COMPENSATION PLAN FOR TEMPORARY DAMAGES (CPTD)

FOR

T & D NETWORK IN EAST JAINTIA HILLS DISTRICT, MEGHALAYA

Prepared By

Environment and Social Management

POWER GRID CORPORATION OF INDIA LTD.

For

Meghalaya Power Transmission Corporation Ltd. (MePTCL)

&

Meghalaya Power Distribution Corporation Ltd. (MePDCL)

MEGHALAYA-2/CPTD/R52018 **OCTOBER, 2018**

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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
GoI	:	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 Word Bank

GLOSSARY

Regional Council/Autonomous District Council/ Village Council	:	An autonomous body/institution formed under the provisions of 6th 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 Jaintia Hill district 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 CPTD is guided by laws and regulations of the Government of India/ State Govt viz. The Electricity Act, 2003, The Indian Telegraph Act, 1885, MoP guidelines of Oct.' 2015 on RoW Compensation, Meghalaya Power Transmission Corporation Ltd. (MePTCL) & Meghalaya Power Distribution Corporation Ltd. (MePDCL)'s Environmental and Social Policy & Procedures Framework (ESPPF) and World Bank's Operational Policies.

ii. The project components include construction of one no. 132 kV D/C line of 27 km length & four new 33kV distribution lines of total 44.5 km length along with associated 132/33kV substation at Mynkre & 33/11 kV Mynkre, Rymbai, Lumshnong & Latyrke located in the East Jaintia 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/ POWERGRID[1] 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 may also be paid in three instances, if there are different damages during all the above three activities. Assessment of damages at each stage and payment of compensation is a simultaneous and continuous activity. Hence, CPTD updation will be a continuous process during construction of line for which updated semi-annual CPTD monitoring report shall be 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] *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.*

1. LILO of both circuits of MLHEP – Khliehriat 132 kV D/C line at Mynkre – **27 km**
2. Establishment of 2×50 MVA 132/33 kV new substation at **Mynkre**

B. Distribution System Components:

1. 33kV line from 132/33kV Mynkre (New) to 33/11 kV Mynkre (New) substation - **0.5 km**
2. 33kV line from 132/33kV Mynkre (New) to 33/11 kV Rymbai (New) substation - **16.0 km**
3. 33kV line from 132/33kV Mynkre (New) to 33/11 kV Lumshnong (New) substation – **10.0 km**
4. 33kV line from 132/33 kV Mynkre (New) to 33/11kV Latyrke (New) substation – **18.0 km**
5. Establishment of 33/11kV new substation at **Mynkre, Rymbai, Lumshnong & Latyrke**

iv. As per existing law, land for tower/pole and right of way is not acquired[2] and agricultural activities are allowed to continue after construction activity. Land requirements for erecting tower/ poles for transmission/ distribution lines are just minimal. All it requires is to place the foot, four of which warrants an area of 4-6 sq- ft. Thus, the actual impact is restricted to 4 legs of the tower. Further, line alignments are done in such a way so as to avoid settlements and / or structures and hence no relocation of population on account of Transmission Line (TL)/Distribution Line (DL) is envisaged. In case of Autonomous District Council (ADC) area is involved, No Objection Certificate (NoC) form 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/ community for all damages including cost of land below tower to its owner without acquiring it as per the laws and provisions laid 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 132 kV & 33 kV line are 27 meter & 15 meter respectively but average affected width/corridor would be limited to maximum 20 meter for 132 kV & 10 meter for 33 kV line. Accordingly, actual impacted area for crops and other damages worked out to be approx. 56.08 acre. Total number of trees to be affected is 2501. Private trees will be compensated as per the entitlement matrix. The total number of affected persons is estimated to be 38.

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 inform them about the routing of transmission 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

[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.*

of transmission/distribution lines and substation site. The process of such consultation to be continued during project implementation and even during Operation & Maintenance (O&M) stage. The CPTD will be disclosed to the affected households and other stakeholders by placing it on website. MePTCL & MePDCL & POWERGRID's site officials visit construction sites frequently during construction and meet with APs and discuss about norms and practices of damages and compensation to be paid for them. The executive summary of the CPTD and Entitlement Matrix in local language will be 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 World Bank Safeguard Policies as well as MePTCL & MePDCL's ESPPF and law of the land. 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 and (iii) MoP Guidelines of Oct.' 2015 on RoW Compensation. 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 given in **E-1**. Temporary damage will occur during construction of

transmission/distribution lines for which compensation is paid as per relevant norms. All APs are paid compensation for actual damages irrespective of their religion, caste and their economic status. One time lump sum assistance to vulnerable households on recommendation of State Authority. As an additional assistance, construction contractors are encouraged to hire local labour that has the necessary skills. MePTCL & MePDCL /IA will provide compensation to all APs including non-title holders as already mentioned in the entitlement matrix.

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.	Land coming in corridor of width of Right of Way **(#)**	Owner	15% of land cost as decided by Deputy Commissioner
3.	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.
4..	Other damages (if applicable)	All APs	Actual cost as assessed by the concerned authority.
5.	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.
6.	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
7.	Tribal/ Vulnerable APs	Vulnerable APs3	One time additional lump sum assistance not exceeding 25% of total compensation on recommendation of State Authority/ADC/VC.

(#) Compensation for land value as per MoP guidelines dated 15.10.2015 shall be paid once Govt. of Meghalaya adopts the said guidelines for implementation.

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

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

ix. No physical displacement is envisaged in the proposed project. Major damages in transmission/distribution line are not envisaged due to flexibility in routing of line. Displacement of structures is normally not envisaged in the transmission line projects. However, whenever it is necessary, 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 APs will be done and verified by revenue official for actual damages. Hence, compensation is paid parallely 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. This is a tentative budget which may change during the original course of implementation. The total indicative cost is estimated to be INR 609.09 Lakhs equivalent to USD 0.92 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.

xi. Public consultation and internal monitoring will be continued in an intermittent basis for the entire duration of project. 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 GoI'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. GoI 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 (GoI) 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: GoI) basis except the component of capacity building for Rs.89 crore, which GoI 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, GoI 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 and associated Extra High Voltage(EHV) & Distribution substations proposed in West Garo Hills & South West Garo Hills districts of Meghalaya State;

A. Transmission System:

1. LILO of both circuits of MLHEP – Khliehriat 132 kV D/C line at Mynkre – **27 km**
2. Establishment of 2×50 MVA 132/33 kV new substation at **Mynkre**

