order to ascertain the assessment carried out by the revenue office is genuine and correct. After this process the District Collector issue a tree cutting permission to MePTCL & MePDCL to enable removal / damage to the standing tree/crop identified in the line corridor.

89. Once the tree/crop is removed / damaged, MePTCL & MePDCL shall issue a tree cutting/crop damaged notice to the land owner with a copy to the Revenue Officer to process the compensation payment. Based on the above the compensation payment is generated by means of a computerized programme developed by the National Informatics Center exclusively for this

purpose. The detailed Valuation statement thus generated using this programme is verified at various levels and approval of payment of compensation is accorded by the concerned District Collectors or Council Authority.

90. On approval of compensation, the revenue officer shall further intimate the amount payable to the different landowners and MePTCL & MePDCL/POWERGRID will arrange the payment by way cheque/online transfer to the affected parties. The payment is further disbursed at the local village office after due verification of the documents in presence of other witnesses. Process of tree/crop compensation is depicted in **Figure-5.1**. A sample copy of compensation process including notice to Affected Persons, compensation assessment and payment is illustrated at **Annexure-4**.

5.4 Land Compensation for Tower Footing & RoW Corridor

91. As per present practices, full compensation (100%) towards land value for tower base areas as decided by the district authority is paid to the affected persons/ land owners in addition to tree/crop damage compensation. Since State Govt./MePTCL has decided that only land compensation for tower base shall be paid as per prevailing practice in the State , land compensation for corridor area as per MoP guidelines of Oct'15 shall not be applicable.

5.5 Compensation for Structure

92. No physical displacement is envisaged in the proposed project. Displacement of structures is normally not envisaged due to flexibility of routing of transmission/distribution line. However, whenever it is necessary, compensation for structures as per entitlement matrix shall be provided (**refer Table 5.1**). In the instant case, no structures are encountered in the right of way of proposed transmission/distribution lines. In case any structure is getting affected, a notice is issued to APs and the joint measurement by MePTCL & MePDCL /POWERGRID and APs will be done and verified by revenue official for actual damages. The compensation will be paid to the APs as decided by committee based on state government norms. Hence, compensation is paid parallelly with the construction activity of line.

5.6 Compensation Disbursement Module

93. In order to streamline the compensation process, a disbursement modules has been developed (**Table -5.2**) specifying the time period with respect to various process/activities which will be implemented during the project execution.

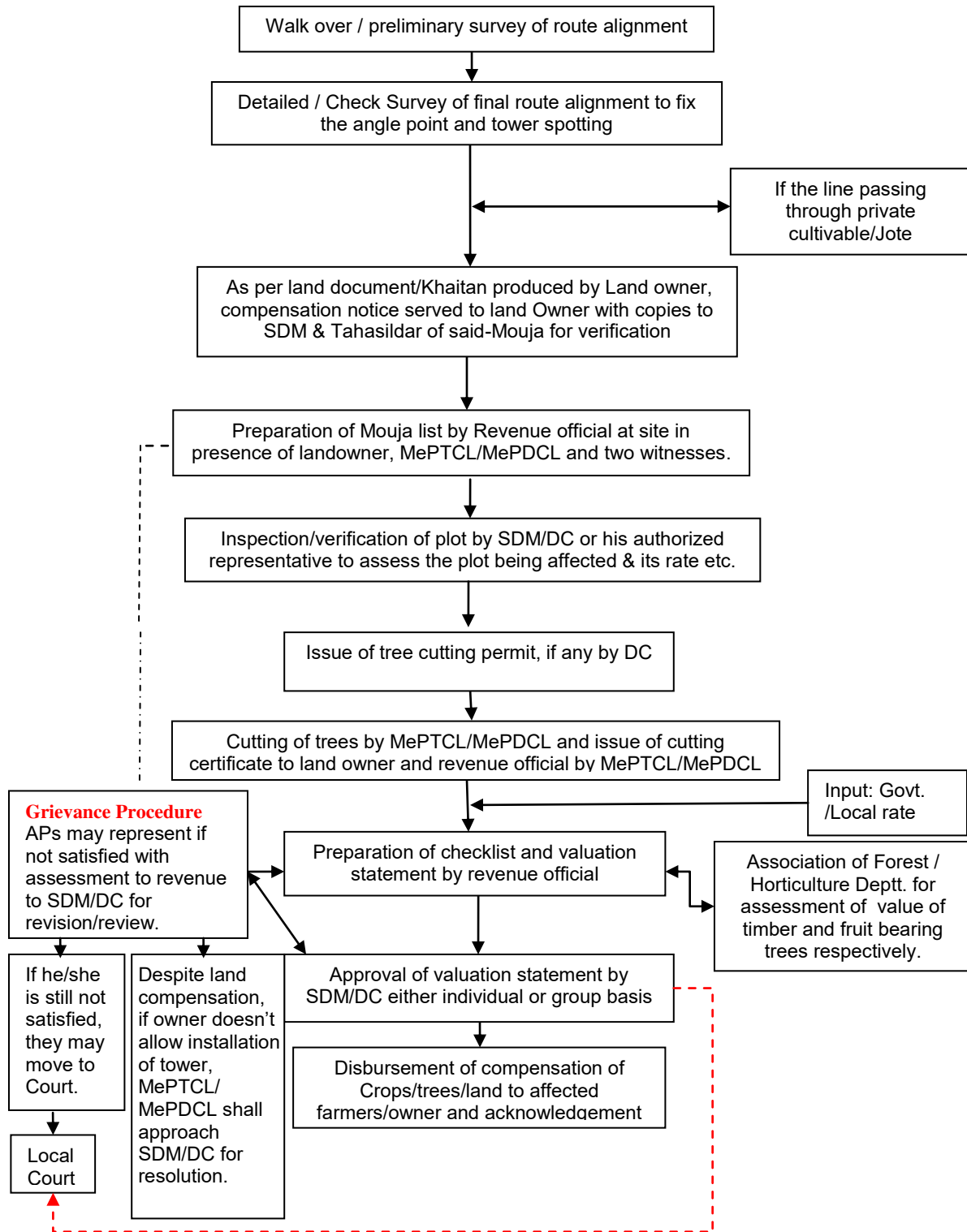
Table 5.2: Compensation Disbursement Module

Activity/Stage	Process	Maximum Time Period from Cut-Off date
Tower Foundation/ Erection/ Stringing	Serving of Notice (<i>Cut-off date</i>)	0 date
	Verification of Ownership by Revenue Deptt.	15 days
	Assessment/Verification of damages by Revenue Deptt.	45 days
	Online disbursement*	60 days**

* *Provision of advance payment up to 25% (Rs. 1 lakh maximum) of total estimated land compensation already made in the RoW guidelines of POWERGRID and may also be implemented in the NERPSIP after consent of concerned State Utilities.*

** *60 days is on maximum side. However, based on past experience it's normally concluded within 30-45 days.*

Figure-5.1: Tree / Crop Compensation Process



VI. INFORMATION DISCLOSURE, CONSULTATION & PARTICIPATION

6.1. Consultations

94. Public consultation/information is an integral part of the project implementation. Public is informed about the project at every stage of execution. During survey also MePTCL/MePDCL & 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 consulted. Apart from this, Public consultation using different technique like Public Meeting, Small Group Meeting, informal Meeting shall also be carried out during different activities of project cycle. During such consultation the public are informed about the project in general and in particular about the following;

- Complete project plan (i.e. its route and terminating point and substations, if any, in between);
- Design standards in relation to approved international standards;
- Health impacts in relation to EMF;
- Measures taken to avoid public utilities such as school, hospitals, etc.;
- Other impacts associated with transmission & distribution lines and MePTCL/MePDCL approach to minimizing and solving them;
- Trees and crop compensation process.

95. In the instant project also, many group meetings both formal and informal were organized in villages where the proposed interventions are likely to happen (**Table - 6.1**). These meetings were attended by Village Council/headman, senior/respected person of village, interested villagers/general public and representatives from MePTCL/MePDCL & POWERGRID. Besides, gender issues have also been addressed to the extent possible during such consultation process (total 12 female out of 98 participants). To ensure maximum participation, prior intimation in local language was given and such notices were also displayed at prominent places/panchayat office etc. Details of above public consultation meetings including minutes of meeting, list of participants and photographs are enclosed as **Annexure -5**.

Table 6.1 Details of Consultations

Date of meeting	Venue of Meeting	No. of Persons attended	Persons Attended
Public Consultation Meeting			
12.09.2014	Village- Byrnihat, Ri-Bhoi	28	Members of Khasi Hill Council,

	District		Senior members & General Public
19.09.2014	Village- Umium, Ri-Bhoi District	35	Members of Khasi Hill Council, Senior members & General Public
Informal Group Meeting			
12.05.2019	Lamkyv village, East Khasi Hills	9	Project affected families, Village headman & general public
18.06.2019	Mynkre village, East Khasi Hills	14	Project affected families, Village headman & general public
27.06.2019	Village- Mynkre, East Khasi Hills	12	Project affected families, Village headman & general public

96. During consultations/interaction processes with people of the localized areas, MePTCL & MePDCL/POWERGRID field staffs explained benefit of the project, impacts of transmission/distribution line, payment of compensation for damaged of crops, trees, huts etc. as per The Indian Electricity Act, 2003 and The Indian Telegraph Act, 1885 and measures to avoid public utilities such as schools, hospital etc. People more or less welcomed the construction of the proposed project.

97. Various issues inter alia raised by the people during public consultation and informal group meetings are as follows;

- To Involve Village headman during survey work/finalization of line corridor;
- To engage local people in various works associated with construction of line and if required proper training may be provided to engage them.
- Early disbursement of compensation;

98. MePTCL/MePDCL & POWERGRID representative replied their queries satisfactorily and it was assured that compensation would be paid in time after Revenue dept.fixed/award the amount.

6.2. Plan for further Consultation and Community Participation during Project Implementation

99. The process of such consultation to be continued during project implementation and even during O&M stage. The progress and proposed plan for Public consultation is described in **Table 6.**

Table 6.2: Plan for Future Consultations

S. N.	Activity	Technique	Schedule
1.	Detailed/ Check survey	Formal/Informal Meeting at different places (20-50 Km) en-route final route alignment of line	Public meeting during pre- construction stage
2.	Construction Phase	Localized group meeting, Pamphlet/ Information brochures, Public display etc.	During entire construction period.

3.	O&M Phase	Information brochures, Operating field offices, Response to public enquiries, Press release etc.	Continuous process as and when required.
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6.3. Information Disclosure

100. The CPTD will be disclosed to the affected households and other stakeholders by placing it on website. To maintain the uninterrupted communication channel, MePTCL/MePDCL & POWERGRID site officials are meeting APs and inform about norms and practices of damage assessment and compensation thereof. A notice also issued to APs after the detailed/ checks survey and finalization of tower location during the construction. Affected persons also visited site/construction offices of MePTCL/MePDCL & POWERGRID to know about the compensation norms and policies and to discuss their grievances. For wider circulation, executive summary of the CPTD/ Entitlement Matrix will be translated in local language and placed at construction offices/ sites. The CPTD will also be disclosed on the World Bank website. MePTCL/MePDCL & POWERGRID will organize further public consultation meetings with the stakeholders to share the views of public and all possible clarifications. This consultation process will continue throughout the project implementation and even during operation and maintenance (O&M) stage.

VII. INSTITUTIONAL ARRANGEMENTS

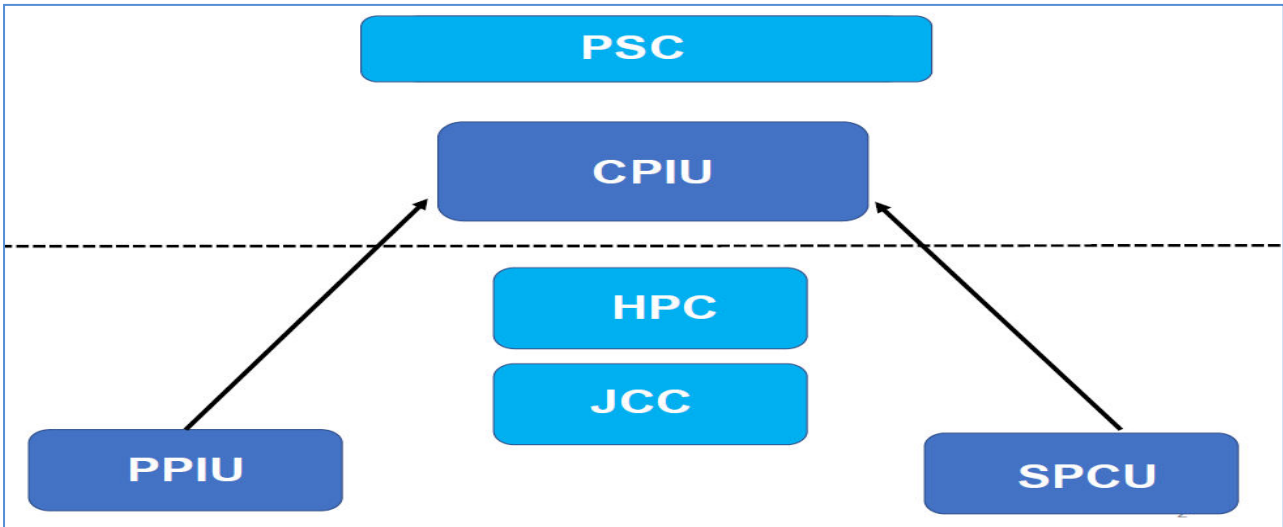
7.1 Administrative Arrangement for Project Implementation

101. Ministry of Power (MoP), Gol has appointed POWERGRID as Implementing Agency (IA) to implement the project in close coordination with the respective state power utilities and departments. POWERGRID will implement 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 will form 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;

Central Project Implementation Unit (CPIU) - A body responsible for coordinating the preparation and implementation of the project and shall be housed within the IA's offices at Guwahati. The "Project-In-Charge" of IA & Head of each of the SPCU shall be a member of CPIU.

State Project Coordination Unit (SPCU) – A body formed by the Utility and responsible for coordinating with IA in preparing and implementing the project at the State level. It consist of experts across different areas from the Utility and shall be headed by an officer of the rank not below Chief Engineer, from the Utility.

PMC Project Implementation Unit (PPIU) – A body formed by the IA, including members of Utility on deputation, and responsible for implementing the Project across the State, with its personnel being distributed over work site & working in close association with the SPCU/ CPIU. PIU report to State level "Project Manager" nominated by the Project-in-Charge of IA. The IA will have a Core team stationed at the CPIU on permanent basis and other IA officers (with required skills) will visit as and when required by this core team. This team shall represent IA and shall be responsible for all coordination with SPCU, PIU, within IA and MoP, Gol. CPIU shall also assist MoP, Gol in monitoring project progress and in its coordination with The Bank.



7.2. Review of Project Implementation Progress:

102. To enable timely implementation of the project/subprojects, following committee has been setup to review the progress;

- A. Joint Co-ordination Committee (JCC):** IA and SPCU nominate their representatives in a body called JCC to review the project. IA shall specify quarterly milestones or targets, which shall be reviewed by JCC through a formal monthly review meeting. This meeting forum shall be called as Joint Co-ordination Committee Meeting (JCCM). The IA shall convene & keep a record of every meeting. MoP, GoI and The Bank may join as and when needed. Minutes of the meeting will be shared with all concerned and if required, with GoI and The Bank.
- B. High Power Committee (HPC):** The Utility in consultation with its State Government shall arrange to constitute a High Power Committee (HPC) consisting of high level officials from the Utility, State/ District Administration, Law enforcement agencies, Forest Department. etc. so that various permission/ approvals/ consents/ clearances etc. are processed expeditiously so as to reach the benefits of the Project to the end consumers. HPC shall meet on bimonthly basis or earlier, as per requirement. This forum shall be called as High Power Committee Meeting (HPCM) and the SPCU shall keep a record of every meeting. Minutes of the meeting will be shared with all concerned and if required, with GoI and The Bank.
- C. Contractor's Review Meeting (CRM):** Periodic Review Meeting will be held by officials of PIU with Contractors at field offices, State Head Quarters (PIU location) and if required with core

team of IA at Guwahati. These shall be called “Contractor’s Review Meeting” (CRM). PIU shall keep a record of all CRMs, which shall be shared with all concerned and if required, with Gol and The Bank.

- D. A review will be held among MoP, Gol, The Bank, State Government., Utility and IA, at four (4) months interval or earlier if needed, primarily to maintain oversight at the top level and also to debottleneck issues that require intervention at Gol/ State Government level. Minutes of the meeting shall be prepared by IA and shared with all concerned.

7.3. Arrangement for Safeguard Implementation

103. At the Central Project Implementation Unit (CPIU) based at Guwahati, POWERGRID has set up an Environmental and Social Management cell (ESMC) which is headed by General Manager (GM) to oversee Environmental and Social issues of the projects and to coordinate the SPCU & Site Offices.

104. At the State level, POWERGRID has already set up PPIU at the capital of each participating State. The PPIU is staffed with dedicated multidisciplinary team headed by Project Manager who is also responsible for overseeing and implementing the environmental and social aspects of project in their respective state. The PPIU team is assisted by a dedicated Field Officer (Environment & Social Management) who has been specifically recruited for this purpose by POWERGRID. Moreover, State Utilities have constituted State Project Coordination Unit (SPCU) at each state and also designated their Environmental & Social Officer within SPCU to work in close co-ordination with the PMC Project Implementation Unit of POWERGRID and CPIU team at Guwahati. Major responsibilities of Environment and Social team at State level are conducting surveys on environmental and social aspects to finalize the route/substation land, implementation Environment Management Plan (EMP)/CPTD, co-ordination with the various statutory departments, monitoring EMP/CPTD implementation and producing periodic progress reports to CPIU.

105. In the instant subprojects, POWERGRID will implement the CPTD in close co-ordination with MePTCL/MePDCL which includes overall coordination, planning, implementation, financing and maintaining all databases & also work closely with APs and other stakeholders. A central database will also be maintained for regular updation of social assessment & compensation data. State Utilities & POWERGRID will ensure that local governments are involved in the CPTD implementation to facilitate smooth settlement of compensation related activities. Roles and responsibilities of various agencies for CPTD implementation are presented in **Table 7.1**.

Table 7.1: Agencies Responsible for CPTD Implementation

Activity	Agency Responsible	
	Primary	Secondary
Implementing CPTD	Field staffs of POWERGRID & MePTCL/MePDCL	
Updating the CPTD	POWERGRID	MePTCL/MePDCL
Review and Approval of CPTD	MePTCL/MePDCL	POWERGRID
Verification survey for identification of APs	POWERGRID, MePTCL/MePDCL field staffs	Revenue Officials
Survey for identification of plots for Crop/Tree/ other damages Compensation	POWERGRID, MePTCL/MePDCL	Revenue Officials
Consultation and disclosure of CPTD to APs	POWERGRID, MePTCL/MePDCL	Revenue Officials
Compensation award and payment of compensation	Revenue Dept. / Competent Authority	POWERGRID, MePTCL/MePDCL
Fixing of replace cost and assistance	Revenue Dept. / Competent Authority	POWERGRID, MePTCL/MePDCL
Payment of replacement cost compensation	POWERGRID, MePTCL/MePDCL	Revenue Dept.
Takeover temporary possession of land/houses	POWERGRID, MePTCL/MePDCL	Revenue Dept.
Hand over temporary possession land to contractors for construction	POWERGRID & MePTCL/MePDCL	Contractor
Notify construction starting date to APs	POWERGRID, MePTCL/MePDCL Field Staff	Contractor
Restoration of temporarily acquired land to its original state including restoration of private or common property resources	Contractor	POWERGRID, MePTCL/MePDCL
Development, maintenance and updating of Compensation database	POWERGRID, MePTCL/MePDCL	-
Development, maintenance and updating of central database	POWERGRID, MePTCL/MePDCL	-
Internal monitoring	POWERGRID, MePTCL/MePDCL	-
External monitoring, if required	External Monitoring Agency	-

7.4. Responsibility Matrix to manage RoW Compensation

In order to manage the RoW compensation effectively, a Work Time Breakdown (WTB) matrix depicting sequence of activities, timing, agencies responsible have been drawn both for Tree/Crop and Land compensation which will be implemented during project execution.

a) WTB for Tree/Crop Compensation

Activities	Responsibility		Time Schedule
	Primary	Secondary	
Identification of APs (During Tower spotting & Check Survey)	Contractor	MePTCL/MePDCL & IA field staffs	In 3 different Stages i.e. before start of Foundation, Erection & Stringing Works
Serving Notice to APs	MePTCL/MePDCL & IA field staffs	Revenue Dept.,	0 date
Verification of ownership	MePTCL/MePDCL, IA & Revenue Dept.	ADC (if applicable)	0-15 days
Joint Assessment of damages	Revenue Dept. & APs	MePTCL/MePDCL / IA	16-45 days
Payment (online/DD) of compensation to AP*	MePTCL/MePDCL & IA		46-60 days

b) WTB for Land Compensation for Tower base and RoW corridor**

Activities	Responsibility		Time Schedule
	Primary	Secondary	
Identification of APs (During Tower spotting and Check Survey)	Contractors	MePTCL/MePDCL & IA field staffs	Before start of Foundation/ Erection & Stringing Works
Fixation of land rate	DC, ADC/ Executive Committee (if applicable)	MePTCL/MePDCL & IA	0 date
Serving Notice to APs	MePTCL/MePDCL, IA field staffs	Revenue Dept.,	0-7 days
Assessment of compensation/ Verification of ownership	Revenue Dept./ ADC	MePTCL/MePDCL & IA	8-15 days
Payment (online/DD) of compensation to AP*	MePTCL/MePDCL & IA		16-30 days

* AP can approach to DC for any grievance on compensation.

** Discussion for release of certain % as advance is also under progress with Utilities.

Note: Both a and b activities shall run parallelly

VIII. GRIEVANCE REDRESS MECHANISM

106. Grievance Redress Mechanism (GRM) is an integral and important mechanism for addressing/resolving the concern and grievances in a transparent and swift manner. Many minor concerns of peoples were addressed during public consultation process initiated at the beginning of the project. For handling grievance, a two tier GRM consisting of Grievance Redress Committee (GRC) at two levels, i.e. project/scheme level and Corporate/HQ level have been constituted. The project level GRCs include members from MePTCL/MePDCL, POWERGRID, Local Administration, Village Council/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. The composition of GRC also disclosed in Panchayat/Village council offices and concerned district headquarter for wider coverage

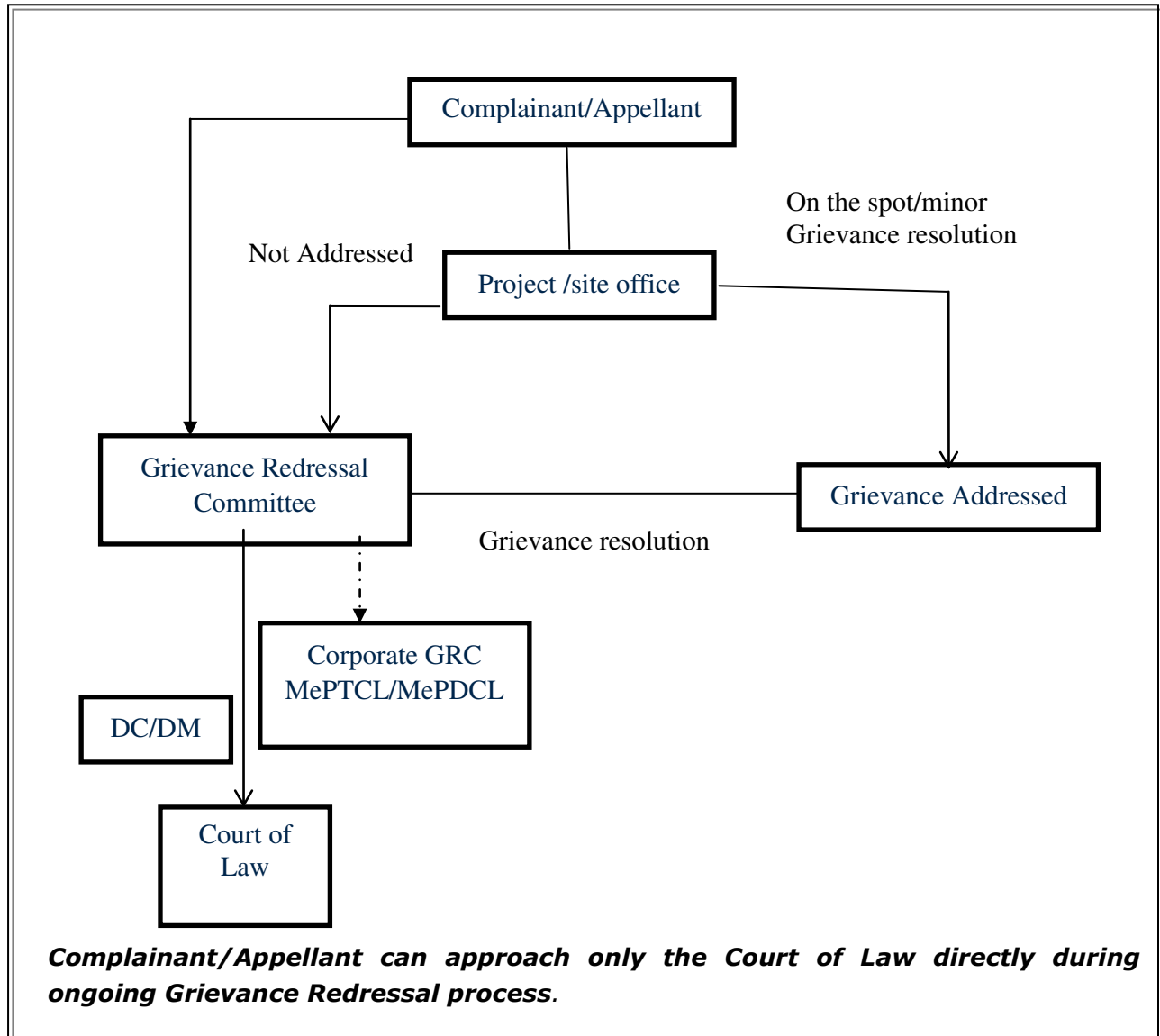
107. The complainant will also be allowed to submit its complaint to local project official who will pass it to GRC immediately but not more than 5 days of receiving such complaint. The first meeting of GRC will be organized within 15 days of its constitution/disclosure to formulate procedure and frequency of meeting. In case of any complaint, GRC meeting shall be convened within 15 days. If Project level GRC is not able to take decision it may refer the complaint to corporate GRC for solution. GRC endeavours to pronounce its decision within 30-45 days of receiving grievances. In case complainant/appellant is not satisfied with the decision of project level GRC they can make an appeal to corporate GRC for review. The proposed mechanism does not impede access to the country's judicial or administrative remedies at any stage.

108. The corporate level GRC shall function under the chairmanship of Director (Transmission) who will nominate other members of GRC including one representative from corporate ESMC who is conversant with the environment & social issues. The meeting of Corporate GRC shall be convened within 7-10 days of receiving the reference from project GRC or complainant directly and pronounce its decision within next 15 days.

109. 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 authorised

representative also provides forum for raising the grievance towards any irregularity/complain. Moreover, MePTCL/MePDCL & POWERGRID officials also address to the complaints of affected farmers and the same are forwarded to revenue official for doing the needful. Details are depicted below in **Figure-8.1**:

Figure-8.1: Flow Chart of Grievance Redress Mechanism



IX. BUDGET

110. The CPTD Implementation cost estimate for the project includes eligible compensation for loss of crops/ trees/ huts and support cost for implementation of CPTD, monitoring, other administrative cost etc.. Though Govt. of Meghalaya has not yet adopted MoP guidelines for RoW compensation for implementation, a budget provision has been made for compensation for Tower Base (@ 100% of the land cost) and zero compensation for RoW Corridor as per the prevailing practices. Accordingly, cost has been estimated for proposed 220 kV line in the budget by including these provisions. However, this is a tentative budget which may change during the original course of implementation. The unit cost for the loss of crop has been derived through rapid field appraisal and based on MePTCL/MePDCL & POWERGRID's previous experience of similar project implementation. Contingency provision equivalent to 3% of the total cost has also been made to accommodate any variations from this estimate. Sufficient Budget has been provided to cover all compensation towards land use restriction, crops losses, other damages etc. As per MePTCL/MePDCL & POWERGRID's previous projects and with strategy for minimization of impacts, an average of 50-60% of the affected land area is expected for compensation for crops and other damages. Structure will be avoided to the extent possible. However, if any structure is affected, budget provisions are available to cover all damages as per entitlement matrix. As detailed in above paras, initial study has confirmed that no residential structure shall be affected. Therefore, provisions of budget expenditure for implementation of CPTD for the subprojects considering corridor of 27 meter & 10 meter maximum for 220 kV & 33 kV line respectively.

9.1. Compensation for Land under Tower Base

111. The land area for 220 kV tower base is estimated as 0.077 acre per km. The cost of land is estimated @ Rs. 15 lakh/acre considering the land use type as agriculture land in rural setting. However, as per the Govt. of Meghalaya decision on RoW compensation for Transmission lines, land compensation @ 100% land value for tower base & no compensation will be paid for the width of RoW corridor to the land owners/ farmer. Further, no compensation is associated with 33kV lines. Accordingly, the cost of land compensation towards tower base for overhead line is thus estimated as Rs. 146.1 Lakhs. A detail of cost is given below in **Table 9.1**.

Table 9.1: Cost of Land Compensation for Tower Base & RoW Corridor

Name of Line	Line Length (Km)	Land Area for Tower Base (acre)	Avg. Cost of Land (Lakhs /acre)	Total in Lakhs (Tower base @ 100%)
Kiling (Byrnihat) - Mawngap - New Shillong 220 kV D/C line	126.592	9.74	15.00	146.1

* Effective RoW corridor has been considered after excluding tower base area

9.2. Compensation for Crops and Trees

112. The crop compensation is calculated in consultation with revenue authorities in terms of yield/hectare and rate/quantity for prevailing crops in the area. Similarly, tree compensation is calculated on basis of tree enumeration, tree species and an estimate of the yield. In case of fruit bearing trees compensation will be calculated on the basis of 8 years yield (assessed by revenue/horticulture department). Market rates of compensation are assessed by the relevant government authorities. The estimation of crop and tree damages are based on preliminary investigation and accordingly budgetary provisions are made which will be updated during implementation. Details of line wise cost are given in **Table 9.2** below.

Table 9.2: Cost of Compensation for Crops and Trees

SI No	Name of the Line	Total Length (Km)	Compensation /Km (In Lakh)	Total compensation cost for Crops & trees (Lakh)
1.	Kiling (Byrnihat) - Mawngap - New Shillong 220 kV D/C line	126.592	5.0	632.96
2.	Mawpat - New Shillong 2 x 33 kV line	13.05	0.5	6.53
3.	New Shillong-New Shillong 33 kV line	3.862	0.5	1.93
4.	Mawryngkneng-New Shillong 2 x 33 kV line	17.23	0.5	8.62
5.	Reconductoring of 33kV Jowai-Landonogkrem-Jongksha	35	0.5	17.5
6.	Mawkynrew - Jongksha 33 kV line	6.4	0.5	3.2
Total				670.74

9.3. Summary of Budget

113. The total indicative cost is estimated to be **INR 867.02 Lakhs** equivalent to **USD 1.34** million. Details are given in **Table 9.3**. The following estimated budget is part of complete project cost as on date. However, actual updation of the estimated cost shall be updated during execution.

Table 9.3: Summary of Budget

Item	Amount in Lakh (INR)
A. Compensation	
A-1: Loss of Crops and Trees	670.74
A-2: Land Compensation for Tower Base and RoW Corridor ⁸	146.1
Sub Total-A	816.84
B: Implementation Support Cost	
B-1: Man-power involved for CPTD Implem. & Monitoring	14.93
B-2: External Monitoring, if required	10.00
Sub Total- B	24.93
Total (A+B)	841.77
Contingency (3%)	25.25
Grand Total	867.02 \cong 1.34 million USD

⁸ Payment of Compensation subject to adoption/implementation of MoP guidelines of Oct.'15 by Govt. of Meghalaya

X. IMPLEMENTATION SCHEDULE

114. Following work schedule has been drawn for implementation of CPTD considering letter of award for execution of work placed in end of 2016. Tentative implementation schedule for project including various sub tasks presented in **Table 10.1**.

Table 10.1 Tentative Implementation Schedule

Sl. No.	Activity	1 st Year				2 nd Year				3 rd Year			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
1.	Initial CPTD Matrix disclosure												
2.	Detailed Survey												
3.	Public Consultation												
4.	Compensation Plan Implementation												
i)	Compilation of land record, ownership,												
ii)	Finalization of list of APs, fixing rate by DC												
iii)	Serving of Notice to APs												
iv)	Joint assessment & acknowledgement by APs												
v)	Validation of Compensation amount												
vi)	Compensation Payment												
5.	Civil Works												
6.	Review/ Activity Monitoring												
i)	Monthly												
ii)	Quarterly												
iii)	Half yearly												
iv)	Annual												
7.	Grievance redress												
8.	CPTD Documentation												
9.	External Monitoring, if required												

XI. MONITORING AND REPORTING

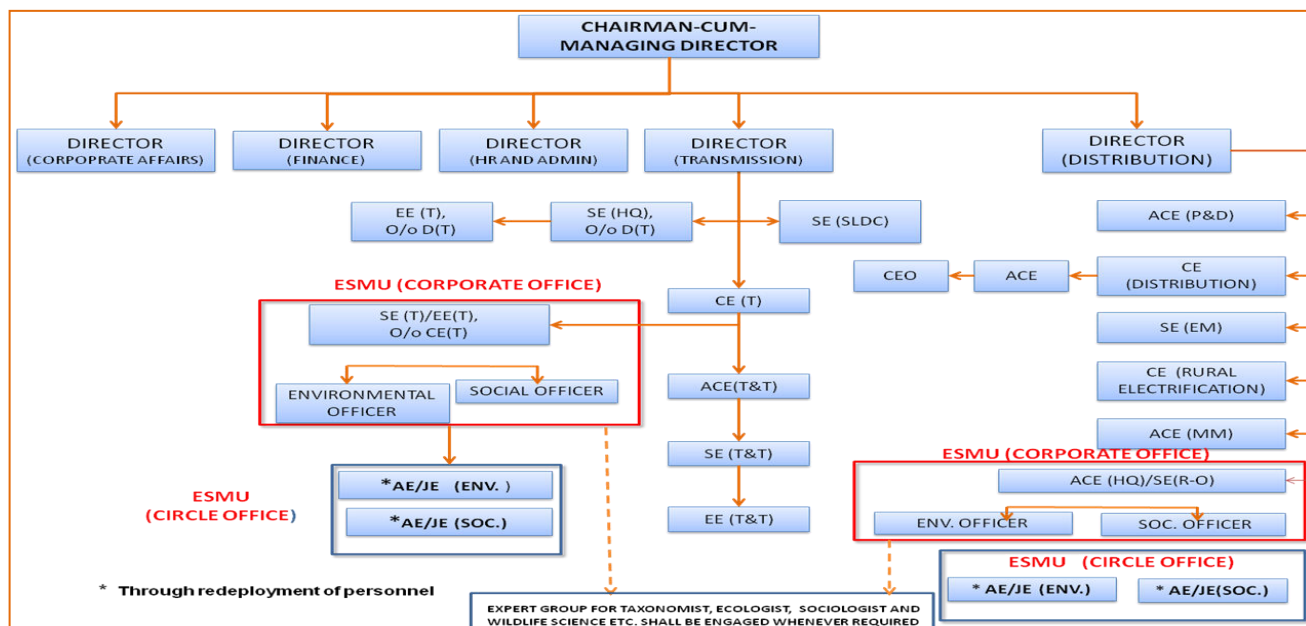
115. Monitoring is a continuous process at all stages of project. Monitoring of CPTD implementation will be the responsibility of POWERGRID as well as the State Utility.

116. Internal monitoring will include: (i) administrative monitoring: daily planning, implementation, feedback and troubleshooting, maintenance, and progress reports and (ii) socio-economic monitoring: compensation for land/crops/trees or any other damages, demolition if any, salvaging materials, dates for consultations and number of grievance/complaints received etc.. Monitoring and reports documenting progress on compensation/ implementation of CPTD will be provided by POWERGRID to World Bank for review semi-annually.

117. If required, POWERGRID/State Utility will engage the services of an independent agency/External monitoring and provisions for the same have been made in the budget component.

118. MePTCL/MePDCL is well equipped to implement and monitor its environment and social management plan including CPTD. Organizational Support Structure of MePTCL/MePDCL for monitoring of above is given in **Figure-11.1**.

Figure – 11.1: MePTCL/MePDCL Support Structure for Safeguard Monitoring



11.1 Status of Compensation (Tree/ Crop / Land / Structures)

119. As explained in previous chapters, compensation for the loss of crops, trees, land, structure etc. are paid to Affected Persons (APs) based on actual damages in 3 different stages i.e. during foundation work, tower erection & stringing as per norms. Till Oct, 2020, work in 246 locations out of total of 389 tower locations have been completed for which land compensation of Rs 58.28 million to 151 affected persons have been paid. Similarly, compensation to the tune of Rs. 2.64 million has been paid to 30 APs in respect of tree/crop damage till date. Details of compensation status is placed below;

Sl. No.	Name of the Line	Land compensation						Tree/Crop Compensation				Remarks
		Foundation Completed	Total Affected Persons	Compensation already paid to Affected Persons	Compensation for APs under progress	Total Compensation paid for Tower Base	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)	(Rs. Lakh)	(No.)	(No.)	(No.)	(Rs. Million)	
1	220kVD/c Byrnihat- Mawngap- N.Shillong	246	240	151	89	58.28	Not Applicable as State Govt. has not adopted MoP Guidelines	30	30	0	2.64	Most of the land belongs to community land controlled by village council and compensation is paid directly to Village council/ Headman account. Hence data are given in terms of no. of locations instead of nos. of affected persons/ owners
Total		246	240	151	89	58.28	NA	30	30	0	2.64	

11.2 Status of Grievances

120. Till date only two verbal complaints have been registered against the subprojects covered under present CPTD. The details are provided below.