B. Distribution System:

1. 33kV line from 132/33kV Mynkre (New) to 33/11 kV Mynkre (New) substation - **0.5 km**
2. 33kV line from 132/33kV Mynkre (New) to 33/11 kV Rymbai (New) substation - **16 km**
3. 33kV line from 132/33kV Mynkre (New) to 33/11 kV Lumshnong (New) substation – **10 km**
4. 33kV line from 132/33 kV Mynkre (New) to 33/11kV Latyrke (New) substation - **18 km**
5. Establishment of 33/11kV new substation at **Mynkre, Rymbai, Lumshnong & Latyrke**

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

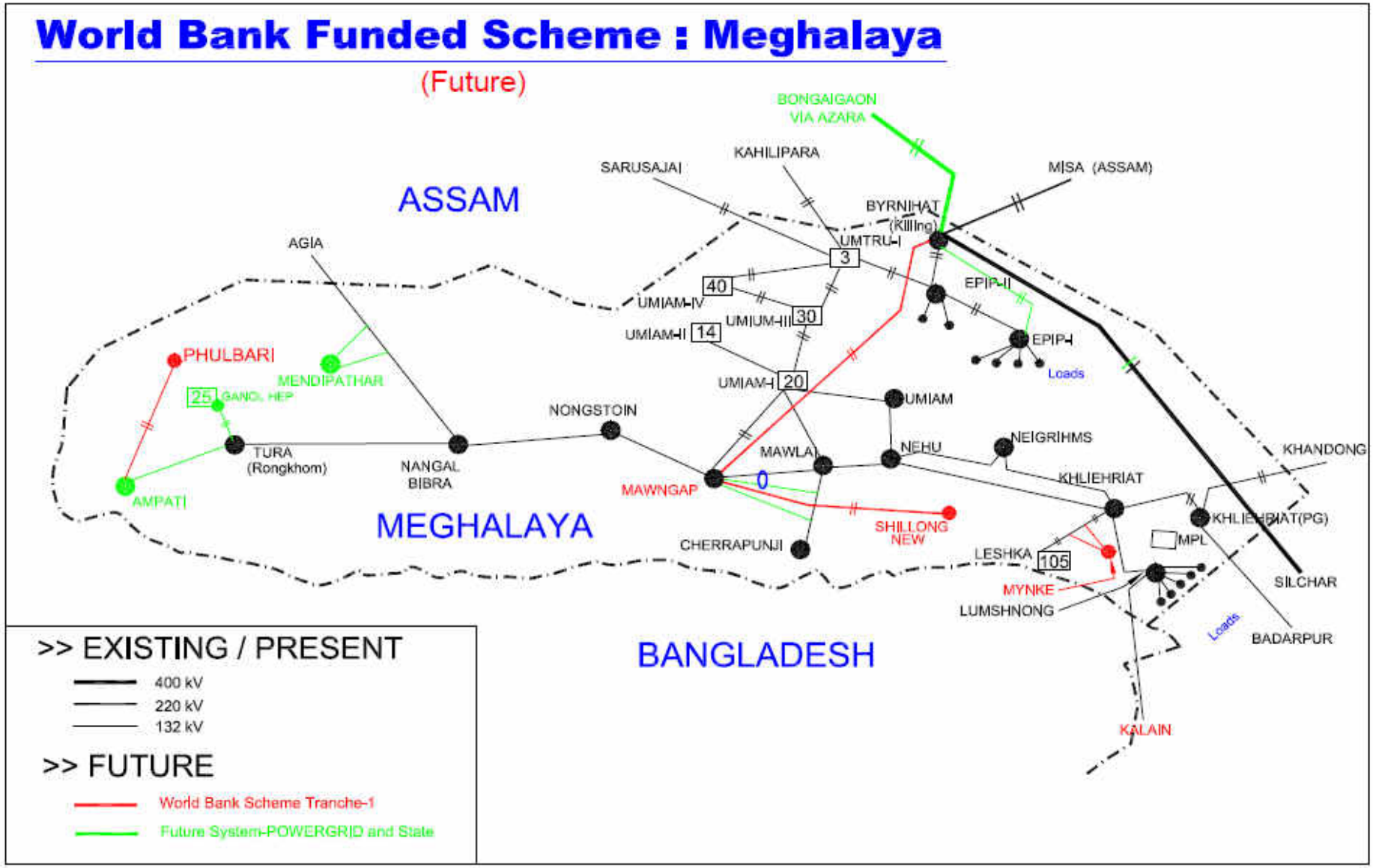
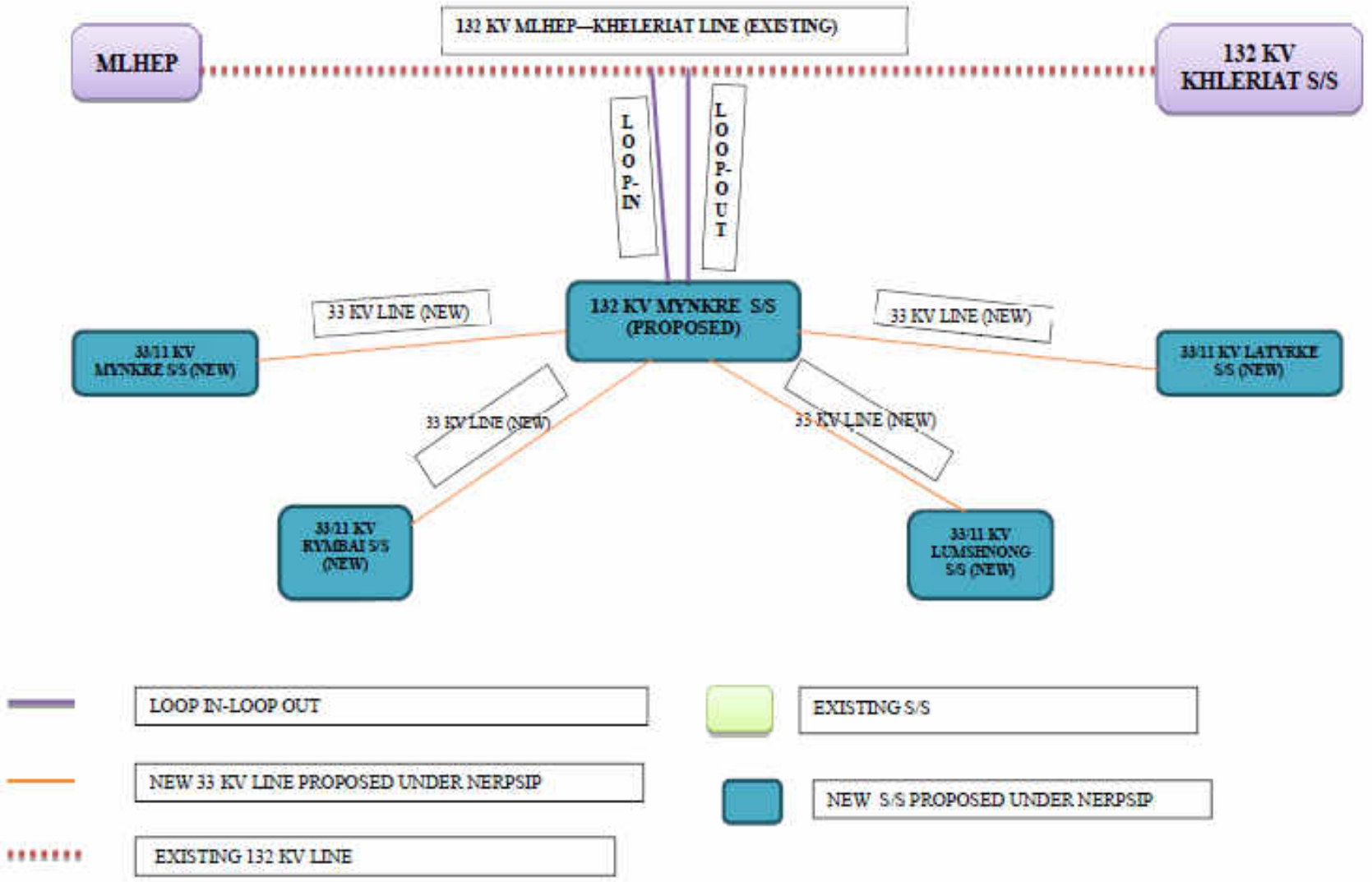


Figure 1.2. : Proposed T & D Network in East Jaintia Hills District under NERPSIP



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 presents (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. The CPTD is guided by The Electricity Act, 2003, The Indian Telegraph Act, 1885, MoP guidelines of 15th October 2015 on RoW Compensation, MePTCL & MePDCL's ESPPF and World Bank's Safeguard Policies.

1.4. Scope and Limitation of the CPTD

9. Based on the assessment of proposed project components and intervention, it has been established that there will be no permanent land acquisition required and the anticipated project impacts are temporary in nature in terms of impacts on land and loss of standing crops/trees only.
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/ POWERGRID[4] 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 shall be paid in three instances, if there are different damages during above all the three activities. Assessment of damages at each stage and payment of compensation is a simultaneous and continuous activity. Hence, CPTD updation will be a continuous process during construction of line for which updated semi-annual CPTD monitoring report shall be submitted by MePTCL & MePDCL/POWERGRID.

[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.*

1.5. Measures to Minimize Impact

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

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 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

2.2.2 East Jaintia Hills District

22. East Jaintia Hills district is hilly and tribal and is bounded by Bangladesh in the South, North

Cachar Hills District in the East and West Jaintia Hills District in the North and West. Its distance from the state capital is 97 kms and the National Highway 44 Connecting Shillong and the eastern part of Assam pass through the district. This district lies between latitude of 24°58' N to 25°45' N and longitude of 91° 59' E to 92° 51'E and has a total geographical area of 3793.47 sq. km..

23. Geo-morphologically, the district is an undulatory one, comprising dissected plateau, denudational high and low hills with deep gorges. The district represents a remnant of ancient plateau of Indian Peninsular shield uplifted to its present height due to tectonic activities in the past and deeply dissected suggesting several geotectonic and structural deformities that the plateau has undergone. The southern parts form a platform on which Tertiaries were deposited in the post-cretaceous period. Topography varies from gently rolling type to highly undulating type. The highest point of 1627m above MSL is observed at Maryngksin, in eastern part and the lowest point is 76m above MSL at Dawki.

24. There are total 2 blocks namely Khliehriat and Saipung with total 206 villages which come under this East Jaintia Hills with district.

2.2.2.1 Climate

25. The climate of the district is directly controlled by the southwest monsoon originating from the Bay of Bengal and the Arabian Sea. The climate shows a variation from the warm, humid tropical in the plains in the eastern and southern part and temperate climate is experienced in the western part around the district headquarter Jowai. The climatic conditions vary substantially from place to place due to wide differences in altitude. Therefore, according to the prevailing weather condition over the years, the district can be grouped into four conspicuous seasons namely winter season, pre-monsoon season, monsoon season and retreating season. The average annual rainfall in the district is 4173 mm recorded at Rymphum seed farm in Jowai. The district receives a fairly high rainfall throughout the year. Most of the precipitation occurs between April and October. The monthly maximum rainfall of 2655.80 mm was recorded in June 1995 at the same rain gauge station. The lowest annual rainfall was recorded in 2009 with 2623 mm and the highest annual rainfall was recorded in 1995 with 7695 mm. The rainfall pattern of Jaintia District is showing an increase for last few years.

2.2.2.2 Water Resources:

26. 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, Myntang, Umlarem and Meghna Basin comprises of sub- Basin of Kangra, Simsang, Dareng, Darong, RongIk, Kynshi, Umngi, Myntdu, Lubha. Meghalya is dominated by the Brahmaputra river (length: 2900 km). Its drainage area is roughly 935,500 sq. km.

27. The important rivers flowing through district East Jaintia are Umngot, Myntdu, Lukha and Mytang. However, the project activity is not going to impact these water bodies in any way as the route alignment of proposed transmission lines are quite far from these rivers.

2.2.2.3 Soil

28. The district shows different types of soils as the provenance differs widely. The loamy soil is the most prevalent one. They vary from sandy to clayey-loam in Jowai and Nongbah. Reddish lateritic soil is observed in the hill slope in Sonapur and alluvial soil occurs in the southern periphery of the district eg Dawki, Muktapur, Lakroh etc. The soil is acidic in nature, with low percentage of phosphorous and high organic carbons.

2.2.2.4 Ecological Resources

29. 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* (Teak), *Shorea robusta* (Sal), *Terminalia myricarpa* (Hoolock), *Gmelina arborea* (Gamari), *Pinus khasiana* (Pine), *Michelia champaca* (Champ) etc.