S N	Name of the Subproject /State	Loc. No/ Village	Name of complainant	Date of complaints/ Court case	Main Issue of complaints	Status of complaint
11	220 kV D/C Killing-Mawphlang-New Shillong Transmission line	Mawphlang	AP 1-3	10.08.19	Realignment of line route	Resolved. Meeting held under Joint Secretary Power on 4.10.19. Minor realignment along with making 3 nos. tower multi-circuit has been proposed.
12		Nongthymai	Land Owners	18.02.20	Land Owner disagreed to give NOC for construction works due to low Land/Tree & Crops Compensation rates	DC, Ri-Bhoi has been intimated & matter has already taken up with the concerned forest & horticulture dept. for furnishing the latest rates of Trees & Crops.

ANNEXURE - 1

EVALUATION OF ALTERNATIVES ROUTE ALIGNMENT

EVALUATION OF ALTERNATIVES ROUTE ALIGNMENT

A. ANALYSIS OF ALTERNATIVES FOR TRANSMISSION LINES

1. Killing (Byrnihat) - Mawngap - New Shillong 220 kV D/C line

Three different alignments were studied with the help of Google Maps / published data such as Forest Atlas, Survey of India topographic sheets, etc. and walkover survey to arrive at the most optimum route to be considered for detailed survey. The comparative details of these three alternatives in respect of the proposed line are as follows;

S.N	Description	Alternative-I	Alternative-II	Alternative-III
1.	Route particulars			
i.	Route Length (km)	126.59	127.34	130.47
ii.	Terrain			
	Hilly	100%	100%	100%
	Plain	Nil	Nil	Nil
2.	Environmental details			
i.	Name of District through which the line passes	Ri-Bhoi and East Khasi Hills	Ri-Bhoi and East Khasi Hills	Ri-Bhoi and East Khasi Hills
ii.	Town in alignment	No towns are encountered along the corridor. However, nearby towns along the route are Byrnihat, Mawngap & Shillong	Nearby towns are Byrnihat, Mawngap & Shillong,	Nearby towns are Byrnihat, Mawngap & Shillong,
iii.	House within ROW	Shall be ascertained after detailed survey	Shall be ascertained after detailed survey	Shall be ascertained after detailed survey
iv.	Forest involvement in Ha/Km	Nil	26.00ha./ 7.43 Km	45.15 ha./12.9 km
v.	Type of Forest (RF/PF/Wildlife Area/Elephant corridor/Biodiversity Hotspots/Biosphere Reserve/Wetlands or any other environmentally sensitive area.	Nil	Reserved Forest (Passes through Nongkhylllem Wildlife Sanctuary)	Reserved Forest (Passes through Nongkhylllem Wildlife Sanctuary)
vi.	Density of Forests	N.A.	Dense	Dense

S.N	Description	Alternative-I	Alternative-II	Alternative-III
vii.	Type of flora	Arcea Nut (<i>Areca catechu</i>), Teak (<i>Tectona grandis</i>), Sal (<i>Shorea robusta</i>), Bamboo (<i>Bambusa vulgaris</i>), Banana (<i>Musa acuminata</i>), Pineapple (<i>Ananas comosus</i>), Rubber plant (<i>Ficus elastica</i>) etc	Teak(<i>Tectona grandis</i>), Almond (<i>Terminalia myricarpa</i>), Sal (<i>Shorea robusta</i>), Beechwood (<i>Gmelina arborea</i>), Pine (<i>Pinus khasiana</i>), Red Cedar (<i>Toona ciliate</i>) Champak (<i>Michelia champaca</i>), Pink Cedar (<i>Acrocarpus froxinifolius</i>), Elephant Apple (<i>Dillenia indica</i>), and Bamboo, cane, orchid, broomgrass etc	Teak(<i>Tectona grandis</i>), Almond (<i>Terminalia myricarpa</i>), Sal (<i>Shorea robusta</i>), Beechwood (<i>Gmelina arborea</i>), Pine (<i>Pinus khasiana</i>), Red Cedar (<i>Toona ciliate</i>) Champak (<i>Michelia champaca</i>), Pink Cedar (<i>Acrocarpus froxinifolius</i>), Elephant Apple (<i>Dillenia indica</i>), and Bamboo, cane, orchid, broomgrass etc
viii.	Type of fauna	Monitor Lizard (<i>Veranus benghalensis</i>), Sparrow (<i>Passer domesticus</i>), Boar (<i>Sus scrofa cristatus</i>), Jungle Cat (Felis chaus), Assamese Macaque (<i>Macaca assamensis</i>), etc	Tiger (<i>Panthera tigris</i>), Clouded leopard (<i>Pardofelis nebulosa</i>), Asian Elephants (<i>Elephas maximus</i>), Wild dog (<i>Cuon alpinus</i>), Himalayan Black Bear (<i>Ursus thibetanus</i>) Sloth bear (<i>Melursus ursinus</i>), Assamese macaque (<i>Macaca assamensis</i>), Manipur bush-quail (<i>Perdicula manipurensis</i>), Hoolock Gibbon (<i>Hylobates Hoolock</i>), Slow Loris (<i>Nycticebus coucang</i>)	Tiger (<i>Panthera tigris</i>), Clouded leopard (<i>Pardofelis nebulosa</i>), Asian Elephants (<i>Elephas maximus</i>), Wild dog (<i>Cuon alpinus</i>), Himalayan Black Bear (<i>Ursus thibetanus</i>) Sloth bear (<i>Melursus ursinus</i>), Assamese macaque (<i>Macaca assamensis</i>), Manipur bush-quail (<i>Perdicula manipurensis</i>), Hoolock Gibbon (<i>Hylobates Hoolock</i>), Slow Loris (<i>Nycticebus coucang</i>)
ix.	Endangered species, if any	Nil	Various species of orchids and endangered species present in reserved forest/wildlife sanctuary	Various species of orchids and endangered species present in reserved forest//wildlife sanctuary
x.	Historical/cultural monuments	Nil	Nil	Nil

S.N	Description	Alternative-I	Alternative-II	Alternative-III
xi.	Any other relevant information	Line is passing mostly through Jhum cultivated areas and medium dense private forest areas controlled by Village Council. Alignment is more or less parallel to the existing road (NH-40)	A portion of the line is passing through Hilly Reserved Forest/ Nongkhylllem Wildlife Sanctuary area (4.5 Km approx.)	A portion of the line is passing through Hilly Reserved Forest / Nongkhylllem Wildlife Sanctuary area (6.0 Km approx)
3	Compensation Cost (in Lakhs)			
i.	Crop (Non Forest)	Estimated as Rs.632.95 lakhs @ Rs.5 Lakhs per Km	Estimated as Rs.599.55 lakhs @ Rs.5 Lakhs per Km	Estimated as Rs.587.85 lakhs @ Rs.5 Lakhs per Km
ii.	Forest (CA+NPV)	N.A.	Estimated as Rs.520.00 lakhs @ Rs.20 Lakhs per ha.	Estimated as Rs.903.00 lakhs @ Rs.20 Lakhs per ha
4.	No. of Crossings (Nos.)			
i.	Highway (National/State)	3 (NH)	2	4
ii.	Power line	4	2	1
iii.	Railway line	Nil	Nil	Nil
iv.	River crossing	3	3	3
5.	Overall Remarks			
		Preferred route as it avoids protected area, easier access due to proximity to existing road and also involve less tree felling	Relatively more difficult due to involvement of Nongkhylllem wildlife sanctuary areas, poor approach roads as it and also involve more tree felling	Most difficult due to longer line length involving Nongkhylllem wildlife sanctuary areas, poor approach roads as it and also involve more tree felling

From the comparative analysis of three alternatives route alignments studied, it is observed that the alternative-I is shorter in length avoiding protected area such as Nongkhylllem wildlife sanctuary/ reserve forest area and mostly pass over the agriculture area/pvt.forest and revenue lands. However, alternative II & III are passing through the Nongkhylllem wildlife sanctuary which may adversely impact wild life in the sanctuary and also involve huge compensation cost and cumbersome environment clearances involved. Although, Alternative-1 passes near to Nongkhylllem Wild life sanctuary at a distance of 1.3-1.6 km from boundary, this section of line is routed parallel to existing road i.e. NH-40 and opposite to wildlife sanctuary which has already undergone disturbance and therefore negligible additional environmental impact is anticipated. Hence, Alternative - I is considered as the most optimized route and recommended for detailed survey.

2. ANALYSIS OF ALTERNATIVES FOR DISTRIBUTION LINES

Following distribution lines are proposed under subject schemes;

S. No	Name of the distribution line with length
1	2 x 33 kV line from 33 /11kV Mawpat (New) - 220/132/33 kV New Shillong (New) substation and extending up to existing SE Falls 33/11 kV substation - 13.05 km
2	33 kV line from 33/11 kV New Shillong (New) substation - 220/132/33 kV New Shillong substation - 3.862 km
3	2 x 33 kV line from 33/11 kV Mawryngkneng substation (New) - 220/132/33 kV New Shillong substation (New) - 17.23 km
4	33 kV line from 33/11 kV Mawkynew substation(New)- 33/11 kV Jongksha substation (Existing) - 6.4 km

Since the subproject distribution lines at Sl. No. 2, & 4 connect two substations in close vicinity with their line length not exceeding 10 km and are intended for providing power supply to the predestined areas, thus, having negligible environmental and social impacts. Hence alternative analysis studies are not required. However for distribution lines at S. No. 1 & 3 having line length of more than 10 kms, detail alternative route alignment study is as follows:

1. 2 x 33 kV line from 33 /11kV Mawpat (New) - 220/132/33 kV New Shillong (New) substation and extending up to existing SE Falls 33/11 kV substation

Three different alignments were studied with the help of Google Maps / published data such as Forest Atlas, Survey of India topographic sheets, etc. and walkover survey to arrive at the most optimum route to be considered for detailed survey. The comparative details of these three alternatives in respect of the proposed line are as follows;

S.N	Description	Alternative-I	Alternative-II	Alternative-III
1.	Route particulars			
i.	Route Length (km)	13.05	17.74	15.35
ii.	Terrain			
	Hilly	90%	90%	90%
	Plain	10%	10%	10%
2.	Environmental details			
i.	Name of District through which the line passes	East Khasi Hills	East Khasi Hills	East Khasi Hills
ii.	Town in alignment	No major towns. However it touches some villages & semi urban areas. Nongkohlew, Mawripih, Lamlyer.	The route touches Nongkohlew, Mawripih, Lamlyer	The route touches Nongkohlew, Mawripih, Lamlyer
iii.	House within ROW	Shall be ascertained after detailed survey	Shall be ascertained after detailed survey	Shall be ascertained after detailed survey
iv.	Forest involvement in Ha/km	Nil	Nil	Nil

S.N	Description	Alternative-I	Alternative-II	Alternative-III
v.	Type of Forest (RF/PF/ Wildlife Area/Elephant corridor/Biodiversity Hotspots/Biosphere Reserve/Wetlands or any other environmentally sensitive area.	N.A.	N.A.	N.A.
vi.	Density of Forests	N.A.	N.A.	N.A.
vii.	Type of flora	Arcea Nut (<i>Areca catechu</i>), Teak (<i>Tectona grandis</i>), Sal (<i>Shorea robusta</i>), Bamboo (<i>Bambusa vulgaris</i>), Banana (<i>Musa acuminata</i>), Pineapple (<i>Ananas comosus</i>) etc	Arcea Nut (<i>Areca catechu</i>), Teak (<i>Tectona grandis</i>), Sal (<i>Shorea robusta</i>), Bamboo (<i>Bambusa vulgaris</i>), Banana (<i>Musa acuminata</i>), Pineapple (<i>Ananas comosus</i>) etc	Arcea Nut (<i>Areca catechu</i>), Teak (<i>Tectona grandis</i>), Sal (<i>Shorea robusta</i>), Bamboo (<i>Bambusa vulgaris</i>), Banana (<i>Musa acuminata</i>), Pineapple (<i>Ananas comosus</i>) etc
viii.	Type of fauna	Monitor Lizard (<i>Veranus benghalensis</i>), Sparrow (<i>Passer domesticus</i>), Boar (<i>Sus scrofa cristatus</i>), Assamese Macaque (<i>Macaca assamensis</i>), Grey Peacock Pheasant (<i>Polyplectron bicalcaratum</i>) etc	Monitor Lizard (<i>Veranus benghalensis</i>), Sparrow (<i>Passer domesticus</i>), Boar (<i>Sus scrofa cristatus</i>), Assamese Macaque (<i>Macaca assamensis</i>), Grey Peacock Pheasant (<i>Polyplectron bicalcaratum</i>) etc	Monitor Lizard (<i>Veranus benghalensis</i>), Sparrow (<i>Passer domesticus</i>), Boar (<i>Sus scrofa cristatus</i>), Assamese Macaque (<i>Macaca assamensis</i>), Grey Peacock Pheasant (<i>Polyplectron bicalcaratum</i>) etc
ix.	Endangered species, if any	Nil	Nil	Nil
x.	Historical/cultural monuments	Nil	Nil	Nil
xi.	Any other relevant information	Line is mostly passing through agricultural land	A portion of the line is passing through plantation area having medium tree cover	A portion of the line is passing through plantation area having medium tree cover
3	Compensation Cost (in Lakhs)			
iii.	Crop (Non Forest)	Estimated Rs. 6.53 lakhs @ 0.5 Lakhs per Km	Estimated Rs. 8.87 lakhs @ 0.5 Lakhs per Km	Estimated Rs. 7.68 lakhs @ 0.5 Lakhs per Km
iv.	Forest (CA+NPV)	N.A.	N.A.	N.A.
4.	No. of Crossings (Nos.)			
v.	Highway (National/State)	3	1	Nil
vi.	Power line	Nil	Nil	Nil
vii.	Railway line	Nil	Nil	Nil
viii.	River crossing	Nil	Nil	Nil

S.N	Description	Alternative-I	Alternative-II	Alternative-III
5.	Overall Remarks	Shortest line length and easy approachability as the route is parallel to existing road. It also involve less tree felling as the line is passing through agricultural land	Line is mostly passing through areas having some plantation and thus involve tree felling and approachability is difficult due to non-availability of existing road/path	Longest in line length and difficult accessibility due to non-availability of existing road/path and also involve more tree felling as the route passing through plantation area

From the comparative analysis of three alternatives route alignment, it is observed that Alternative-I is shorter in length than other two alternatives and is mostly passing through barren/abandoned coal mine area, whereas, other two alternatives are mostly passing through village council owned land having tree cover. Accordingly, it is expected that not only the environmental impacts associated with Alternative-I will be minimum, but also no. of tree felling and RoW issues will be lesser. Hence Alternative-I is recommended for detail survey.

2. 2 x 33 kV line from 33/11 kV Mawryngkneng substation (New) - 220/132/33 kV New Shillong substation (New)

Three different alignments were studied with the help of Google Maps / published data such as Forest Atlas, Survey of India topographic sheets, etc. and walkover survey to arrive at the most optimum route to be considered for detailed survey. The comparative details of these three alternatives in respect of the proposed line are as follows;

S.N	Description	Alternative-I	Alternative-II	Alternative-III
1.	Route particulars			
iii.	Route Length (km)	17.23	18.46	19.7
iv.	Terrain			
	Hilly	90%	90%	90%
	Plain	10%	10%	10%
2.	Environmental details			
xii.	Name of District through which the line passes	East Khasi Hills	East Khasi Hills	East Khasi Hills
xiii.	Town in alignment	No major towns. However it touches some villages & semi urban areas. Umsawli, Thangshlai Umroh, Mawpdang, Mawryngkneng, Tynring,	The route touches Umsawli, Madan Saisiej, Lumkseh, Ryngksaw and Mawryngkneng	The route touches Umsawli, Madan Saisiej, Lumkseh, Sohalaper and Mawryngkneng
xiv.	House within ROW	Shall be ascertained after detailed survey	Shall be ascertained after detailed survey	Shall be ascertained after detailed survey
xv.	Forest involvement in Ha/km	Nil	Nil	Nil

S.N	Description	Alternative-I	Alternative-II	Alternative-III
xvi.	Type of Forest (RF/PF/ Wildlife Area/Elephant corridor/Biodiversity Hotspots/Biosphere Reserve/Wetlands or any other environmentally sensitive area.	N.A.	N.A.	N.A.
xvii.	Density of Forests	N.A.	N.A.	N.A.
xviii.	Type of flora	Arcea Nut (<i>Areca catechu</i>), Teak (<i>Tectona grandis</i>), Sal (<i>Shorea robusta</i>), Bamboo (<i>Bambusa vulgaris</i>), Banana (<i>Musa acuminata</i>), Pineapple (<i>Ananas comosus</i>) etc	Arcea Nut (<i>Areca catechu</i>), Teak (<i>Tectona grandis</i>), Sal (<i>Shorea robusta</i>), Bamboo (<i>Bambusa vulgaris</i>), Banana (<i>Musa acuminata</i>), Pineapple (<i>Ananas comosus</i>) etc	Arcea Nut (<i>Areca catechu</i>), Teak (<i>Tectona grandis</i>), Sal (<i>Shorea robusta</i>), Bamboo (<i>Bambusa vulgaris</i>), Banana (<i>Musa acuminata</i>), Pineapple (<i>Ananas comosus</i>) etc
xix.	Type of fauna	Monitor Lizard (<i>Veranus benghalensis</i>), Sparrow (<i>Passer domesticus</i>), Boar (<i>Sus scrofa cristatus</i>), Assamese Macaque (<i>Macaca assamensis</i>), Grey Peacock Pheasant (<i>Polyplectron bicalcaratum</i>) etc	Monitor Lizard (<i>Veranus benghalensis</i>), Sparrow (<i>Passer domesticus</i>), Boar (<i>Sus scrofa cristatus</i>), Assamese Macaque (<i>Macaca assamensis</i>), Grey Peacock Pheasant (<i>Polyplectron bicalcaratum</i>) etc	Monitor Lizard (<i>Veranus benghalensis</i>), Sparrow (<i>Passer domesticus</i>), Boar (<i>Sus scrofa cristatus</i>), Assamese Macaque (<i>Macaca assamensis</i>), Grey Peacock Pheasant (<i>Polyplectron bicalcaratum</i>) etc
xx.	Endangered species, if any	Nil	Nil	Nil
xxi.	Historical/cultural monuments	Nil	Nil	Nil
xxii.	Any other relevant information	Line is mostly passing through agricultural land	A portion of the line is passing through plantation area having medium tree cover	A portion of the line is passing through plantation area having medium tree cover
3	Compensation Cost (in Lakhs)			
v.	Crop (Non Forest)	Estimated Rs. 8.62 lakhs @ 0.5 Lakhs per Km	Estimated Rs. 9.23 lakhs @ 0.5 Lakhs per Km	Estimated Rs. 9.85 lakhs @ 0.5 Lakhs per Km
vi.	Forest (CA+NPV)	N.A.	N.A.	N.A.
4.	No. of Crossings (Nos.)			
3.	Highway (National/State)	3	1	Nil
4.	Power line	Nil	Nil	Nil
5.	Railway line	Nil	Nil	Nil
6.	River crossing	Nil	Nil	Nil

S.N	Description	Alternative-I	Alternative-II	Alternative-III
5.	Overall Remarks	Shortest line length and easy approachability as the route is parallel to existing road. It also involve less tree felling as the line is passing through agricultural land	Line is mostly passing through areas having some plantation and thus involve tree felling and approachability is difficult due to non-availability of existing road/path	Longest in line length and difficult accessibility due to non-availability of existing road/path and also involve more tree felling as the route passing through plantation area

From the above comparative analysis of three alternative route alignments, it is observed that Alternative-I is shorter in length than Alternative-II and Alternative-III, mostly passing over agriculture/ revenue land and is well approachable from the existing roads. Since, the route is passing over agriculture / revenue land, it is likely to have minimum tree felling and fewer RoW problems. Alternative - I is considered as the most optimized route and recommended for detailed survey.