2.2.2.5 Crops

30. Agriculture is the main occupation of the people of East Jaintia Hills district where people cultivate rice as the major crop. Besides rice they also cultivate bettle-nuts (kwai) and bettle-leaves (pathi/ tympew), potato, sweet potato, maize, turmeric, ginger, black pepper etc. Most of the farmers in the area are depending on seasonal rainfall as only a few portion of the land are covered under irrigational system.

2.2.2.6 Human and Economic Development

31. 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.

32. 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.

33. Jaintia Hills District is rich in mineral resources like coal and limestone. It has a total deposit of 37.25 million tonnes of coal and 1054 million tonnes of limestone. The economic status of the East Jaintia district is primarily driven by agriculture and assistance schemes of Central and local government. Other sources of income also exist like sericulture, cottage industries, small industries, retailing and other small businesses. Poultry, Dairy Farming and Beekeeping are also practiced. Due to the abundance of limestone, many Cement factories have been set up. Coal mining at sites is also one of the major activities in the district.

2.2.3 Demography Features

2.2.3.1. Total Population

34. 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 Jaintia Hills district has a total of 3,95,124 population which is constituting 13.32% of State's population. The rural and urban population constitute 92.80% and 7.20% of total populations of the district. 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
Jaintia Hills	3,95,124	3,66,694	28,430	92.80	7.20

Source: Census of India, 2011

2.2.3.2 Male and Female Population

35. 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 Jaintia Hills district stands at 3,95,124 of which male population stands at 1,96,285 (49.68%) and female population stands at 1,98,839 (50.32%). The sex ratio of the district stands at 1013 females per thousand male which is higher 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
Jaintia Hills	3,95,124	1,96,285	1,98,839	49.68	50.32	1013

Source: Census of India, 2011

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

36. 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 Jaintia Hills district has a total SC population of 1,317 (0.33%) and ST population of 3,76,099 (95.16%). 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
Jaintia Hills	3,95,124	1,317	0.33	3,76,099	95.16

Source: Census of India, 2011

2.2.3.4 Literacy

37. The literacy rate of Jaintia Hills district stands at 47.46 % which is lower than State's average. However, the female literacy rate of the district is higher than the male literacy rate of the district. 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
Jaintia Hills	3,95,124	1,87,527	47.46	46.59	53.41

Source: Census of India, 2011

2.3.3.5. Total Workers (Male and Female)

38. 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 Jaintia Hills district has a total work population of 1,54,180 of which total Male (work) population stands at 88,839 (57.62%) and total female (Work) population stands at 65,341 (42.38%). 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
Jaintia Hills	1,54,180	88,839	65,341	57.62	42.38

Source: Census of India, 2011

2.3.3.6 Households

39. 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. Jaintia Hills district has a total of 66,028 households of which 61,086 (92.52%) households belong to rural area and 4,942 (7.48%) households 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
Jaintia Hills	66,028	61,086	4,942	92.52	7.48

Source: Census of India, 2011

III. LEGAL & REGULATORY FRAMEWORK

3.1. Overview

40. 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. For transmission/distribution line project, land for tower/pole and right of way is not acquired[5] and ownership of land remains with the owner and is allowed to continue cultivation after construction. However, as per existing laws[6] 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 and (iii) MoP guidelines on 15th October, 2015 for payment of compensation toward damages in regard to RoW. The compensation principles adopted for this project shall comply with applicable laws and regulations of the Government of India/ State Govt,, World Bank's Safeguard Policies and MePTCL & MePDCL's ESPPF.

3.2. Statutory Requirements

41. 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.

42. 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:

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[6] *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*

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 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).

3.2.3. MoP guidelines dated 15th October, 2015 for payment of compensation toward damages in regard to RoW

43. Ministry of Power (MoP) vide its order No. 3/7/2015-Trans dated 15th April'15 constituted a Committee comprising of representatives of various State Govt., MoP, Central Electricity Authority (CEA) & POWERGRID under the chairmanship of Special Secretary, MoP to analyze the issues relating to Right of Way for laying of transmission lines in the country and to suggest a uniform methodology for payment of compensation on this account. Based on recommendation of the Committee, Ministry of Power, Govt. of India vide its notification dated 15th Oct'15 has issued guidelines for payment of compensation for damages in regard to RoW (**Annexure-2**). Ministry of Power (MoP) has also written to all the States for taking suitable decisions regarding adoption of these guidelines considering that acquisition of land is a State subject. Till date Govt. of Meghalaya

has not adopted the said guidelines for implementation. However, once it is adopted, following compensation shall be paid to all affected farmers/land owners as per norms in addition to normal tree and crop damage compensation;

i) **Tower base**: Compensation @ 85% of land value as determined by District Magistrate or any other competent authority based on Circle rate/ Guideline value/ Stamp Act rates for tower base area (between four legs).

ii) **Line corridor**: Compensation @ maximum 15% of land value towards diminution of land value in the width of RoW corridor as determined by District Magistrate or any other competent authority based on Circle rate/ Guideline value/ Stamp Act.

3.3. World Bank's Environmental & Social Safeguard Policies

44. 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 are 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.

3.4. MePTCL/MePDCL's ESPPF

45. 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.

46. 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.

47. 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.

3.5. Basic Principles for the Project

48. 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.

49. 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 due to construction of overhead lines, cash compensation payable by cheque/through online transfer will be provided during construction works. Further, cash compensation (by cheque/ online transfer) to the APs for the temporary loss of crop and loss of trees if occurred, during the time of maintenance and repair.