ANNEXURE - 2

***DETAILS OF TOWER/POLE SCHEDULE
OF PROPOSED LINES***

UNIQUE STRUCTURES & TOWERS LTD
 TW-01 (Pro-053A) - Construction of 220kV D/c Killing (Byrnihat)-Mawngap-New Shillong T/L
 Order No. - CC-CS/91-NER/TWT-2468/G4/CA-1/5842(Services), Dated 30.08.2016
 Tower Schedule from Gantry of Killing Sub-Station to AP 3/0 (Route Length-0.472 Kms) of 220kV D/c Killing-Mawngap-New Shillong Line.
 Client:- Power Grid Corporation of India Limited

Date:- 07-Aug-18

K/122-127
1942

Sl. No.	Location No.	Tower No	Angle of Deviation	GPS Coordinates		Tower Type	Reduced Level at center	Span (M)	Section Length (M)	Cumulative Route Length	Sum of Adjacent Span (M)	Wind Span (M)	Weight Span HOT(M)			Weight Span COLD (M)			Remarks/ Crossing.
				Easting	Northing								LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
1	GANTRY	GANTRY	00°00'00"	2884987	384356	Gantry	200.799	78.48	0	0	78.480	39.240	0	-25	-25	0	-53	-53	
2	AP01/0 DE	AP01/0 DE	53°59'2" LT	2887932	384296	DD + 0	199.165	94.93	78	78	173.410	86.705	104	35	138	131	29	160	Nalla, Bituminous road & 1 Line.
3	AP 01A/0	AP 01A/0	17°50'57" LT	2884841	384299	DC + 0	199.969	99.25	95	173	194.180	97.090	60	36	97	66	31	96	Bituminous road & 11kV Lin (Power line needs to be shifted). Tower proposed with Auxilliary Cross arms.
4	AP 02/0	AP 02/0	44°03'31" RT	2884743	384322	DD + 0	200.840	199.6	99	273	298.850	149.425	63	82	145	68	75	143	11kV Line & LT line needs to be shifted.
5	AP 03/0	AP 03/0	25°58'47" LT	2884571	384230	DC + 0	203.190		200	472	618.600	305.300	118	78	196	125	24	149	Carl Track, 11kV line, 132kV MCT T/L & scattered trees.
Total Route Length in M.:-							0.472	0.472											

Supervised by  R. O. SHILLONG UNIQUE STRUCTURES & TOWERS LTD USTL	Checked by  R. O. SHILLONG UNIQUE STRUCTURES & TOWERS LTD USTL	Submitted by  P.K. Talukdar USTL	Checked by  J.C. Sarma Field Engineer (C) Powergrid NERPSIP, Nongpoh	Recommended by  J.C. Sarma Chief Manager Powergrid PCCIL एन ई आर पी एन ग्रिड कॉर्पोरेशन लि. नगपो/Nongpoh	Approved by  J.C. Sarma Chief Manager Powergrid PCCIL एन ई आर पी एन ग्रिड कॉर्पोरेशन लि. नगपो/Nongpoh
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UNIQUE STRUCTURES & TOWERS LTD.

TW-01 (Pro-053A):- Construction of 220kV D/c Killing (Byrnihat)-Mawngap-New Shillong T/L.

Order No.:- CC-CS/91-NER/TWT-2468/G4/CA-1/5842(Services), Dated 30.08.2016.

Check Survey Report from AP03/0 to AP22/0 (Route Length-7.041Kms) of Killing (Byrnihat) - Mawngap Section.

Client - Power Grid Corporation of India Limited.

Date:- 06.12.2017

AS PER THE DETAILED SURVEY								AS PER THE CHECK SURVEY								Crossing details & Remarks; if any		
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)
		Easting	Northing								Easting	Northing						
1	3/0	384230	2884568	25°35'49"LT	DC+3	203.194			1	3/0	384230	2884571	25°58'47"LT	DC+0	203.194			3M body extension reduced to provide am clearance to the bottom conductor of 132kV MCT line.
							411									411		POND & 11 KV LINE.
2	4/0	384230	2884157	08°18'07"LT	DB+0	237.996		411	2	4/0	384228	2884160	08°18'07"LT	DB+0	237.996			
							256									256		
3	5/0	384267	2883904	02°21'26"LT	DD+0	322.279		256	3	5/0	384262	2883905	02°21'26"LT	DD+0	322.279			
							195									195		
4	6/0	384301	2883712	10°21'49"LT	DD+0	335.487		195	4	6/0	384299	2883714	10°21'49"LT	DD+0	335.487			
							632									632		CART TRACK, VALLEY & NALLA.
5	7/0	384522	2883120	22°01'06"RT	DD+0	234.433		632	5	7/0	384517	2883121	22°18'07"RT	DD+6	234.979			
							423									423		Extension provided for ELEPHANT ZONE
6	8/0	384511	2882697	02°49'05"LT	DB+0	298.979		423	6	8/0	384501	2882699	02°58'14"RT	DB+6	299.310			
							179									180		Extension provided for ELEPHANT ZONE
11	9/0	384515	2882518	27°05'31"LT	DC+0	321.928		179	7	9/0	384504	2882519	34°25'05"LT	DD+6	320.538			
							205									219		Extension provided for ELEPHANT ZONE



PD
Rajendra



P.K. Talukdar
Field Engineer (C), Powergrid
NERPSIP, Nongpoh

09/12/17
ज. सो. शर्मो J.C. Sa
अभियंता /Sr Engineer
पावरग्रिड/POWERGRID
नगपो/Nongpoh

AS PER THE DETAILED SURVEY								AS PER THE CHECK SURVEY								Crossing details & Remarks, if any		
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)
		Easting	Northing								Easting	Northing						
8	9A/0	384612	2882338	35°00'04"RT	DD+0	319.273		205	8	9A/0	384599	2882336	37°54'55"RT	DD+6	319.684			Extension provided for ELEPHANT ZONE
								368										POND
9	10/0	384570	2881972	49°27'47"RT	DD+0	351.674		368	9	10/0	384562	2881970	50°49'14"RT	DD+6	351.886			Extension provided for ELEPHANT ZONE
								272										
10	11/0	384344	2881821	32°49'19"LT	DD+0	368.650		272	10	11/0	384348	2881829	33°05'52"LT	DD+6	369.057			Extension provided for ELEPHANT ZONE
								456										
11	12/0	384163	2881401	44°22'18"LT	DD+0	418.913		456	11	12/0	384136	2881399	20°48'12"LT	DD+3	417.802			Extension provided for ELEPHANT ZONE
								298										
12	13/0	384271	2881124	38°25'29"RT	DD+3	308.509		298	12	13/0	384114	2881100	02°59'50"RT	DB+6	358.120			Extension provided for ELEPHANT ZONE
								504										
13	14/0	384120	2880642	50°21'44"RT	DD+0	324.601		504	13	14/0	384078	2880636	58°18'01"RT	DD+0	318.840			
								324										CART TRACK
14	15/0	383821	2880519	04°21'34"LT	DB+0	346.231		324	14	15/0	383814	2880523	02°09'08"LT	DB+0	347.270			
								192										
15	16/0	383649	2880433	02°17'17"LT	DB+0	374.352		192	15	16/0	383641	2880439	02°43'14"RT	DB+0	374.352			
								403										
16	17/0	383288	2880245	30°22'02"LT	DD+0	375.649		403	16	17/0	383288	2880245	30°36'50"LT	DD+0	375.649			
								209										
17	18/0	383183	2880069	26°09'56"RT	DC+0	388.000		209	17	18/0	383183	2880069	26°09'56"RT	DC+0	366.894			
								490										CART TRACK






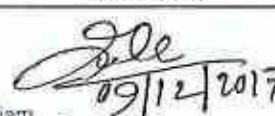


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P.K. Talukdar
Field Engineer (C), Powergrid
NERPSIP, Nongpoh

एम. प्रबन्धु के. वेडरियाच/S.W.K. Khyriem
ब. अभियंता /Sr Engineer
पावरग्रिड/POWERGRID
एन ई आर पी एम अरॉ ई/NERPSIP
नगपों/Nongpoh

[Handwritten Signature]
09/12/17
जे. सी. शर्मा/J.S. Sharma
मूल्य मंच/Value Bench
एन ई आर पी एम अरॉ ई/NERPSIP
नगपों/Nongpoh

AS PER THE DETAILED SURVEY									AS PER THE CHECK SURVEY							Crossing details & Remarks, if any				
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)		
		Easting	Northing								Easting	Northing								
18	19/0	382774	2879797	24°16'24"LT	DC+0	289.000		490	18	19/0	382774	2879797	24°16'24"LT	DC+0	289.000					
							324									324				
19	20/0	382598	2879533	26°54'21"LT	DD+0	263.000		324	19	20/0	382598	2879533	26°54'21"LT	DD+0	263.000					
							528									528		POND		
20	21/0	382141	2879262	02°37'31"LT	DD+25	206.000		528	20	21/0	382141	2879262	02°37'31"LT	DD+25	206.000					
							407									407		132 KV D/C LINE 03 NOS. CART TRA		
21	22/0	381788	2879058	08°04'34"LT	DB+0	287.000		407	21	22/0	381788	2879058	08°04'34"LT	DB+0	287.000					
Route Length as per the detailed Survey:-							7076	M.	Route Length as per the Check Survey:-							7041	M.			
Surveyed by			Checked by			Submitted by			Checked by			Recommended by			Approved by					
																				
			USTL						P.K. Talukdar Field Engineer (C), Powergrid NERPSIP, Nongpoh			S.W.K. Khatri Sr Engineer POWERGRID NERPSIP, Nongpoh			J.C. Sarma Chief Manager Powergrid NERPSIP, Nongpoh					

7041

UNIQUE STRUCTURES & TOWERS LTD.

TW-01 (Pre-052A) - Construction of 220kV D/S Killing (Bymihat)-Mawngap-New Shilong T/L

Order No. - DC-CS/01-NER/TWT-2489/34/CA-1/5842(Services), Dated 30.08.2016.

Check Survey Report from AP22/0 to AP29/0 (Route Length-2.379Kms) of Killing (Bymihat) - Mawngap Section.

Client - Power Grid Corporation of India Limited

Date - 20/Mar/18

AS PER THE DETAILED SURVEY								AS PER THE CHECK SURVEY								Crossing details & Remarks, if any			
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)	
		Easting	Northing								Easting	Northing							
1	AP 22/0	381787	2879056	08°04'34" LT	DB+0	266.529			1	AP 22/0	381787	2879056	08°04'34" LT	DB+0	266.529				
							243									243		11kV Line (Clearance - 9.00 M)	
2	AP 23/0	381563	2878971	14°43'53" LT	DB+0	316.040		243	2	AP 23/0	381563	2878971	14°43'53" LT	DB+0	316.040		243		
							383									383		Cart Track	
3	AP 24/0	381258	2878748	16°40'04" LT	DC+0	305.443		383	3	AP 24/0	381258	2878748	16°40'04" LT	DC+0	305.443		383		
							252									252			
4	AP 25/0	381103	2878575	19°18'44" RT	DC+0	276.669		252	4	AP 25/0	381103	2878575	19°18'44" RT	DC+0	276.669		252		
							456									456		Tea plantation	
5	AP 26/0	380718	2878292	50°25'23" LT	DD+3	266.816		456	5	AP 26/0	380718	2878292	50°25'23" LT	DD+3	266.816		456		
							223									223			
6	AP 27/0	380696	2878072	13°26'46" RT	DB+0	229.700		223	6	AP 27/0	380696	2878072	13°26'46" RT	DB+0	229.700		223		
							363									363		Cart Track & temporary hut at 18.77M from center line	
7	AP 28/0	380570	2877732	16°56'30" RT	DC+0	216.884		363	7	AP 28/0	380570	2877732	16°56'30" RT	DC+0	216.884		363		
							459									459		Cart Track & 11kV Line (Ht.-7.520M & clearance-7.598	
8	AP 29/0	380227	2877370	18°48'05" RT	DC+0	257.336		459	8	AP 29/0	380227	2877370	18°48'05" RT	DC+0	257.336		459		

Route Length as per the detailed Survey - 2379 M

Route Length as per the Check Survey - 2379 M

Surveyed by

Checked by

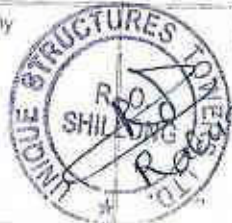
Submitted by

Checked by

Recommended by

Approved by

[Signature]



[Signature]
Rohindra



[Signature]
20/03/18
(Mohank)

[Signature]
31/03/18
S. Saha

Field Supervisor
NERPSIP

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P.K. Talukdar
Field Engineer (C), Powergrid
NERPSIP, Nongpoh

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31/03/2018

जे. सी. शर्मा J.C. Sarma
मुख्य प्रबंधक Chief Manager
NERPSIP, Nongpoh
एन ई ग्रिड कॉर्पोरेशन ऑफ इंडिया
नगपो Nongpoh

USTL

USTL

UNIQUE STRUCTURES & TOWERS LTD.

TW-01 (Pre-053A) - Construction of 220KV D/C Killing (Bymihat)-Mawngap-New Shillong T/L.

Order No. - DC-CS/91-NER/TWT-2458/G4/CA-1/5842(Services), Dated 30.08.2016

Check Survey Report from AP29/0 to AP41/0 (Route Length-3.760Kms) of Killing (Bymihat) - Mawngap Section.

Client:- Power Grid Corporation of India Limited.

Date:- 29/Apr/18

AS PER THE DETAILED SURVEY								AS PER THE CHECK SURVEY								Crossing details & Remarks,					
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)			
		Eastings	Northing								Eastings	Northing									
1	AP29/0	380280	2877379	18°48'05"RT	DC+0	257.335			1	AP29/0	380280	2877379	18°48'05"RT	DC+0	257.335			Valley & Scattered trees.			
							572.000									572.000					
2	AP30/0	379603	2877068	29°03'39"LT	DD+0	267.726		572.000	2	AP30/0	379603	2877068	29°03'39"LT	DD+0	267.726		572.000			Valley & Scattered trees.	
							201.000									201.000				Valley & Scattered trees.	
3	AP31/0	379707	2876891	10°12'04"RT	DB+0	259.487		201.000	3	AP31/0	379707	2876891	10°12'04"RT	DB+0	259.487		201.000				Valley & Scattered trees.
							400.000									400.000				Valley & Scattered trees.	
4	AP32/0	379456	2876578	28°11'48"RT	DC+0	227.148		400.000	4	AP32/0	379456	2876578	28°11'48"RT	DC+0	227.148		400.000				Valley & Scattered trees.
							279.200									279.200				Valley & Scattered trees.	
5	AP33/0	379203	2876470	42°57'38"LT	DD+0	237.084		279.200	5	AP33/0	379203	2876470	42°57'38"LT	DD+0	237.084		279.200				Scattered trees.
							282.320									282.320				Scattered trees.	
6	AP34/0	379112	2876227	33°40'30"RT	DD+3	218.132		282.320	6	AP34/0	379112	2876227	33°40'30"RT	DD+3	218.132		282.320				Valley & Scattered trees.
							494.390									494.390				Valley & Scattered trees.	
7	AP35/0	378672	2875841	11°53'01"RT	DB+0	219.493		494.390	7	AP35/0	378672	2875841	11°53'01"RT	DB+0	219.493		494.390				Scattered trees.
							160.000									160.000				Scattered trees.	
8	AP36/0	378520	2875890	15°29'14"LT	DC+0	234.915		160.000	8	AP36/0	378520	2875890	15°29'14"LT	DC+0	234.915		160.000				Scattered trees.



Moham

S. Saha
S. Saha
Field Supervisor (E) Powergrid
NERPSIP

एन. डब्ल्यू. के. खेरिया/S.W.K. Khuriem
Sr Engineer
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नगपो/Nongpoh

05/05/2018
जे. जी. सार्मा/J.C. Sarma
मुख्य प्रबंधक/Chief Manager
पावरग्रिड/Powergrid
नगपो/Nongpoh

AS PER THE DETAILED SURVEY

AS PER THE CHECK SURVEY

Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Crossing details & Remarks	
		Easting	Northing								Easting	Northing							
							292.000											Scattered trees.	
9	AP37/0	378285	2875718	15°58'58"LT	DC+0	263.409		292.000	9	AP37/0	378285	2875718	15°58'58"LT	DC+0	263.409		292.000		
							222.500											Valley & Scattered trees.	
10	AP38/0	378108	2875621	19°58'26"RT	DC+0	232.105		222.500	10	AP38/0	378108	2875621	19°58'26"RT	DC+0	232.105		222.500		
							339.190											Cart Track,RCC foot path, LT Line & Line.	
11	AP39/0	377836	2875393	31°50'08"LT	DD+0	257.705		339.190	11	AP39/0	377836	2875393	31°50'08"LT	DD+0	257.705		339.190		
							192.000											Scattered trees.	
12	AP40/0	377649	2875348	31°09'51"RT	DD+0	272.628		192.000	12	AP40/0	377649	2875348	31°09'51"RT	DD+0	272.628		192.000		
							355.570											Cart Track & Scattered trees	
13	AP41/0	377393	2875102	02°57'40"LT	DB+0	249.955		355.570	13	AP41/0	377393	2875102	02°57'40"LT	DB+0	249.955		355.570		
Route length as per detailed Survey:-							3790.170 M	Route length as per Check Survey:-							3790.170 M				

Surveyed by 	Checked by 	Submitted by 	Checked by 	Recommended by 	Approved by 
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नाम स्वयं के निदेशानुसार/S.W.K. Khyent
 ब.अभिज्ञान/Sc Engineer
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जे. मो. वर्मा/J.C. Sarma
 मुख्य प्रबंधक/Chief Manager
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6/69-17

UNIQUE STRUCTURES & TOWERS LTD.

TW-01 (Pro-053A) - Construction of 220kV D/c Killing (Byrnihat)-Mawngap-New Shilong T/L

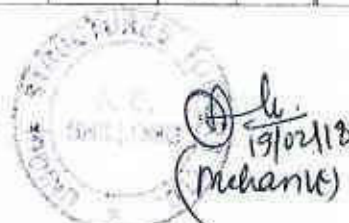
Order No. - CC-CS/91-NER/TWT-2468/G4/CA-1/5842(Services). Dated 30.08.2016.

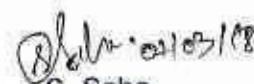
Check Survey Report from AP41/0 to AP67/0 (Route Length-8.755Kms) of Killing (Byrnihat) - Mawngap Section.

Client - Power Grid Corporation of India Limited.


Date:- 19-Feb-18

AS PER THE DETAILED SURVEY								AS PER THE CHECK SURVEY								Crossing details & Remarks, if any		
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)
		Easting	Northing								Easting	Northing						
1	AP 41/0	377393	2875102	To be decided later	To be decided later	250.021			1	AP 41/0	377393	2875102	02°04'09" LT		250.021			
							319									319		Cart Track & Rubber trees.
2	AP 42/0	377189	2874873	11°40'30" LT	DC+0	242.106		319	2	AP 42/0	377189	2874873	11°40'30" LT	DC+0	242.106		319	
							646									646		Rubber garden.
3	AP 43/0	376823	2874327	11°19'20" RT	DC+9	227.615		646	3	AP 43/0	376823	2874327	11°19'20" RT	DC+9	227.615		646	
							303									303		Rubber garden.
3	AP 44/0	376614	2874108	06°18'20" RT	DB+0	237.135		303	3	AP 44/0	376614	2874108	06°18'20" RT	DB+0	237.135		303	
							348									348		Rubber garden.
4	AP 45/0	376346	2873886	22°53'10" RT	DC+0	204.541		348	4	AP 45/0	376346	2873886	22°53'10" RT	DC+0	204.541		348	
							244									244		Rubber garden.
5	AP 46/0	376112	2873817	11°23'03" RT	DB+0	206.865		244	5	AP 46/0	376112	2873817	11°23'03" RT	DB+0	206.865		244	
							365									365		Rubber garden.
6	AP 47/0	375749	2873786	17°05'30" LT	DC+0	204.028		365	6	AP 47/0	375749	2873786	17°05'30" LT	DC+0	204.028		365	
							294									294		
7	AP 48/0	375478	2873673	21°51'11" LT	DC+0	215.788		294	7	AP 48/0	375478	2873673	21°51'11" LT	DC+0	215.788		294	
							466									466		Rubber garden.




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AS PER THE DETAILED SURVEY								AS PER THE CHECK SURVEY								Crossing details & Remarks, if any		
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)
		Eastings	Northing								Eastings	Northing						
8	AP 49/0	375142	2873347	07°31'02" LT	DB+0	195.215		466	8	AP 49/0	375142	2873347	07°31'02" LT	DB+0	195.215		466	
								364									364	Cart Track & river.
9	AP 50/0	374916	2873059	33°38'50" LT	DD+0	199.693		364	9	AP 50/0	374916	2873059	33°38'50" LT	DD+0	199.693		364	
								382									382	Beetel nut & Rubber tree
10	AP 51/0	374885	2872679	23°55'49" LT	DC+0	252.086		382	10	AP 51/0	374885	2872679	23°55'49" LT	DC+0	252.086		382	
								151									151	Beetel nut & Rubber tree
11	AP 52/0	374935	2872535	43°54'39" RT	DD+0	260.757		151	11	AP 52/0	374935	2872535	43°54'39" RT	DD+0	260.757		151	
								514									514	
12	AP 53	374721	2872073	18°18'29" LT	DC+0	263.129		514	12	AP 53	374721	2872073	18°18'29" LT	DC+0	263.129		514	Cart Track & 11kV Line
								340									340	
13	AP 54/0	374682	2871734	02°41'23" LT	DB+0	257.871		340	13	AP 54/0	374682	2871734	02°41'23" LT	DB+0	257.871		340	
								287									287	Nalla.
14	AP 55/0	374662	2871448	20°38'36" LT	DC+0	267.002		287	14	AP 55/0	374662	2871448	20°38'36" LT	DC+0	267.002		287	
								281									281	Nalla.
15	AP 56/0	374741	2871181	13°41'53" RT	DB+0	283.403		281	15	AP 56/0	374741	2871181	13°41'53" RT	DB+0	283.403		281	
								291									291	
16	AP 57/0	374746	2870892	12°57'04" LT	DB+0	278.232		291	16	AP 57/0	374746	2870892	12°57'04" LT	DB+0	278.232		291	
								359									359	Nalla, Tar Road, 11kV Line & 33kV Line.
17	AP 58/0	374860	2870538	36°09'32" RT	DD+0	309.632		359	17	AP 58/0	374860	2870538	36°09'32" RT	DD+0	309.632		359	
								168									168	



Date: 02/03/18
S. Saha

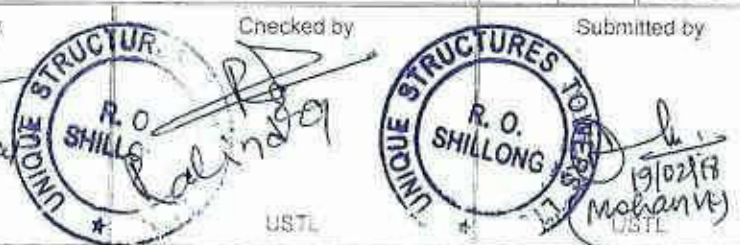
Field Supervisor (E), Powergrid
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एन डी ग्रिड के मेडियम S.W.K. Khyriem
व शोधना /Sr Engineer
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Date: 07/03/2018
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मुख्य प्रकल्प/Chief Engineer
पावरग्रिड/Powergrid
एन डी ग्रिड वी एन आई पी/NERPSIP
नगपो/Nongpoh

AS PER THE DETAILED SURVEY									AS PER THE CHECK SURVEY							Crossing details & Remarks, if any		
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)
		Easting	Northing								Easting	Northing						
18	AP 59/0	374804	2870381	18°35'05" RT	DC+0	344.409		168	18	AP 59/0	374804	2870381	18°35'05" RT	DC+0	344.409		168	
							321									321		
19	AP 60/0	374809	2870128	34°17'03" LT	DD+0	367.371		321	19	AP 60/0	374809	2870128	34°17'03" LT	DD+0	367.371		321	
							533									533		
20	AP 61/0	374597	2869594	34°19'04" RT	DD+0	354.132		533	20	AP 61/0	374597	2869594	34°19'04" RT	DD+0	354.132		533	Cart Track, Rubber & Tea Garden.
							392									392		
21	AP 62/0	374385	2869276	18°39'09" RT	DC+0	420.764		392	21	AP 62/0	374385	2869276	18°39'09" RT	DC+0	420.764		392	Rubber & Tea Garden.
							211									211		
22	AP 63/0	374194	2869151	06°46'36" RT	DB+0	429.733		211	22	AP 63/0	374194	2869151	06°46'36" RT	DB+0	429.733		211	Cart Track.
							182									182		
23	AP 64/0	374037	2869064	11°33'59" RT	DB+0	427.261		182	23	AP 64/0	374037	2869064	11°33'59" RT	DB+0	427.261		182	
							433									433		
24	AP 65/0	373625	2868929	25°37'15" LT	DC+0	399.225		433	24	AP 65/0	373625	2868929	25°37'15" LT	DC+0	399.225		433	Cart Track & Tea Garden.
							328									328		
25	AP 66/0	373391	2868708	13°40'50" LT	DB+0	442.822		328	25	AP 66/0	373391	2868708	13°40'50" LT	DB+0	442.822		328	Cart Track & Tea Garden.
							233									233		
26	AP 67/0	373264	2868502	To be decided later	To be decided later	456.974		233	26	AP 67/0	373264	2868502	To be decided later	To be decided later	456.974		233	
Route Length as per the detailed Survey -							8755 M.	Route Length as per the Check Survey -							8755 M.			

Surveyed by: *Nishal K. R.*
 Checked by: *Calinda*
 Submitted by: *Mohanty*



Checked by: *Saha*
 Recommended by: *Saha*
 Approved by: *FROM AP 55 to AP 67 approved.*
 Date: 07/03/2018

S. Saha
 Field Supervisor (E) Powergrid
 NERPSIP, Nongpoh

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 Sr. Engineer
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UNIQUE STRUCTURES & TOWERS LTD

TW-01 (Pro-053A):- Construction of 220kV D/c Killing (Byrnihat)-Mawngap-New Shillong T/L.

Order No.:- CC-CS/91-NER/TWT-2468/G4/CA-1/5942(Services), Dated

Check Survey Report from AP 67/0 TO AP 76/0 (Route Length- 2.873 Km) of Killing (Byrnihat) -Mawngap Section.

Client:- Power Grid Corporation of India Limited.

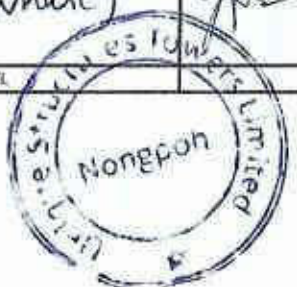
AS PAR THE DETAILED SURVEY

AS PAR THE CHECK SURVEY

SL. NO.	Location No.	Angle of Deviation	GPS Coordinates		Tower Type	Reduced Level at center peg	Span (M)
			Easting	Northing			
1	AP 67/0	48°52'34"RT	2668502	373264	DD+0	458.974	321.470
2	AP 68/0	31°12'17"LT	2668449	372947	DD+0	409.218	253.280
3	AP 69/0	14°34'56"RT	2668284	372755	DB+0	411.310	378.660
4	AP 70/0	04°15'21"LT	2668117	372414	DB+0	428.605	226.080
5	AP 71/0	19°09'17"LT	2668004	372221	DC+0	446.767	294.110
6	AP 72/0	54°44'55"RT	2667778	372028	DD+0	437.361	306.150
7	AP 73/0	34°51'08"LT	2667806	371723	DD+3	494.931	439.800
8	AP 74/0	21°28'24"LT	2667589	371341	DD+0	525.792	337.180
9	AP 75/0	17°37'18"LT	2667328	371130	DC+6	422.377	316.200
10	AP 76/0	11°25'57"RT	2667031	371014	DB+3	368.554	
Total Route Length in M.:-							2872.930

SL. NO.	Location No.	Angle of Deviation	GPS Coordinates		Tower Type	Reduced Level at center peg	Span (M)	Remarks/ Crossing.
			Easting	Northing				
1	AP 67/0	48°52'34"RT	2668502	373264	DD+0	458.974	321.470	Valley & scattered trees.
2	AP 68/0	31°12'17"LT	2668449	372947	DD+0	409.218	253.280	Valley & scattered trees.
3	AP 69/0	16°34'56"RT	2668284	372755	DC+0	411.310	378.660	Valley & scattered trees.
4	AP 70/0	04°15'21"LT	2668117	372414	DB+0	428.605	226.080	Cart Track & scattered trees.
5	AP 71/0	19°09'17"LT	2668004	372221	DC+0	446.767	294.110	Valley & scattered trees.
6	AP 72/0	54°44'55"RT	2667778	372028	DD+0	437.361	306.150	Valley & scattered trees.
7	AP 73/0	34°51'08"LT	2667806	371723	DD+3	494.931	439.800	Valley & scattered trees.
8	AP 74/0	21°28'24"LT	2667589	371341	DD+0	525.792	337.180	Valley & scattered trees.
9	AP 75/0	17°37'18"LT	2667328	371130	DC+6	422.377	316.200	Valley, Cart Track & 11 KV
10	AP 76/0	11°25'57"RT	2667031	371014	DB+3	368.554		
Total Route Length in M.:-2872.930 MTR								

Surveyed By	Checked By	Submitted By	Checked By	Recommended By	Approved By
<i>Nongpon</i>	<i>Ajit Shivhare</i>	<i>Kishan Shivare</i>	<i>Pratik</i>	<i>S.W.K. Khuriem</i>	<i>J.C. Sarma</i>
UST	USTL	USTL	PGCIL	PGCIL	NERPSIP



ए. रिनताथियंग/A. Rynthathiang
 इन्जिनियर/Engineer
 पावरग्रिड/Powergrid
 एन ई आर पी एम आई पी/NERPSIP
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एस. डबल्यू. के. खुरियाम/S.W.K. Khuriem
 ज्युनियर इंजीनियर/Junior Engineer
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जे. सी. जर्मा/J.C. Sarma
 डी. एम. प्रबंधक/DGM
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2872-93

UNIQUE STRUCTURES & TOWERS LTD.

TW-01 (Pr0-053A)- Construction of 220kV D/c Killing (Byrnihat)-Mawngap-New Shillong T/L.

Order No. - CC-CS/91-NER/TWT-2468/G4/CA-1/5842(Services), Dated 30.08.2016.

Check Survey Report from AP76/0 to AP94/0 (Route Length-8.107Kms) of Killing (Byrnihat) - Mawngap Section.

Client:- Power Grid Corporation of India Limited.

Date:- 03 February 2018

AS PER THE DETAILED SURVEY								AS PER THE CHECK SURVEY								Crossing details & Remarks, if any		
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)
		Easting	Northing								Easting	Northing						
1	AP76/0	2867031	371014	To be decided later	To be decided later	368.645			1	AP76/0	2867031	371014	To be decided later	To be decided later	368.645			
							368									368		Pond
2	AP77/0	2866728	370819	30°45'45"RT	DD+0	381.653		368	2	AP77/0	2866728	370819	30°53'45"RT	DD+0	381.853		368	
							328									328		Cart Track, LT Line (Clearance-10.400M)
3	AP78/0	2866574	370526	06°47'06"LT	DB+6	361.816		328	3	AP78/0	2866574	370526	06°47'06"LT	DB+6	361.816		328	
							346									346		Nalla-2Nos & Cart Track
4	AP79/0	2866380	370240	09°10'50"LT	DB+6	359.606		346	4	AP79/0	2866380	370240	09°10'50"LT	DB+6	359.606		346	
							410									410		Nalla.
5	AP80/0	2866092	369943	16°00'39"LT	DC+9	356.700		410	5	AP80/0	2866092	369943	16°00'39"LT	DC+9	356.704		410	
							433									415		33kV Line, LT Line & Tar Road. Span reduced to get ample clearance of 6.200M & 5.200M above 33kV & LT line respectively)
6	AP81/0	2865721	369722	03°19'37"RT	DB+9	355.738		433	6	AP81/0	2865735	369732	03°12'14"RT	DB+9	355.133		415	
							366									384		Tar Road, 11kV Line & Nalla. Clearance above 11kV Line is 4.950M.
7	AP82/0	2865417	369518	06°27'31"LT	DB+6	353.303		366	7	AP82/0	2865417	369518	06°27'31"LT	DB+9	353.303		384	
							426									426		
8	AP83/0	2865041	369320	15°09'21"LT	DC+9	351.611		426	8	AP83/0	2865041	369320	14°09'21"LT	DB+9	351.611		426	
																		Tower Type changed w.r.t AoD.



Drif
 PV Kishore
 Supervisor (E), Powergrid
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मम इत्यन्तु के मेरिग्याम/S.W.K. Khyniem मे. FEB 11/2018
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मुख्य प्रकल्प/Chief A
 पावरग्रिड/Power
 नगपों/Nongpoh

AS PER THE DETAILED SURVEY								AS PER THE CHECK SURVEY								Crossing details & Remarks, if any		
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)
		Easting	Northing								Easting	Northing						
							410											Nalla-2Nos, LT Line & 11kV Line
9	AP84/0	2864642	369225	32°28'20"RT	DD+3	350.631		410	9	AP84/0	2864642	369225	32°28'20"RT	DD+6	350.631		410	Extension increased at AP84/0 to get adequate clearance of 6.400M above 11kV & LT Line respectively.
							359											Nalla.
10	AP85/0	2864393	368967	13°57'19"LT	DC+3	349.960		359	10	AP85/0	2864393	368967	13°57'19"LT	DC+3	349.960		359	Though AoD is less than 16°, DC tower is proposed to fulfill sum of adjacent span criterion.
							392											Nalla, Pond.
11	AP86/0	2864062	368759	05°06'19"LT	DB+3	349.285		392	11	AP86/0	2864062	368759	05°45'05"LT	DB+3	349.285		392	
							340											Nalla-2Nos.
12	86/1	2863758	368603		DA+0	346.246		340	12	AP86A/0	2863748	368604	02°10'12"RT	DB+0	346.195		347	
							357											Nalla.
13	AP87/0	2863441	368441	06°51'19"RT	DB+3	345.391		357	13	AP87/0	2863436	368448	08°57'39"RT	DB+3	345.286		348	
							297											
14	AP88/0	2863195	368278	02°58'57"RT	DB+0	344.469		297	14	AP88/0	2863195	368278	02°31'57"RT	DB+0	344.469		299	
							340											Nalla-2Nos.
15	88/1	2862922	368074		DA+0	343.381		340	15	AP88A/0	2862920	368073	02°01'03"RT	DB+0	343.493		340	
							340											Nalla & 11kV Line. Clearance above 11kV line is 4.820M.
16	88/2	2862650	367870		DA+0	342.238		340	16	AP88B/0	2862649	367870	02°56'44"LT	DB+0	342.485		340	
							305											Nalla.
17	AP89/0	2862404	367687	02°55'27"LT	DB+9	341.341		305	17	AP89/0	2862404	367687	02°55'27"LT	DB+9	341.341		305	
							407											11kV Line & Nalla-2Nos. Clearance above 11kV Line - 4.650M)
18	AP90/0	2862074	367445	07°01'45"LT	DB+3	342.876		407	18	AP90/0	2862074	367445	07°01'45"LT	DB+3	342.876		407	



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मुख्य प्रबंधक/Chief M.
पावरग्रिड/Powergrid
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नगपोंह Nongpoh

AS PER THE DETAILED SURVEY								AS PER THE CHECK SURVEY						Crossing details & Remarks, if any					
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation		Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	
		Easting	Northing								Easting	Northing							
							315											Nalla-2Nos & LT Line.Extension provided to get ample clearance of 5.600M above LT Line).	
19	AP91/0	2861797	367296	22°23'04"RT	DC+0	340.328		315	19	AP91/0	2861797	367296	22°23'04"RT	DC+6	340.328		315		
							503											Nalla, 11kV Line, Hut & Cart Track Clearance above 11kV Line - 6.400M	
20	AP92/0	2861485	366904	10°57'17"LT	DC+0	371.010		503	20	AP92/0	2861485	366904	10°57'17"LT	DC+0	371.010		503		
							380											Nalla.	
21	AP92A/0	2861193	366657		DB+3	336.579		380	21	AP92A/0	2861192	366658		DB+3	336.579		380		Though the spotted tower is in line with AoD-0 th , DB tower has been proposed to fulfill sum of adjacent span criterion.
							401											Nalla.	
22	AP93/0	2860890	366401	17°37'34"LT	DC+0	340.829		401	22	AP93/0	2860890	366401	17°37'34"LT	DC+0	340.829		401		
							284												
23	AP94/0	2860634	366273	To be decided later	To be decided later	346.437		284	23	AP94/0	2860634	366273	To be decided later	To be decided later	346.437		284		
Route Length as per the detailed Survey:-							8107 M.	Route Length as per the Check Survey:-							8107 M.				

Surveyed by	Checked by	Submitted by	Checked by	Recommended by	Approved by
USTL	<i>R. O. Shillong</i> 4/2/18	<i>R. O. Shillong</i> 05/02/18 (Mohan)	<i>H.V. Kishore</i> Sr. Supervisor (GCI), Powergrid NERPSIP, Nongpoh	<i>Powergrid</i> एन ई आर पी एन आई सि/NERPSIP नगपो/Nongpoh	<i>J.C. Sarma</i> 13/02/2018 जे. सी. सार्मा J.C. Sarma मुख्य प्रबंधक/Chief Manager पावरग्रिड/Powergrid एन ई आर पी एन आई सि/NERPSIP नगपो/Nongpoh

2107

UNIQUE STRUCTURES & TOWERS LTD.

TW-01 (Pro-053A):- Construction of 220kV D/o Killing (Byrnihat)-Mawngap-New Shillong T/L

Order No. :- CC-CS/91-NER/TWT-2488/G4/CA-1/5842(Services), Dated 30.08.2018.

Check Survey Report from AP094/0 to AP120/0 (Route Length- 9.657Kms) of Killing (Byrnihat) - Mawngap Section.