IV. PROJECT IMPACTS

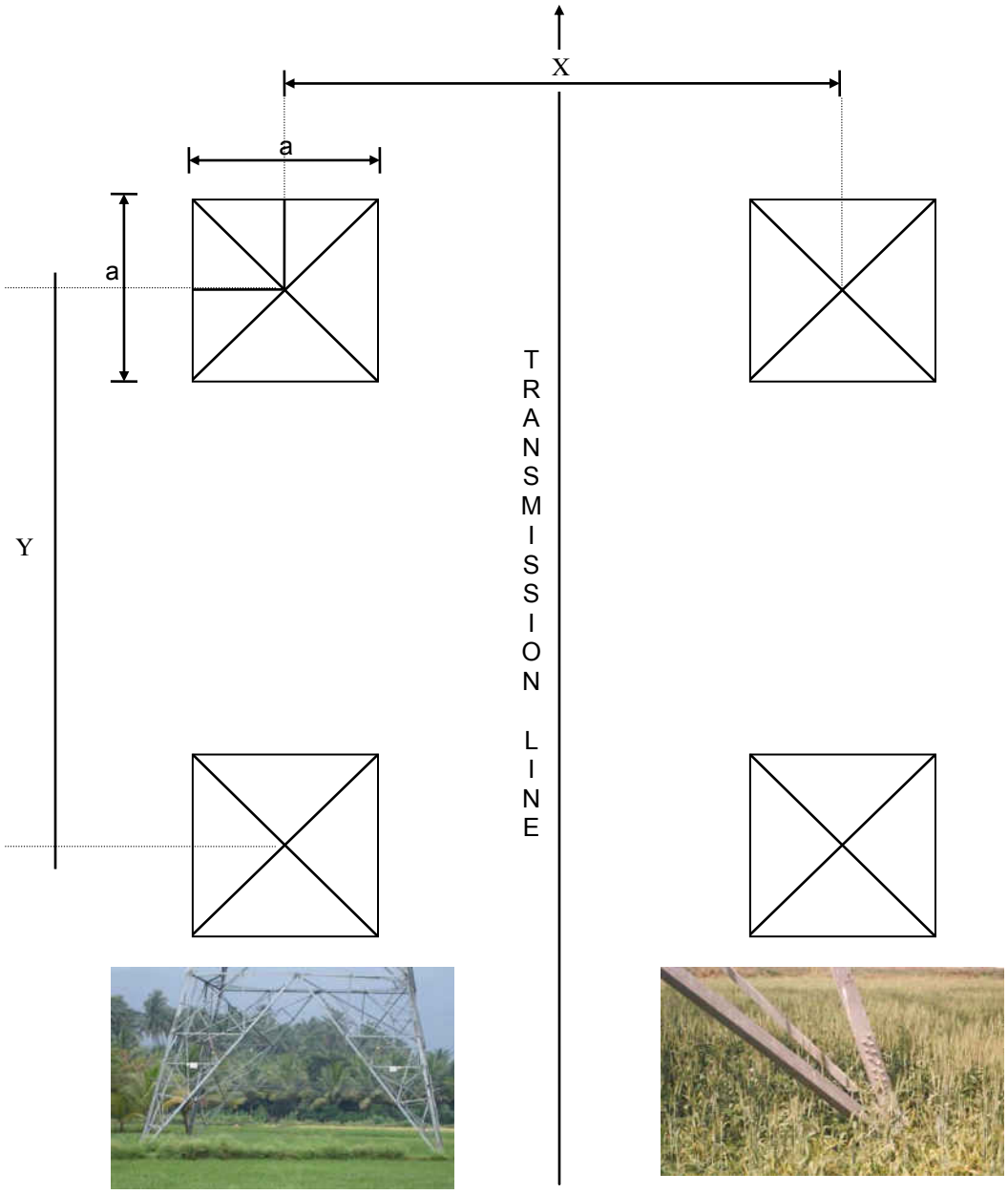
4.1. General

50. The project does not require any private land acquisition for construction of transmission/distribution lines. Therefore, no physical displacement is foreseen in the project. 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 along with maps of proposed route alignment is placed as **Annexure-3.** Therefore, the CPTD remains as draft, as actual temporary impacts shall be known only during implementation which will be based on the detailed design and final/check survey once the construction contractor is mobilized for implementation. 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 132 KV D/C transmission line is 27 meter whereas, the 33 kV distribution lines it is considered as 15 meter.

51. 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.

52. 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 132 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 actual base area impact). Due diligence confirms that land is either agricultural or barren, and