Client:- Power Grid Corporation of India Limited.

Date:- 11/Jul/18

AS PER THE DETAILED SURVEY									AS PER THE CHECK SURVEY							Crossing details & Remarks, if any			
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)	
		Easting	Northing								Easting	Northing							
1	94/0	366273	2860634	02°43'14"RT	DB +0	346.437			1	94/0	366273	2860634	02°43'14"RT	DB +0	346.437				
							368.200									368.200		Valley & scattered trees.	
2	95/0	366101	2860307	02°55'18"LT	DB+0	362.499		389.200	2	95/0	366101	2860307	02°55'18"LT	DB+0	362.499		389.200	368.200	
							531.470									531.470		Cart Track, Nalla & scattered trees.	
3	96/0	365887	2859832	40°17'46"RT	DD+0	362.711		531.470	3	96/0	365887	2859832	40°17'46"RT	DD+0	362.711		531.470	531.470	
							346.440									346.440		Cart Trees & scattered trees.	
4	97/0	365546	2859693	20°37'54"LT	DC+0	343.702		348.440	4	97/0	365546	2859693	20°37'54"LT	DC+0	343.702		348.440	346.440	
							357.040									357.040		Nalla & scattered trees.	
5	98/0	365292	2859447	11°47'11"LT	DB+0	348.560		357.040	5	98/0	365292	2859447	11°47'11"LT	DB+0	348.560		357.040	357.040	
							287.900									287.900		Scattered trees.	
6	99/0	365129	2859207	02°27'51"LT	DB+0	387.585		287.900	6	99/0	365129	2859207	02°27'51"LT	DB+0	387.585		287.900	287.900	
							208.570									208.570		Scattered trees & Rubber plantation.	
7	100/0	365018	2859032	06°12'11"LT	DB+0	376.280		208.570	7	100/0	365018	2859032	06°12'11"LT	DB+0	376.280		208.570	208.570	
							204.210									204.210		Scattered trees & Rubber plantation.	
8	101/0	364925	2858849	06°04'00"LT	DB+0	378.445		204.210	8	101/0	364925	2858849	06°04'00"LT	DB+0	378.445		204.210	204.210	
							345.080									345.080		Cart Track, scattered trees & Tea Garden.	
9	102/0	364806	2858525	11°38'21"LT	DB+0	356.820		345.080	9	102/0	364806	2858525	11°38'21"LT	DB+0	356.820		345.080	345.080	



P.K. Talukdar
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 Field Engineer (C), Powergrid
 NERPSIP, Nongpoh

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 Sr Engineer
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J.C. Sa...
 13/07/18
 जे. सी. सा... J.C. Sa...
 मुख्य प्रबंधक Chief Manager
 NERPSIP, Nongpoh
 एन ई ग्रिड सी जेन साई जी/NERPSIP
 नंगपो Nongpoh

AS PER THE DETAILED SURVEY								AS PER THE CHECK SURVEY							Crossing details & Remarks, if any				
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower		Reduced level at the center of location	Span (M)	Section Length (M)	
		Easting	Northing								Easting	Northing							
							381.060												
10	103/0	364749	2858152	30°07'10"RT	DD+0	370.533		381.060	10	103/0	364749	2858152	30°07'10"RT	DD+0	370.533		381.060	Nails & scattered trees.	
							345.400												State Highway No 3, Pond, 11KV Line (Ht. - 8.216M & clearance-31.406M) & scattered trees.
11	104/0	364532	2857882	15°15'07"LT	DC+0	421.662		345.400	11	104/0	364532	2857882	25°11'09"LT	DD+0	421.662		345.400	Tower type changed to restrict violation of sum of adjacent span & one side span parameters as per revised T&D.	
							503.580												State Highway No 3, Valley & scattered trees.
12	105/0	364331	2857420	20°31'40"LT	DD+18	439.368		503.580	12	105/0	364381	2857322	00°53'28"RT	DC+0	451.174		581.000	Location Shifted to higher ground to avoid higher extension at this location. DC tower provided to justify one side span to be below 60% of sum of adjacent span.	
							441.490												Scattered trees.
13	106/0	364324	2857020	21°10'37"LT	DD+3	529.919		441.490	13	106/0	364324	2857020	32°39'18"LT	DD+6	529.919		348.513	Extension provided to maintain ample clearance above ground level.	
							290.760												Scattered trees.
14	107/0	364367	2856703	01°01'09"RT	DB+0	538.118		290.760	14	107/0	364367	2856703	01°01'09"RT	DB+0	538.118		290.760		
							237.090												Scattered trees.
15	108/0	364493	2856450	07°01'54"LT	DB+0	563.616		237.090	15	108/0	364493	2856450	07°01'54"LT	DB+3	563.616		237.090	Extension provided to maintain ample clearance above ground level.	
							370.730												Cart Track & scattered trees.
16	109/0	364618	2856140	05°35'36"LT	DB+0	550.431		370.730	16	109/0	364618	2856140	05°35'36"LT	DB+0	550.431		370.730		
							461.120												Cart Track, Nails & scattered trees.
17	110/0	364847	2855736	15°30'29"RT	DC+0	582.401		461.120	17	110/0	364847	2855736	15°02'35"RT	DC+0	582.401		461.120		
							504.640												Valley & scattered trees.
18	111/0	364970	2855253	12°58'54"LT	DC+0	612.876		504.640	18	111/0	364970	2855253	12°58'54"LT	DC+0	612.876		504.640		
							680.270												Valley & scattered trees.
19	112/0	365283	2854644	05°08'05"LT	DC+0	675.333		680.270	19	112/0	365283	2854644	05°08'05"LT	DC+0	675.333		680.270		




P.K. Talukdar
 Field Engineer (C), Powergrid
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 13/07/2019
 Mr. J.C. Sarmah
 Sr. Engineer
 Chief Manager
 Powergrid
 Nongpoh

AS PER THE DETAILED SURVEY									AS PER THE CHECK SURVEY							Crossing details & Remarks, if any		
Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location	Span (M)	Section Length (M)	Sl. No.	Location No.	GPS Coordinate (UTM)		Angle of Deviation	Type of Tower	Reduced level at the center of location		Span (M)	Section Length (M)
		Easting	Northing								Easting	Northing						
							410.170											
20	113/0	365503	2854300	25°28'33"RT	DD+0	870.175		410.170	20	113/0	365503	2854300	25°28'33"RT	DD+0	870.175		410.170	Valley & scattered trees.
							479.130											
21	114/0	365597	2853823	41°31'41"LT	DD+0	892.141		479.130	21	114/0	365597	2853823	41°31'41"LT	DD+0	892.141		479.130	Point, Valley & scattered trees.
							345.540											
22	115/0	365818	2853593	43°05'08"RT	DD+0	755.060		345.540	22	115/0	365818	2853593	43°05'08"RT	DD+0	755.060		345.540	State Highway No.3 & scattered trees.
							461.450											
23	116/0	365858	2853137	06°22'22"LT	DB+3	781.596		461.450	23	116/0	365858	2853137	06°22'22"LT	DB+3	781.596		461.450	Scattered trees.
							311.530											
24	117/0	365919	2852828	01°48'47"RT	DD+25	739.013		311.530	24	117/0	365919	2852828	01°48'47"RT	DD+25	739.013		311.530	Scattered trees.
							319.920											
25	118/0	365974	2852512	11°23'03"LT	DB+0	795.446		319.920	25	118/0	365974	2852512	11°23'03"LT	DB+0	795.446		319.920	Cart Track & scattered trees.
							213.880											
26	119/0	366050	2852313	39°00'09"LT	DD+25	791.318		213.880	26	119/0	366050	2852313	39°00'09"LT	DD+25	791.318		213.880	Scattered trees.
							265.800											
27	120/0	366277	2852182	43°25'20"RT	DD+9	861.189		265.800	27	120/0	366277	2852182	43°25'20"RT	DD+9	861.189		265.800	Scattered trees.
Route Length as per the detailed Survey:-							9672.290 M.	Route Length as per the Check Survey:-							9656.733 M.			
Surveyed by			Checked by			Submitted by			Checked by			Recommended by			Approved by			
USTL			USTL			USTL			P.K. Talukdar Field Engineer (C), Powergrid NERPSOL, Nongpon			S.W.K. Khyem Sr Engineer POWERGRID NERPSOL, Nongpon			J.C. Sarma Chief Manager Powergrid NERPSOL, Nongpon			

9656-733

SL. NO.	Location No.	Angle of Deviation	GPS Coordinates		Tower Type	Reduced Level at center peg	Span (M)	SL. NO.	Location No.	Angle of Deviation	GPS Coordinates		Tower Type	Reduced Level at center peg of Location.	Span (M)	Remarks/ Crossing
			Easting	Northing							Easting	Northing				
18	AP 137/0	42°34'04"LT	369780	2847789	DD+0	802.748	281.890	18	AP 137/0	42°34'04"LT	369780	2847789	DD+0	802.748	281.890	NALA & VALLEY
19	AP 138/0	05°34'51"RT	370127	2847741	DB+0	817.435	350.680	19	AP 138/0	05°34'51"RT	370127	2847741	DB+0	817.435	350.680	
20	AP 139/0	35°07'23"RT	370550	2847641	DD+0	834.167	437.580	20	AP 139/0	35°07'23"RT	370550	2847641	DD+0	834.167	437.580	Carl Track & scattered trees.
21	AP 140/0	11°49'08"RT	370723	2847448	DB+0	853.211	259.450	21	AP 140/0	11°49'08"RT	370723	2847448	DB+0	853.211	259.450	TAR ROAD & scattered trees.
Total Route Length in M.:-							6933.480	Total Route Length in M.:-							6933.480	

Surveyed By <i>[Signature]</i>	Checked By <i>[Signature]</i>	Submitted By <i>[Signature]</i>	Checked By <i>[Signature]</i>	Recommended By <i>[Signature]</i>	Approved By <i>[Signature]</i> 12/12/18
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रिन्ताथियाम/A. Ryntathiang
रिन्ताथियाम/Junior Engineer
पावरग्रिड/Powergrid
एन ई आर पी एम आई पी/NERPSIP
नंगपो/Nongpoh

एस. डबल्यू. के. खेरियाम/S.W.K. Khyiem
उप प्रबंधक/Dy Manager
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जे. सी. गर्मा/J.C. Sarma
उप महा प्रबंधक/DGM
पावरग्रिड/Powergrid
एन ई आर पी एम आई पी/NERPSIP
नंगपो/Nongpoh

4781

UNIQUE STRUCTURES & TOWERS LTD

TW-01(Pro-053A):-Construction of 220kV D/c Killing(Bymkat)-Mawngap-New Shillong T/L

Order No. -CC-CS/91-NER/TWT-2468/G4/CA-1/5842(Services), Dated 30.08.2016.

Tower Schedule from AP 140/0 to AP 161/0 i.e. Prev. AP182/0 (Route Length - 7.960 Kms) of Killing - Mawngap Section

Client - Power Grid Corporation of India Limited.













Date: 22-Sep-16

SL NO.	Location No.	Tower No	Angle of Deviation	GPS Coordinates		Tower Type	Reduced Level at center/peg of Location	Span (M)	Section Length (M)	Cumulative Route Length (M)	Sum of Adjacent Span (M)	Wind Span (M)	Weight Span HOT(M)			Weight Span COLD (M)			Remarks/Crossing
				Easting	Northing								LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
1	AP 140/0	140/0	11°45'08"RT	370723	2847446	DB + 0	853.211	509.200	0.000	0.000	768.550	384.325	240	161	401	287	121	408	
2	AP 141/0	141/0	12°05'21"RT	370975	2847002	DC + 0	885.036		509.200	509.200	903.210	450.105	349	225	574	388	238	626	
3	AP 142/0	142/0	05°54'46"RT	371089	2846629	DD + 0	877.279	391.010	391.010	900.210	837.080	418.540	166	153	719	153	893	846	Cart Track & scattered trees
4	AP 143/0	143/0	00°30'00"	371269	2846221	DB + 6	773.360	446.070	446.070	1346.280	875.670	437.836	-107	162	75	247	168	-79	Scattered trees
5	AP 144/0	144/0	07°37'18"LT	371436	2845826	DB + 0	786.709	430.000	430.000	1776.280	733.130	366.565	248	137	385	262	131	393	Scattered trees
6	AP 145/0	145/0	12°32'02"LT	371588	2845560	DB + 0	791.655	304.000	304.000	2080.280	511.620	255.510	167	23	189	173	-12	161	Cart Track-2x0.5, LT Line, Play ground & scattered trees
7	AP 146/0	146/0	00°00'00"	371729	2845411	DB + 0	802.876	208.000	208.000	2288.280	701.670	350.635	185	176	361	220	145	265	Valley & Scattered trees
8	AP 147/0	147/0	30°34'37"LT	372067	2845050	DD + 0	826.119	493.600	493.600	2781.880	679.620	339.810	318	-214	103	348	-345	3	Scattered trees
9	AP 148/0	148/0	37°30'50"RT	372246	2844999	DD + 0	864.128	186.000	186.000	2967.880	537.740	268.870	400	280	581	531	325	855	







SL NO.	Location No.	Tower No	Angle of Deviation	GPS Coordinates		Reduced Level at center of tower at location	Span (M)	Section Length (M)	Cumulative Route Length (M)	Sum of Adjacent Span (M)	Wind Span (M)	Weight Span (M)			Remarks or Crossing		
				Easting	Northing							Tower Type	LEFT	RIGHT		TOTAL	
20	AP 155/0	159/0	23°14'54" RT	373353	2841460	983.080	335.400	342.200	7034.940	677.620	338.510	294	46	248	211		
21	AP 150/0	160/0	09°09'16" RT	373423	2841132	981.488	589.200	335.420	7370.340	924.650	462.325	291	495	786	581	Valley & Scattered trees	
22	AP 151/182	161/182	To be decided later	373450	2840541	911.730		589.200	7859.540	TBDL	TBDL	94	NF	8	NF	Valley & scattered trees	
Total Route Length in M. =							7959.540										
Surveyed by		Checked by		Submitted by		Checked by		Recommended by		Approved by							
 		 		 		 		 		 							


 V. K. SINGH
 Sr. Engineer
 POWERGRID, MAWNGAP


 V. K. SINGH
 Sr. Engineer
 POWERGRID, MAWNGAP

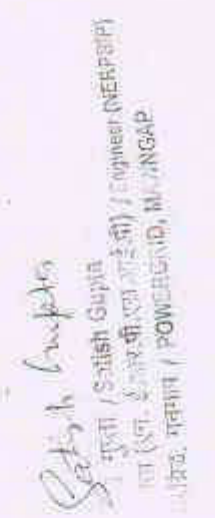

 V. K. SINGH
 Sr. Engineer
 POWERGRID, MAWNGAP

Sl. No.	Location No.	Tower No.	Angle of Deviation	GPS Coordinates		Tower Type	Reduced Level at center peg of Location.	Span (M)	Section Length (M)	Cumulative Route Length (M)	Sum of Adjacent Span (M)	Wind Span (M)	Weight Span HOT (M)			Weight Span COLD (M)			Remarks/ Crossing.
				Easting	Northing								LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
8	AP 1890	AP 1890	12°38'47"RT	2838765	374134	DB + 0	985.293		329.200	1985.120	726.810	363.405	108	175	283	83	154	247	Valley & Scattered pine trees.
9	AP 1900	AP 1900	03°12'47"LT	2838372	374194	DB + 0	1091.692	397.610	2362.730	859.870	429.995		223	258	481	233	269	502	Valley & Scattered pine trees.
10	AP 1910	AP 1910	32°53'35"RT	2837922	374290	DD + 0	893.556	462.260	2844.990	820.650	410.325		205	115	321	193	89	282	Scattered pine trees.
11	AP 1920	AP 1920	03°33'35"RT	2837577	374185	DB + 0	1008.655	358.390	3203.380	695.700	347.850		243	102	345	269	73	342	Scattered pine trees.
12	AP 1930	AP 1930	12°41'53"LT	2837260	374086	DB + 0	1023.652	337.310	3540.690	659.310	329.655		236	154	390	233	151	382	Valley & Scattered pine trees.

Total Route Length in M.:- 3540.690

Surveyed by  	Checked by  	Submitted by  	Checked by 	Recommended by  	Approved by  12/12/18 
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SL NO.	Location	Tower No	Tower Angle of Deviation	Tower Type	GPS Coordinates		Reduced Level at center ring or Location	Span (M)	Station Length (M)	Span Length (M)	Sum of Adjacent Span (M)	Wind Spm (M)	Weight Span (KTNM)			Weight Span COLD (M)		Remarks Crossing	
					Easting	Northing							LEFT	RIGHT	TOTAL	LEFT	RIGHT		TOTAL
13	AP 205	AP 205W	205°12'28"LT	DB+0	28333204	374852	1692.873	400	391	4446	101	351	547	52	339	887	46	908	Scattered trees
14	AP 206	AP 206W	38°01'13"RT	DB+0	28333176	376170	1681.453	193	400	4640	530	337	308	17	325	364	16	338	Can Track, 2 Nos & scattered trees
15	AP 207	AP 207W	27°14'35"RT	DB+0	28332990	375215	1691.652	216	193	5059	411	206	175	125	300	209	132	341	Scattered trees
16	AP 208	AP 208W	09°45'25"RT	DB+0	28332816	375347	1695.219	223	216	5257	441	221	52	67	189	85	46	133	Can Track & Scattered trees
17	AP 209	AP 209W	03°27'07"LT	DB+0	28332654	375505	1695.757	239	223	5460	462	231	105	68	196	174	149	26	Scattered trees
18	AP 210	AP 210W	38°05'45"LT	DB+0	28332509	375692	1725.391	329	239	5719	596	264	308	309	017	385	370	759	Can Track & Scattered trees
19	AP 211	AP 211W	13°53'13"LT	DB+0	28332327	375869	1694.130	337	329	6045	686	333	10	120	139	41	91	58	Can Track & Scattered trees
20	AP 212	AP 212W	68°08'08"RT	DB+0	28332206	376282	1704.928	360	337	6305	637	319	218	130	336	237	107	344	Can Track & Scattered trees
21	AP 213	AP 213W	11°16'46"RT	DB+0	28331982	376450	1710.936	380	360	6685	680	340	180	356	688	193	426	619	Scattered trees
22	AP 214	AP 214W	09°13'17"RT	DB+0	28331826	376594	1698.996	205	380	7085	695	293	24	195	219	46	264	188	Can Track - 2 nos & Scattered trees
23	AP 215	AP 215W	03°11'53"LT	DB+0	28331427	376624	1656.371	263	205	7270	468	234	10	247	257	29	296	267	Scattered trees
24	AP 216	AP 216W	03°40'19"LT	DB+0	28331172	376990	1636.436	240	263	7633	606	293	16	30	14	31	91	127	Scattered trees
25	AP 217	AP 217W	12°45'50"RT	DB+0	28330943	376768	1650.506	396	240	7775	576	269	372	9	281	337	59	278	Scattered trees & temporary mat
26	AP 218	AP 218W	11°12'28"LT	DB+0	28330540	376715	1638.093	309	396	8111	649	373	327	87	414	394	58	452	Scattered trees
27	AP 219	AP 219W	11°15'17"LT	DB+0	28330320	376783	1708.974	309	309	8420	511	256	222	100	362	251	185	436	Scattered trees & Can Track