Figure- 4.1: Typical Plan of Transmission Line Tower Footing

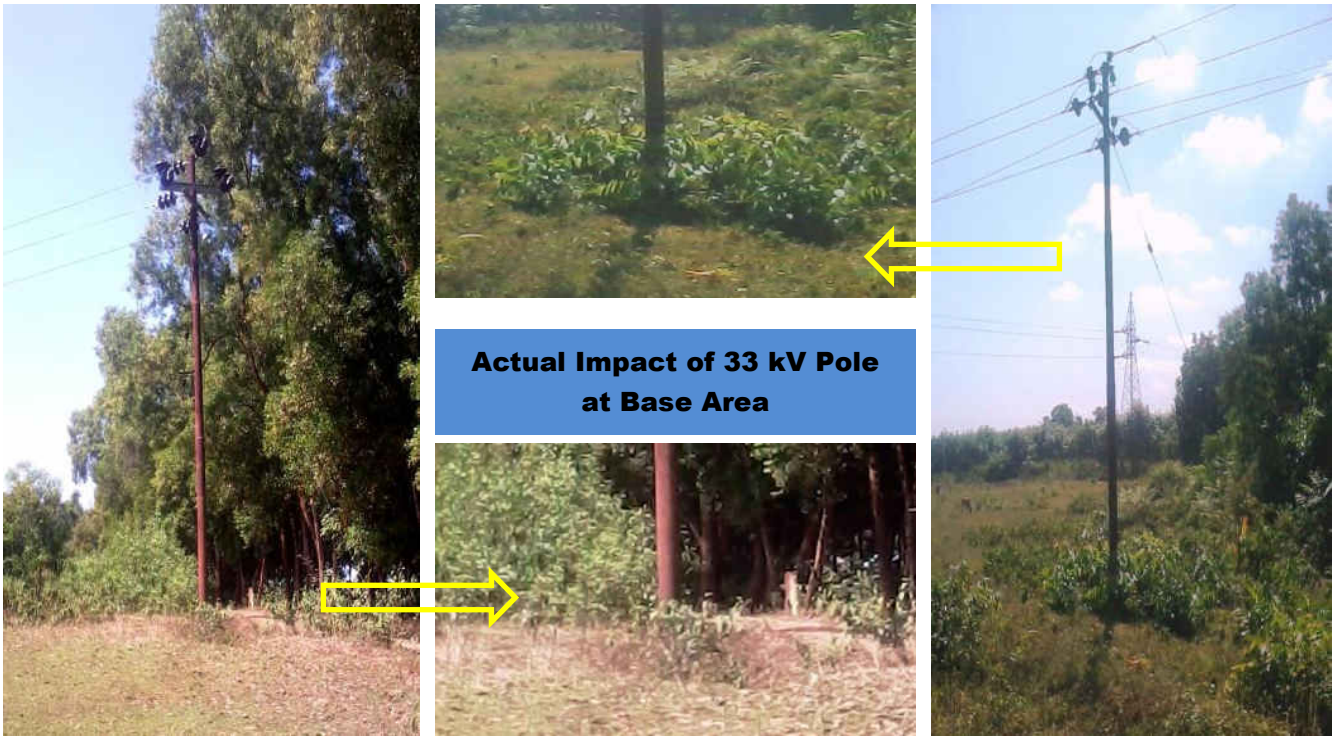


INDICATIVE MEASURES

X & Y = 5-10 METERS

a = 200- 300 mm

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



33 kV line inside city area of Assam

33 kV (H Pole) line inside substation

current land use is not altered and resumed after construction. As per present practices, full compensation (100%) towards land value in tower base areas as decided by the district authority is paid towards damages to the affected persons/land owners. Once Govt. of Meghalaya adopt the MoP guidelines dated 15th Oct,'15 , compensation toward damages in regard to RoW shall be paid as per the norms in addition to normal crop and tree damages .

53. 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.

54. 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.

55. Other Damages: Like bunds, water bodies, fish ponds, approach paths, drainage and irrigation canals 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 pays 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

56. The project components consist of establishment of one 132/33 KV new substation at Mynkre. Under the distribution component, construction of four 33/11 kV new substations at Mynkre, Rymbai, Lumshnong & Latyrke. Land for all substations were purchased on negotiated rates based on "willing buyer-willing seller basis". Since no involuntary 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	Remarks
132/33kV new substation at Mynkre	Yes	Nil	30	Private Land purchased on negotiated rates based on "willing buyer willing seller" basis
33/11kV new substation at Mynkre	Yes	Nil	Nil	
33/11 kV new substation at Rymbai	Yes	Nil	Nil	
33/11 kV new substation at Lumshnong	Yes	Nil	5	
33/11 kV new substation at Latyrke	Yes	Nil	6	

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

57. 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 71.5 kilometre (km) which will impact an estimated of 345.06 acre[7] of land. These include 2.9 km of line passing through agricultural land (12.225 acre of agricultural land), 12.80 km of private plantation/forest (66.71 acre of private plantation/forest land), 0.05 km (0.19 acre) riverine land and 55.75 km of government/barren land (265.93 acre of government land). 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	LILO of MLHEP – Khliehriat 132 kV D/C line at Mynkre	27	0.5 km/ (3.335 acre)	6.5 km/ (43.36 acre)	Nil	20 km/ (133.43 acre)	27.0 km (180.13 acre)
B.	**Distribution Line**						
2	132/33kV Mynkre (New) to 33/11 kV Mynkre (New) 33kV	15	Nil	Nil	Nil	0.5 (1.85 acre)	0.5 km/ (1.85 acre)
3	132/33kV Mynkre (New) to 33/11 kV Rymbai (New) 33kV		0.4 km/ (1.48 acre)	1.9 km/ (7.04 acre)	Nil	13.7 (50.78 acre)	16.0 km/ (59.30 acre)

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

4	132/33kV Mynkre (New) to 33/11 kV Lumshnong 33kV		1.2 km/ (4.45 acre)	1.6 km/ (5.93 acre)	Nil	7.2 (26.68 acre)	10.0 km (37.06 acre)
5	132/33 kV Mynkre (New) to 33/11kV Latyrke (New) 33kV		0.8 km/ (2.96 acre)	2.8 km/ (10.38 acre)	0.05km/ (0.19acre)	14.35 (53.19 acre)	18.0 km (66.72 acre)
Total			**2.9 km (12.225 acre)**	**12.8 km (66.71acre)**	**0.05km/ (0.19acre**	**55.75 km (265.93 acre)**	**71.5 km (345.06 acre)**

Source: Detailed Survey

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

58. 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 (27 m for 132 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 20 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.

59. 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 56.08 acre. Details of estimated impacted area for crop damages is 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 Compen-sation (km)	Total Land Area considered for Crop Compensation (Acre)
LILO of MLHEP – Khliehriat 132 kV D/C line at Mynkre	20	0.5	6.5	7.0	34.59
132/33kV Mynkre (New) to 33/11 kV Mynkre (New) 33kV	10	Nil	Nil	Nil	Nil
132/33kV Mynkre (New) to 33/11 kV Rymbai (New) 33kV		0.4	1.9	2.3	5.68
132/33kV Mynkre (New) to 33/11 kV Lumshnong 33kV		1.2	1.6	2.8	6.92

132/33 kV Mynkre (New) to 33/11kV Latyrke (New) 33kV		0.8	2.8	3.6	8.89
Total		**2.9**	**12.8**	**15.7**	**56.08**

Source: Detailed Survey

4.3.3 Actual loss of land for Tower Base & Pole

60. 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 132 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 27 km of 132 kV transmission line and 44.5 km of 33 kV distribution line proposed under the present scheme is estimated to be 0.005 acre & 0.027 acre respectively. 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.)
LILO of MLHEP – Khliehriat 132 kV D/C line at Mynkre	27	86	0.25	21.50
132/33kV Mynkre (New) to 33/11 kV Mynkre (New) 33kV	0.5	06	0.092	0.552
132/33kV Mynkre (New) to 33/11 kV Rymbai (New) 33kV	16	432	0.092	39.74
132/33kV Mynkre (New) to 33/11 kV Lumshnong 33kV	10	126	0.092	11.59
132/33 kV Mynkre (New) to 33/11kV Latyrke (New) 33kV	18	589	0.092	54.19
Total				**127.57**$\cong$0.032 acre

4.3.4 Land area for RoW compensation as per MoP Guidelines

61. As per the MoP guidelines on RoW compensation, provisional land area to be considered for land compensation has been calculated for proposed LILO of both circuits of MLHEP – Khliehriat 132 kV D/c line. However, land compensation @ 85% land value for tower base & @ maximum 15% land value for width of RoW corridor will be paid to land owners/farmer, if the said guideline is adopted by Govt. of Meghalaya for implementation. Details of calculation 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)	*RoW Corridor area per km (In acre)	Total land area for RoW Corridor (In acre)	Total Land area (In acre)
LILO of MLHEP-Khliehriat 132 kV D/C line at Mynkre	27	86	0.036	0.97	6.635	179.15	180.12