14/03/18
 Mr. S. S. Sait
 Manager
 R.O. SHILLONG TOWERS LTD.
 Sait's books


Wagon
 NE 2033, HAWKINS
 11/4/18

SL NO	Location No.	Tower No.	Azimuth of Displacement	Tower Type	GPS Coordinates		Reqd. Level at center (m) or Location	Span (m)	Section Length (m)	Cum. Route Length (m)	Sum of Adjacent Span (m)	Wind Span (m)	Weight Span HOT (m)			Weight Span COLD (m)			Remarks/ Coasting
					Existing	Needing							LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
28	AF 220	AP220W	09°00'33"LT	DB-0	2830143	2756211	1702.304	302	208	8622	639	310	42	113	71	17	263	333	Scattered trees & Cart Tracks
29	AF 221	AP221W	11°07'43"RT	DB-0	2829806	377117	1738.247	417	457	9038	642	321	530	107	423	667	200	467	11KV Line (clearance - 6.347M), Cart Track, with scattered trees.
30	AP 222	AP222W	02°02'23"RT	DB-0	2829256	377235	1824.111	228	235	4264	528	264	332	330	662	425	405	830	Scattered trees
ROUTE LENGTH - 9.284 Kms												Checked by			Recommended by			Approved by	
Submitted by												PGCIL			PGCIL			PGCIL	







 14-03-18




 11/11/10



 VJES



 NE. ST. ST. MUMBAI



 Sathish Kumar

R. O. SHILLONG
 STRUCTURES TOWER & LINE
 14-03-18

R. O. SHILLONG
 STRUCTURES TOWER & LINE
 14-03-18

R. O. SHILLONG
 STRUCTURES TOWER & LINE
 14-03-18

R. O. SHILLONG
 STRUCTURES TOWER & LINE
 14-03-18

MK

SL. NO.	Location No.	Tower No.	Angle of Deviation	Tower Type	GPS Coordinates		Reduced Level at corner pin or Location	Span (M)	Section Length (M)	Cum. Roader Length (M)	Sum of Adjacent Span (M)	Wind Span (M)	Weight Span HOT (M)			Weight Span COLD (M)		Remarks/ Crossing	
					Easting	Northing							LEFT	RIGHT	TOTAL	LEFT	RIGHT		TOTAL
13	AP 233	233	17°35'38"LT	DB+0	2826161	377174	1630.803	406	156	3538	502	281	-59	171	102	-131	157	26	LINE M ROAD LINE
14	AP 234	234	31°52'19"RT	DD+9	2825835	377438	1690.555	473	406	3994	379	440	235	266.445	502	246	278	528	
15	AP 235	235	04°22'57"RT	DB+3	2825374	377507	1637.139	149	473	4467	622	311	207	188.276	395	154	237	430	
16	AP 236	236	56°41'37"RT	DD+0	2825228	377324	1678.867	219	149	4616	365	384	-39	34	-6	-88	1	-87	CART TRACK
17	AP 240	240	02°57'40"LT	DB+0	2825083	377262	1688.820	238	219	4835	458	229	185.412	24	210	217.62	-16	201	
18	AP 241	241	03°02'43"LT	DB+0	2824929	377170	1705.054	252	238	5074	491	246	215	191	405	285	210	474	
19	AP 242	242	12°17'07"RT	DB+0	2824748	376893	1694.089	333	252	5326	585	293	61	205	266	33	222	294	CART TRACK
20	AP 243	243	10°13'34"LT	DB+3	2824575	376710	1682.529	281	333	5659	564	282	128	41	169	111	9	120	
21	AP 248	248	06°58'46"LT	ED+0	2824421	376542	1687.013	480	281	5890	711	360	193	227	517	225	384	565	
22	AP 245	245	09°46'21"LT	DB+0	2824060	376223	1665.224	295	480	6370	766	393	153	144	287	115	144	260	
23	AP 246	246	11°10'51"LT	DB+0	2823814	376075	1659.058	252	295	6656	638	269	142	-5	134	142	-86	77	
24	AP 247	247	12°44'14"LT	DB+0	2823582	375987	1691.378	311	252	6908	593	292	280	231	491	317	269	576	
25	AP 248	248	08°11'56"RT	DB+0	2823253	375848	1677.183	265	311	7209	596	298	100	134	234	72	138	207	
26	AP 249	249	02°15'01"RT	DB+3	2822996	375889	1673.873	428	265	7504	663	347	131	186	297	130	146	276	
27	AP 250	250	06°51'53"LT	DB+0	2822584	375781	1680.404	428	428	7932	635	348	262	223	485	282	262	544	

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Checked by
Watan
F.S. (Electrical)

Checked by
Sudhakar Karamanna



MK

PGCIL

Sl. No.	Location No.	Tower No.	Angle of Deviation	Tower Type	GPS Coordinates		Reduced Level at corner peg at Location	Span (m)	Section Length (m)	Cum. Route Length (m)	Sum of Adjacent Span (m)	Wind Span (m)	Weight Span HDT(m)			Weight Span COLD (m)			Remarks/Grading	
					Easting	Northing							LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL		
28	AP 203	201	25°40'32"RT	DC+0	2022321	379722	1074.446	207	207	0109	427	234	44	146	552	5	177	182		
29	AP 202	202	31°04'03"RT	DC+0	2022197	370135	1067.181	160	160	9339	364	177	12	362	384	-17	261	444		
30	AP 203	203	22°15'38"LT	DC+0	2022085	376470	1034.163	154	194	0553	915	458	150	302	144	257	278	11	VALEY RIVER	
31	AP 204	204	17°37'34"LT	SPL+26	2021484	375079	1036.972	721	721	5274	1307	634	419	96	515	443	-4	439		
32	AP 205	205	30°51'16"RT	SPL+6	2020645	374895	1769.830	866	666	9940	924	462	370	120	690	670	117	787		
								9940	9940		5.9400									

Approved by
PGCIL

Checked by
PGCIL

Submitted by
USTL

Checked by
USTL

Checked by
USTL

Checked by
USTL

Checked by
USTL

checked by
Watar
F.S. (Electrical)

Checked by
Tajam K. Kumar Ems

UNIQUE STRUCTURES TOWERS LTD
SHILLONG
R. Singh
12/12/17

UNIQUE STRUCTURES TOWERS LTD
SHILLONG
R. Singh
12/12/17

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Recommended by
PGCIL
Approved by
PGCIL

Checked by
PGCIL

Submitted by
USTL

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UNIQUE STRUCTURES & TOWERS LTD


TW-01 (Pro-053A): Construction of 220kV D/c Killing (Byrnihat)-Mawngap-New Shillong T/L
 Order No.: CC-CS/91-NER/TWT-2468/G4/GA-1/5842(Services), Dated 30.08.2016.

Re-Route Tower Schedule from AP-255/0 to AP-259/0 (Route Length-1.2447Kms) SECTION KILLING S/S-MAWNGAP S/S.

Client:- Power Grid Corporation of India Limited.

Sl. NO.	Location No.	Tower No.	Angle of Deviation	Tower Type	GPS Coordinates		Reduced Level at center peg of Location.	Span (M)	Section Length (M)	Sum of Adjacent Span (M)	Wind Span (M)	Weight Span HOT (M)		Weight Span COLD (M)		Remarks/ Crossing.		
					Easting	Northing						LEFT	RIGHT	LEFT	RIGHT		TOTAL	TOTAL
1	255/0	255/0	58°20'28" RT	SPL+6	374895	2820845	1761.161	344.18	0	364	172	571	182	708	194	856		
2	256/0	256/0	48°51'56" LT	DB+0	374565	2820744	1763.705		344.18	566	278	157	72	229	57	208	Pine tree & jungle mixed trees	
3	257/0	257/0	04°49'11" RT	DB+3	374479	2820564	1765.538	211.97	211.97	426	213	140	93	233	86	241	VALLEY, Pine tree & jungle mixed trees. LT LINE TO BE	
4	258/0	258/0	35°29'21" LT	DB+0	374372	2820369	1770.594	214.07	214.07	472	236	121	198	319	227	355	Pine tree & jungle mixed trees	
5	258A/0	258A/0	07°10'41" RT	DB+0	374400	2820405	1758.755	258	258.000	474	237	60	74	134	31	91	Pine tree & jungle mixed trees	
6	259/0	259/0	13°06'27" RT	DB+0	374372	2819892	1763.653	216.45	216.45	474	237	142	407	549	157	525	682	Pine tree & jungle mixed trees
								1.2447										

ROUTE LENGTH IN KM

Surveyed by 	Checked by 10/12/2016 (Signature) (Signature)	Submitted by (Signature) KRASON/FET SEN Project Manager Unique Structures & Towers Ltd Lakhimpur, Assam	Checked by (Signature)	Recommended by (Signature) Pankaj Bhattacharya Project Manager Unique Structures & Towers Ltd Lakhimpur, Assam	Approved by (Signature) P. N. S. 1 C. D. 2
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POWERGRID CORPORATION OF INDIA LIMITED

RECOMMENDED BY
 PANKAJ BHATTACHARYA
 PROJECT MANAGER
 UNIQUE STRUCTURES & TOWERS LTD
 LAKHIMPUR, ASSAM

APPROVED BY
 P. N. S. 1
 C. D. 2

Sl. NO.	Location No.	Tower No.	GPS COORDINATES		Azimuth of Direction	Tower Type	Feasible Levelling contouring of location.	Span (M)	Section Length (M)	Cumulative Route Length (M)	Sum of adjacent Span (M)	Wind span (M)	Weight Span (M)			CROSSING		
			Easting	Northing									LEFT	RIGHT	TOTAL		LEFT	RIGHT
11	AP 265	265/0	374353	7816550	20°40'48" LT	DD-0	1807.78	267	2500	030	268	268	210	255	265	520	National Highway-44 LT Line	
12	AP 266	266/0	374417	2816301	05°05'13" LT	DD+0	1791.435	269	2775	517	259	248	43	4	46	50	Metal road, 11kv Line	
13	AP 267	267/0	374517	2018076	24°35'00" LT	DC+0	1800.403	248	3023	654	332	248	178	170	201	154	355	
14	AP 268	268/0	374825	2017799	05°33'26" RT	DS-0	1810.827	416	3429	819	410	410	245	01	261	30	291	
15	AP 269	269/0	375074	2817485	22°13'50" LT	DC+0	1843.13	403	3942	769	382	403	322	150	373	137	510	2Nds/Metal road LT Line
16	AP 270	270/0				To be decided later	1930.354	380	4202	360	180	380	210	0	223	0	223	
								Route Length (M):-	4202									

Satish Gupta

Satish Gupta
 Project Manager
 F.S. (ELECTRICAL) BUILDING

Approved by
 PGCIL

Recommended by
 PGCIL

Checked by
 PGCIL

Submitted by
 USTL

Checked by
 USTL

Surveiled by
 USTL

PGCIL
 Manager, PGCIL
 1805-3
 25-2

PGCIL
 10
 13
 16
 19

PGCIL
 (Molokhat)

PGCIL
 SHILLONG

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 12.13
 30

15 13

13-4
 16-0
 19-1

D C D

ANNEXURE - 3

***NoC FROM LAND OWNERS/VILLAGE
COUNCILS***

DORBAR SHNONG MAWPDANG

KHYRIM SYIEMSHIP

SHILLONG - 793018, EAST KHASI HILLS

Date : 22/8/17

Ref. No. :

To

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


Stai Sing Syiem

Sordar Shnong Mawpdang
Sordar
Shnong Mawpdang
Khyrim Syiemship
East Khasi Hills


Robinson Syiem

Gen.Secy Shnong Mawpdang
General Secretary
Shnong Mawpdang
Khyrim Syiemship
East Khasi Hills

036

No Objection Certificate

I Shri / Smti Thas KhasumwidS/o D/o
(L) Psen Khasumwidaged about 50 yrsold and residing
at Sohryngkham Ext Khasi HillsDistrict and

Owner of Land mentioned hereunder at clause (I), hereby on this day the 27/04/18
2017 solemnly affirm and declare as follows:

1) That I have no objection whatsoever for MePTCL / PGCIL to construct 220 KV
Power Transmission Linepassing through my land located at
Sohryngkham (Hq. 90-91) Village SohryngkhamDistrict E. K. H

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 to pay compensation to me, in accordance with the schedule of rates issued by the
Deputy Commissioner.....District Council.....

Thas
Land Owner

Witness:

- 1. Chhamef
- 2. **SORDAR**
Sohryngkham
Khyrim Syiemship, E. K. Hills

043

No Objection Certificate

I Shri / Smti ALISAMEEY NONGDHARS/o D/o
(L) W. Worsleyllawaged about 49 yrsold and residing
at Mawshabit East Chai HillsDistrict and

Owner of Land mentioned hereunder at clause (I), hereby on this day the 5/01/2019.....

2017 solemnly affirm and declare as follows:

1) That I have no objection whatsoever for MePTCL / PGCIL to construct 220kv D/C
Transmission Linepassing through my land located at
AP 77village MawshabitDistrict East Chai Hills
.....

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 to pay compensation to me, in accordance with the schedule of rates issued by the
Deputy Commissioner.....District Council.....

Al da
Land Owner

Witness:

1. Sri. R. Nongkhlan
Sorder (Headman)
Dorbar Shnong Mawshabit
Shillong-793007
2. L. THANGEO - Thangee

No Objection Certificate

I Shri/ Smti Losina Khar Kong S/o D/o

(L) Kormelius Kharpan aged about 70 years old and residing at New Chabunt Loc 73 at Umphyrnai E.K.H. District and Owner of Land mentioned hereunder at clause (I), hereby on this day the 15/Jan/2017

2017 solemnly affirm and declare as follows:

1) That I have no objection whatsoever for MePTCL / PGCIL to construct High tension 220KV Transmission lines passing through my land located at Umphyrnai village Loc 73 District E.K.H. Shillong - 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 to pay compensation to me, in accordance with the schedule of rates issued by the Deputy Commissioner
District Council

Land Owner

Witness:

1. Bosstar Lamare B Son - law
2. Pdianghem Khar Kong (Dongor) (y/D)
- 3.

Losina

ANNEXURE - 4

SAMPLE COPY OF COMPENSATION

OFFICE OF THE EXECUTIVE COMMITTEE
KHASI HILLS AUTONOMOUS DISTRICT COUNCIL
SHILLONG.

No.DC.RBF/XI(L)/107/2016 - 17 / 25

Dated Shillong, the 17th August, 2017.

To


The Sordar Shnong Mawpdang,
Khyrim Syiemship, Shillong - 793018,
East Khasi Hills District, Meghalaya.

Subject: Land Valuation Certificate.

Reference: Your Application dt. 7th August, 2017.

With reference to your letter indicated above, I am directed to inform you that the market value of the land located within Mawpdang Village Khyrim Syiemship, Shillong - 793018, East Khasi Hills District, Meghalaya is ₹ 120/- (Rupees One hundred twenty) only, Per Sq.Ft.




Deputy Secretary to the Executive Committee,
Khasi Hills Autonomous District Council,
Shillong.

002

Compensation Bill

MEGHALAYA POWER TRANSMISSION CORPORATION LIMITED.

Name of the Project under NERPSIP Scheme: 220 K.V double circuit line kelling - Mawngap - New Siftlang

- 1. Name of Land Owner: Derbar Shrong Mawpdang
- 2. Father's Name
- 3. Village/Town/Locality/ Mawpdang
- 4. District East Khasi Hills District
- 5. Amount of Compensation in Rs. 2337592

Bank Account No. 30270100006759.....Branch
 Name Bank of Baroda.....
 IFSC No. DARBOMAWDIA.....Branch
 Code MAWDIA.....

Details of Crops: (As per Annexure attached) Compensation against 220 KV tower footing area under Mawpdang village is enclosed in Annexure 1

Signature of Land Owner [Signature] For POWER GRID
 Khyrim Syiemship Junior Engineer/Engineer/Sr. Engineer/Manager
 East Khasi Hills

Witness:
 1. Robinson Syiem - [Signature]
 2. Shaiber Syiem - [Signature]

Certified that the land under Mawpdang village
 Village/Town/Locality, District East Khasi Hills, belongs to
 Sri/Smt. Derbar Shrong Mawpdang

The crops/trees mentioned in the Annexure are being damaged during construction of the said line. Necessary compensation towards the damages may be released to the affected land owner.

[Signature]
 Srdar
 Shrong Mawpdang
 Khyrim Syiemship
 East Khasi Hills
 Signature of Normal Headman

On behalf of MePTCL

Name of Transmission Line :- 220 KV D/C Transmission line Killing -Mawngap- New Shillong (Mawngap -New Shillong Section)

ANNEXURE -I

Compensation against 220 KV Tower footing area under Mawpdang Village, East Khasi Hills Meghalaya

Sl No	Location No	Village Name	Type of tower	Area of tower footing(in square metre)	Area of tower footing(in square feet)	Rate of land(Per square feet) (in Rs)	Amount to be compensated(in Rs)	Bank Account Holder + Join Acc Holder Name	Address of Account Holder	Bank account No	Name of bank	Branch Address
1	AP-93	Mawpdang	DC+0, DFR (1.5 mtr Extension)	131.91	1419.87924	120	170385.509	(i)Dorbar Shnong Mawpdang (ii) Staj sing Syiem (ii) Robinson Syiem	Mawpdang Village ,East Khasi Hills , Shillong, 793018	30270100006759	Bank of Baroda	Mawdiangdiang , NEGRIMS Complex , Meghalaya. Pin 793012
2	AP-94	Mawpdang	DC+0, DFR	119.16	1282.63824	120	153916.589					
3	AP-95	Mawpdang	DC+0,DFR (1.5 mtr leg Extension)	131.91	1419.87924	120	170385.509					
4	AP-96	Mawpdang	DB+0, WFR	96.57	1039.47948	120	124737.538					
5	AP-97	Mawpdang	DB+0, DFR(with 3 mtr extension at two legs)	117.66	1266.49224	120	151979.069					
6	AP-98	Mawpdang	DB+0, DFR (+3 mtr leg Extension)	117.66	1266.49224	120	151979.069					
7	AP-99	Mawpdang	DB+0, DFR (3 mtr Extension)	117.66	1266.49224	120	151979.069					
8	AP-100	Mawpdang	DB+3, DFR	117.66	1266.49224	120	151979.069					
9	AP-100A	Mawpdang	DB+3, DFR	117.66	1266.49224	120	151979.069					
10	AP-101	Mawpdang	DB+0, DFR	96.57	1039.47948	120	124737.538					
11	AP-102	Mawpdang	DC+0, DFR(3 mtr Extension)	145.32	1564.22448	120	187706.938					
12	AP-103	Mawpdang	DD+0, DFR (1.5 mtr extension)	152.35	1639.8954	120	196787.448					
13	AP-104	Mawpdang	DC+0, DFR	119.16	1282.63824	120	153916.589					
14	AP-105	Mawpdang	DB+0, DFR	96.57	1039.47948	120	124737.538					
15	AP-106	Mawpdang	DC+0, DFR(+1.5 mtr Extension)	131.91	1419.87924	120	170385.509					
				1809.73	19479.93372		2337592					


Knyrim Syiemship
East Khasi Hills

DORBAR SHNONG MAWPDANG

KHYRIM SYIEMSHIP
SHILLONG - 793018, EAST KHASI HILLS

Ref. No. :

Date : 26-12-17

To,

The Project Manager,

Power Grid, Lapalang, Meghalaya, Shillong,

Subject: Payment of Compensation to Dorbar Shnong Mawpdang.

Sir,

With reference to the subject mentioned above, we would like to inform you that Dorbar Shnong Mawpdang has an Account transaction at Baroda Bank Neigrihms Branch. An Account Number was 3027010006759 / 30270100006759

Regarding with Compensation to be paid by your office to the Dorbar Shnong Mawpdang for Land and Trees for the construction of 220kv tower lines should be paid in this Account. Photo copy of pass book are enclosed herewith.


This is for your information and necessary action.

Thanking,

Your faithfully,


Sordar Shnong Mawpdang.
Sordar
Shnong Mawpdang
Khyrim Syiemship
East Khasi Hills


Gen. Secy. Shnong Mawpdang.
General Secretary
Shnong Mawpdang
Khyrim Syiemship
East Khasi Hills

1. पैन नं
2. आईडि
3. 
4. आपा
नाम/
दूरभा
5. क्रेडिट
6. डेबिट
7. पॉलिस
8. पासपोर्ट नं./Passport No. :
9. ई-मेल का पता/Email address :



उपयोग सुझाव/Useful Tips :

1. अपने खाते की जानकारी प्राप्त करने के लिए अपना मोबाइल नंबर और ई-मेल आईडी रजिस्टर करवाएं/ Register your Mobile number and email-id for getting information about your account.
2. आप पूछताछ के लिए टॉल-फ्री नंबर पर कॉल कर सकते हैं./ You may call toll free number for inquiry etc.
3. पासबुक को नियमित रूप से अद्यतन करवाएं/ Get pass-book updated regularly.
4. जहां कहीं संभव हो स्थायी अनुदेश जारी करें./ Issue standing instructions wherever possible.
5. पासबुक में कहीं भी अपने हस्ताक्षर न करें./ Do not put signature any where in pass-book.
6. हम आपके सुझावों का स्वागत करते हैं./ We welcome your suggestions.
7. किसी भी प्रकार की कठिनाई के मामले में शाखा प्रबंधक से संपर्क करें./ Contact branch manager in case of difficulties/Value added services.

बैंक ऑफ़ बड़ौदा Bank of Baroda

Branch Address : MAWDIANGDIANG, MEGHALAYA
 WEIGRIHMS COMPLEX
 MAW TIANG DIANG
 SHILLONG
 Pin : 793012
 email : mawdia@bankofbaroda.com
 Tel : 0364-2938037 Fax :

Customer ID : EMR0014e6
 Account No : 30270100006759
 Scheme Desc : BARODA ADVANTAGE SB_BEN
 A/c Holder : DOREBAR SHONG MAWPDANG
 Joint Holders : MR . STAJ SING SYIEM
 MR . ROBINSON SYIEM

Occupation : OTHERS
 Operation Mode : BOTH JOINTLY OR SURVIVOR
 Comm Address :

MAWPDANG VILLAGE
 EAST KHASI HILLS DISTRICT
 SHILLONG
 793018

Nominee Added : NO
 Nominee Name : शाखा प्रबंधक/BRANCH MANAG
 A/c Oper Date : 01-07-2015

ANNEXURE – 5

DETAILS OF PUBLIC CONSULTATIONS

Details of Consultations

Public Consultation Meeting			
Date of meeting	Venue of Meeting	No. of Persons attended	Persons Attended
12.09.2014	Office of the Superintending Engineer, T & T circle, Byrnihat	28	POWERGRID and MePTCL officials, Project affected Persons, Senior members, Village Headman & General Public
19.09.2014	HRD Center, MeECL, Umium	35	POWERGRID and MePTCL officials, Project affected Persons, Senior members, Village Headman & General Public

MEGHALAYA POWER TRANSMISSION CORPORATION LIMITED

OFFICE OF THE SUPERITENDING ENGINEER (TRANSMISSION)

BYRNIHAT::: 793101

KA JING PYNBNA (NOTICE)

Ha

U Rangbah Shnong,

.....

Kane ka long ka jing pynbna ba kan don ka jing ia lang paidbah ha office jong u Suprintending Engineer (T & T) Circle, MeECL, Byrnihat ha ka 12 tarik u bnai September 2014 naduh ka por 11:00 baje mynstep ha kaba ki Engineer na MePTCL bad Power Grid (PGCIL) kin pynshai ha phi ia ka jing shna ia u tower line ba 220 KV na Killing sha Mawphlang bad na Mawphlang sha New Shillong. Lada don kino kino ha shnong jong phi ki ba kwah ban tip bniah shaphang kane ka jing shna kin sngew bha ban poi khnang khnang ha ka tei ka sngi bala buh.

Khublei Shibun.



(Shri. R. Syiem)

9863065704

Superintending Engineer (T & T Circle)

MePTCL, Byrnihat.

Khari Verma

MEGHALAYA POWER TRANSMISSION CORPORATION LIMITED

OFFICE OF THE SUPERINTENDING ENGINEER (TRANSMISSION)

BYRNIHAT:: 793101

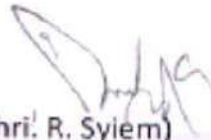
(PROJECT SUMMARY)

KATTO KATNE SHAPHANG KA PROJECT

Khnanng ban kham pynbiang ia ka jing sam bording ha baroh ki jylla Shateilammihngi jong ka ri India kynthup ia ka jylla Meghalaya, ka sorkar India da ka jing iarap jong ka World Bank, ka la shna ia ka project ba la khot ka **North Eastern Region Power System Improvement Project (NERPSIP)**. Na kane ka project yn don kam ban shna ia ki Transmission line bad Distribution line ki ba thymmai ryngkat bad ki jing pynkhlain ia ki mashin bording ne tower line ki ba la don lypa. Kane ka project ha Meghalaya kalong kumne :-

- Ban pynkhlain ia ki sainar ba sam ia ka bording bad ban pynduna ia ka jing sepei (Loss) ka bording electric.
- Ban pynbiang ia ka rukom sam ia ka bording kat kum ka jing don kam.

Ka Meghalaya Power Transmission Corporation Limited (MePTCL) ka dei ka kompani ba pynthei ia kine kam ha ka jylla Meghalaya bad ka thmu ban shna ia ka 220 KV Double Ckt line na Killing, Ri Bhoi sha Mawphlang bad Mawphlang sha New Shillong (110 KM). Ka jingshna ia kane ka line kan nym donkam ban shim duh ia ki jaka bad lada don kano kano ka jing julor ha kaba iadei bad kano kano ka longing longsem haka por ba shna yn siew la ka bai lut ksan kat ba pynshong dor ha ka project. Ka jingwan jong kane ka project (NERPSIP) kan iarap ia ka jylla Meghalaya baroh kawei da kaba kyntiew ia ka ionh ka kot jong baroh.


(Shri. R. Syiem)

Superintending Engineer (T & T Circle)
MePTCL, Byrnihat.

MEGHALAY POWER TRANSMISSION CORPORATION LIMITED

OFFICE OF THE SUPERINTENDING ENGINEER T&T CIRCLE

MePTCL: BYRNihat

Subject: Public Meeting

Agenda:- Construction of 220KV D/C Killing (Byrnihat) - Mawngap - New Shillong Line (110Km approximately)

Venue:- Office of the Superintending Engineer T&T Circle, MePTCL, Byrnihat

Date:- 12/09/2014

Name of the Participants

Sl.No	Full Name	Signatures
1	Shri. Leott. Leonard H. Soltzer	
2	Shri. Rakesh Sengupta	
3	Shri. Sukumar Mishra, DGM, POWERGRID	
4	Shri. K.C. Barman, Chief Engineer	
5	Shri. DIPYOTI BARUAH, POWERGRID	
6	Sri Subha Rama Barua	
7	SRI Enok Lyngdoh	
8	Shri. J. Bhowmik	
9	Shri. Dinesh Lyngdoh	
10	Shri. Lalawida Shalsang	
11	Shri L. Nongma	
12	Shri. Prakash Nongma	
13	Shri. Tindu Nongma	
14	Rebala Nongma	
15	Smt. Naina Nongma	
16	Dit. Nongma	
17	Hita Rani	
18	S. Nongma	
19	Smt. Dina Nongma	
20	" Prolomi Dohai	
21	Shri. Bernard Sengupta	
22	" RBL Kharbuda	
23	D. Nongma	
24	Shri. A.T. Godphol	

25	Mr. G. R. Wainwright	Francis
26	C. S. Prayuki	Wells
27	M. D. Dugdale	Wells
28	P. S. Wong	Wong
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MEGHALAYA POWER TRANSMISSION CORPORATION LIMITED
OFFICE OF THE CHIEF ENGINEER (Transmission)
LUM JINGSHAI:: Shillong : 793001.

KATTO KATNE SHAPHANG KA PROJECT

Khngang ban kham pynbiang ia ka jingsam bording ha baroh ki jylla Shatei lam mihngi jong ka ri India kynthup ia ka jylla Meghalaya, ka sorkar India da ka jingiarap jong ka World Bank, ka la shna ia ka project ba la khot ka **North Eastern Region Power System Improvement Project (NERPSIP)**. Na kane ka project yn don kam ban shna ia ki Transmission line bad Distribution line kiba thymmai ryngkat bad ki jingpynkhlain ia ki mashin bording ne tower line kiba la don lypa. Kane ka project ha Meghalaya ka long kumne :-

- Ban pynkhlain ia ki sainar ba sam ia ka bording bad ban pynduna ia ka jingsepei (Loss) ka bording electric.
- Ban pynbiang ia ka rukom sam ia ka bording kat kum ka jingdonkam.

Ka Meghalaya Power Transmission Corporation Limited (MePTCL) ka dei ka kompani ba pyntrei ia kine kam ha ka jylla Meghalaya bad ka thmu ban shna ia ka 220 KV Double Ckt line na Killing, Ri Bhoi sha Mawphlang bad nangta pat, na Mawphlang sha New Shillong (110 KM). Ka jingshna ia kane ka line kan ym donkam ban shim duh ia ki jaka bad lada don kano kano ka jingjulong ha kaba iadei bad kano kano ka longing longsem ha ka por ba shna, yn siew la ka bai lut san kat kum ba la pynshong dor ha ka project. Ka jingwan jong kane ka project (NERPSIP) kan iarap ia ka jylla Meghalaya baroh kawei da kaba kyntiew ia ka ioh ka kot jong baroh.

Handwritten signature
28/8/14

Shri K.N.War
Chief Engineer (Transmission)
MePTCL, Lumjingshai.



MEGHALAYA POWER TRANSMISSION CORPORATION LIMITED
OFFICE OF THE CHIEF ENGINEER (Transmission)
LUM JINGSHAI : : Shillong : 793001.

PROJECT SUMMARY

In order to strengthen the power scenario of the North Eastern States including Meghalaya, the Government of India with the financial assistance of the WORLD BANK, has formulated the **North Eastern Region Power System Improvement Project (NERPSIP)** which envisages in construction of new power Sub-stations, Transmission & Distribution lines and simultaneously augmentation/expansion of the existing Sub-stations and Transmission lines.

The NERPSIP in the state of Meghalaya broadly aims at:-

- Load enhancement of the transmission and distribution network of Meghalaya as well as reducing the transmission and distribution (T & D) loss.
- To adequately address the demand side management for ensuring adequate supply of electricity.

Meghalaya Power Transmission Corporation Limited (MPTCL) is the owner for the projects in the state of Meghalaya under NERPSIP. Under the scope of NERPSIP, inter-alia, construction of 220 KV D/C Killing (Byrnihat) – Mawngap – New Shillong (Appx. 110 KM) will be taken up by MPTCL. The construction of the above transmission line doesn't require any permanent land acquisition and the temporary damages caused will be adequately compensated. Adequate provision has been made in NERPSIP for payment of compensation to the project affected families for any damages caused during the project.

We hope that implementation of the North Eastern Power System Improvement Project (NERPSIP) in the state of Meghalaya will definitely contribute in the socio-economic development of the state.

12/8/14

Shri K.N.War
Chief Engineer (Transmission)
MePTCL, Lumjingshai



MEGHALAYA POWER TRANSMISSION CORPORATION LIMITED
OFFICE OF THE CHIEF ENGINEER (Transmission)
LUM JINGSHAI:: Shillong : 793001.

KA JINGPYNBNA (NOTICE)

Ha

U Rangbah Shnong ,

.....









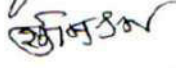

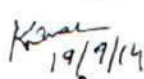

Kane ka long ka jingpynbna ba kan don ka jingialang paidbah ha HRD Centre jong ka MeECL, Umiam ha ka 19 tarik bnai September 2014, naduh ka por 11 baje mynstep ha ka ba ki Engineers jong ka MePTCL bad ka Power Grid (PGCIL) kin pynshai ha phi ia ka jingshna ia u tower line ba 220 KV na Killing sha Mawphlang bad na Mawphlang sha New Shillong. Lada don kino kino ki briew ki ba shong ha shnong jong phi, ki ba kwah ban tip bniah shaphang kane ka jingshna, kin sngewbha ban ia poi khnang khnang ha ka tei ka sngi bad por bala buh.

Khublei Shibun.

Kant 26/8/14
Shri K.N.War
Chief Engineer (Transmission)
MePTCL, Lumjingshai

PUBLIC HEARING HELD ON 19th SEPTEMBER 2014 FOR CONSTRUCTION OF 220KV KILLING-MAWPHLANG, MAWPHLANG-NEW SHILLONG-

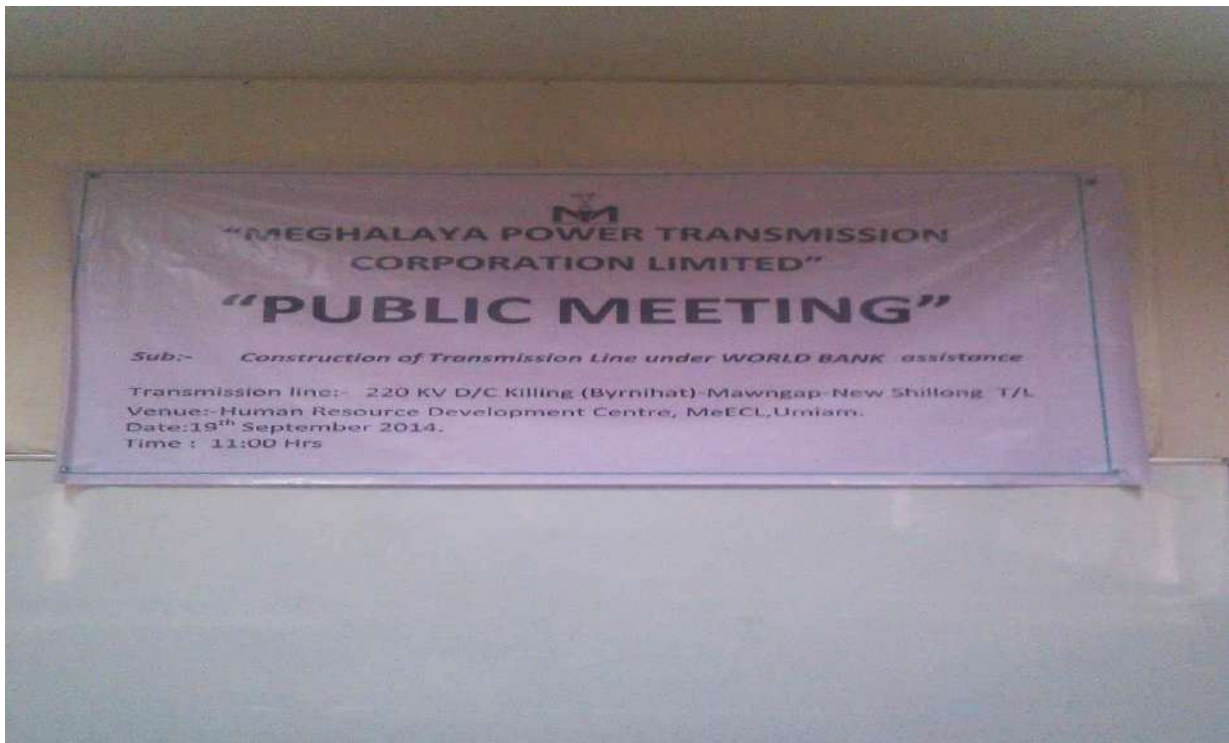
<u>Sl No.</u>	<u>Name</u>	<u>Address</u>	<u>Signature</u>
1.	Shri. H. Lyngdoh	Mawphlang	
2.	Shri R. Schliya	Mawphlang	
3.	Shri I. R. Kharsaynden	Mawtanaw.	
4.	Sri. K. S. Nongdhae	- do -	
5.	Sri. B. Jana	- do -	
6.	Shri. E. S. Umkong	Shangpangla	
7.	Shri. I. K. Lyngdoh Mawtanaw	- do -	
8.	Shri R. Kuebah	Mawphlang	
9.	Shri L. Sun	Umtyomist	
10.	Shri G. Wakkang	Nongpakhaw	
11.	Shri Th. Nongtang	Nongpakhaw	
12.	Sri S. Pathaw	Mawomist.	
13.	Sri G. Dkhot.	Umiam.	
14.	Sri W. Thompson	Umiam	
15.	Shri T. Doklety	Mawhai	
16.	Shri B. Nongmei	Umker	
17.	Shri L. Kharmatki	Umiam	
18.	Shri R. Mawein	Mawbi	
19.	Shri D. Mawbay	Mawkharskiy	
20.	Shri J. Lyngdoh	Umiam	
21.	Shri R. Sankemi	"	
22.	Shri P. Lyngdoh	Umiam	
23.	Shri L. S. Khambuli	Mawlan	

<u>Sl No</u>	<u>Name</u>	<u>Address</u>	<u>Signature</u>
24	Shri. W. E. Pakyanti	Mawlai	
25	Shri. R. War	Umiam	
26	Shri. K. Lyngwa	Umpeh	
27	Shri. L. Phamwar	U.P.P. Shillong	
28	Shri. S. Nongpyaj	Mawtaoan	
29	Shri. P. Nylhumbang	Nongpattro	
30	Shri. K. C. Berman, U. Mgr.	POWERGRID, Ahy	
31	Shri M. Marbanang	MePTCL	
32	Sh. Sukumar Mishra, DGM	POWERGRID	
33	Sh. N. M. S. Laskar, Dy. MGR (CEM)	MePTCL POWERGRID	
34	Shri K. N. Wai	CE (T), MePTCL, Shillong	 Kamal 19/9/14
35	Shri P. P. Kar.	Dy Dir (HRDC), MeECL, Umiam	 Ushan 19/9/14

Photographs of Public Consultation held at Byrnihat on 12.09.2014



Public Consultation held at Umium on 19.09.2014



Informal Group Meeting			
Date of meeting	Venue of Meeting	No. of Persons attended	Persons Attended
12.05.2019	Lamkyv village, East Khasi Hills	9	Project affected families, Village headman & general public
18.06.2019	Mynkre village, East Khasi Hills	14	Project affected families, Village headman & general public
27.06.2019	Village- Mynkre, East Khasi Hills	12	Project affected families, Village headman & general public

Informal Group Meetings held at Nongkohlew on 12.05.2019



Informal Group Meetings held at Mawripih on 18.06.2019



Informal Group Meetings held at Lamlyer on 27.06.2019