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

4.3.5. Loss of Trees

62. It is estimated that approx. 2501 number of 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*), Banana (*Musa acuminate*), Pineapple (*Ananas comosus*) 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.)
LILO of MLHEP – Khliehriat 132 kV D/C line at Mynkre	2365	Nil	2365
132/33kV Mynkre (New) to 33/11 kV Mynkre (New) 33kV	Nil	Nil	Nil
132/33kV Mynkre (New) to 33/11 kV Rymbai (New) 33kV	27	Nil	27
132/33kV Mynkre (New) to 33/11 kV Lumshnong (New) 33kV	35	Nil	35
132/33 kV Mynkre (New) to 33/11kV Latyrke (New) 33kV	74	Nil	74
Total	**2501**	**Nil**	**2501**

Source: Detailed Survey

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

63. It has been observed during survey that no structures including small storage sheds/huts used for storage of agricultural purpose exist along the right of way any proposed lines. However, if any such structure encountered during construction same shall be are compensated as per the entitlement matrix. Details on impacts on small structures which are merely nil in the instant project are given in **Table 4.7**

Table 4.7: Loss of Other Assets

Name of Line	Total number of storage sheds/huts
LILO of MLHEP – Khliehriat 132 kV D/C line at Mynkre	Nil
132/33kV Mynkre (New) to 33/11 kV Mynkre (New) 33kV	Nil
132/33kV Mynkre (New) to 33/11 kV Rymbai (New) 33kV	Nil
132/33kV Mynkre (New) to 33/11 kV Lumshnong 33kV	Nil
132/33 kV Mynkre (New) to 33/11kV Latyrke (New) 33kV	Nil
Total	**Nil**

Source: Detailed Survey

4.4. Details of Affected Persons

64. It is estimated that total number of affected persons which may be impacted temporarily will be approximately 38. 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
LILO of MLHEP – Khliehriat 132 kV D/C line at Mynkre	18
132/33kV Mynkre (New) to 33/11 kV Mynkre (New) 33kV	Nil
132/33kV Mynkre (New) to 33/11 kV Rymbai (New) 33kV	4
132/33kV Mynkre (New) to 33/11 kV Lumshnong (New) 33kV	10
132/33 kV Mynkre (New) to 33/11kV Latyrke (New) 33kV	6
Total	**38**

Source: Detailed Survey

4.5 Other Damages

65. 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

66. 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.

67. 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.

68. The project is being implemented in the tribal areas governed by Jaintia Hills Autonomous District Council (JHADC) 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- 4**). 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

69. 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
Length of Transmission/Distribution Line (Km)	27/ 44.5
Number of Towers/ Poles (Nos.)	86/1153
Total Area under RoW (in acre)	345.06
Total APs (Nos.)	38
Affected Structures (Small Sheds for agricultural purpose(Nos.))	Nil
Area of Temporary Damages for crop compensation (in acre)	56.08
Total Trees (Nos.)	2501

Source: Detailed Survey

V. ENTITLEMENTS, ASSISTANCE AND BENEFITS

5.1. Entitlements

70. 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.

71. 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

72. 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.	Land coming in corridor of width of Right of Way **(#)**	Owner	15% of land cost as decided by Deputy Commissioner
3.	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.
4..	Other damages (if applicable)	All APs	Actual cost as assessed by the concerned authority.
5.	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

Sl.	Type of Issue/ Impact	Beneficiary	Entitlement Options
			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
6.	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
7.	Tribal/ Vulnerable APs	Vulnerable APs8	One time additional lump sum assistance not exceeding 25% of total compensation on recommendation of State Authority/ADC/VC.

(#) Compensation for land value as per MoP guidelines dated 15.10.2015 shall be paid once Govt. of Meghalaya adopt the said guidelines for implementation.

* ***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

73. 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 immoveable 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:

74. 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.:

[8] Vulnerable APs include scheduled tribes residing in scheduled areas/ physically handicapped/ disabled families etc.

75. 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 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.

76. 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 inevitability 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.

77. 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 inevitability 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.

78. 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.

79. 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.

80. 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**.

5.4 Land Compensation for Tower Footing & RoW Corridor

As per present practices, full compensation (100%) towards land value in tower base areas as decided by the district authority is paid towards damages to the affected persons/land owners. However, MePTCL & MePDCL/POWERGRID shall pay the land compensation for tower footing and RoW corridor as per prescribed norms once Govt. of Meghalaya adopt MoP guidelines of Oct,'15 for implementation in State.

5.5. Compensation for Structure

81. 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 parallely with the construction activity of line.

5.6. Compensation Disbursement Module

82. 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.

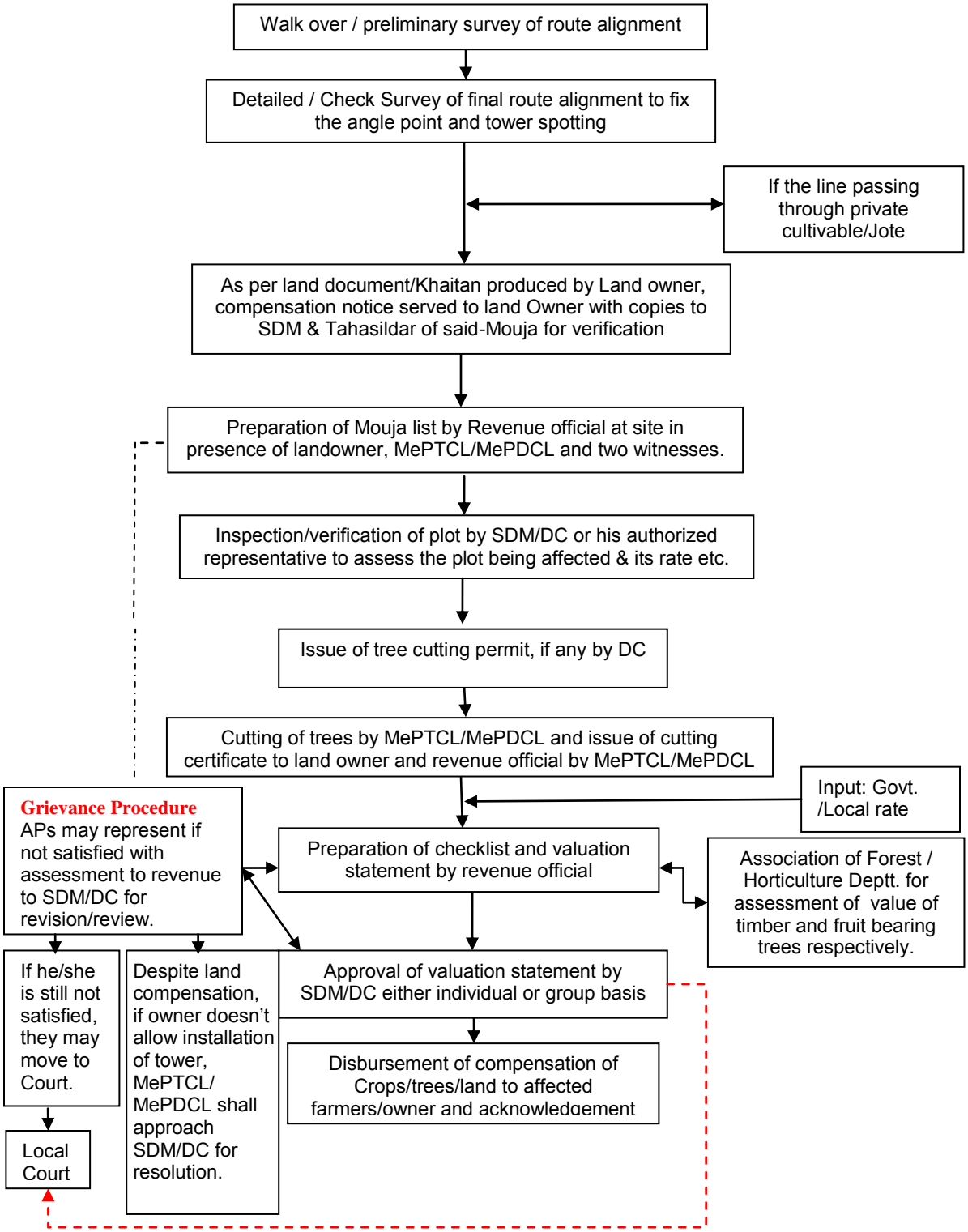
Table 5.2: Compensation Disbursement Module

Activity/Stage	Process	Maximum Time Period from Cut-Off date
Tower Foundation/ Erection/ Stringing	Serving of Notice ***(Cut-off date)***	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

83. 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.

84. 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. 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			
10.11.2014	Village- Mynkre, East Jaintia Hills	21	Members of Jaintia Hill Council, Senior members & General Public

Informal Group Meeting			
23.11.2017	Sutnga village, East Jaintia Hills	32	Project affected families, Village headman & general public
26.03.2018	Mynkre village, East Jaintia Hills	16	Project affected families, Village headman & general public
28.05.2018	Village- Mynkre, East Jaintia Hills	27	Members of Jaintia Hill Council, Senior members & General Public

85. 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.

86. 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;

87. 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

88. 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.

6.3. Information Disclosure

89. The draft/summary CPTD will be disclosed to the affected households and other stakeholders by placing it on website. MePTCL/MePDCL & POWERGRID site officials visit construction sites frequently during construction and meet with APs and discuss about norms and practices of damages and compensation to be paid for them. 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. The executive summary of the CPTD and Entitlement Matrix in local language will be placed at construction offices/ sites. The summary of CPTD will 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 period.

VII. INSTITUTIONAL ARRANGEMENTS

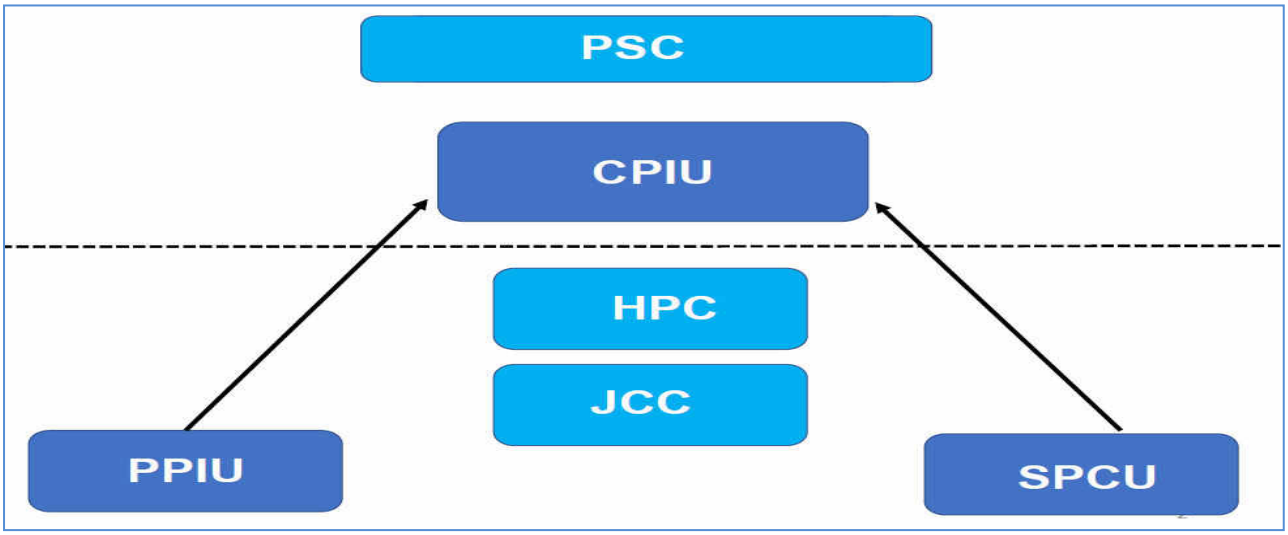
7.1 Administrative Arrangement for Project Implementation

90. Ministry of Power (MoP), GoI 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, GoI. CPIU shall also assist MoP, GoI in monitoring project progress and in its coordination with The Bank.



7.2. Review of Project Implementation Progress:

91. 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 GoI and The Bank.

D. A review will be held among MoP, GoI, 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 GoI/ State Government level. Minutes of the meeting shall be prepared by IA and shared with all concerned.

7.3. Arrangement for Safeguard Implementation

92. 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 Dy. General Manager (DGM) to oversee Environmental and Social issues of the projects and to coordinate the SPCU & Site Offices.

93. 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.

94. 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 parallely

VIII. GRIEVANCE REDRESS MECHANISM

95. 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

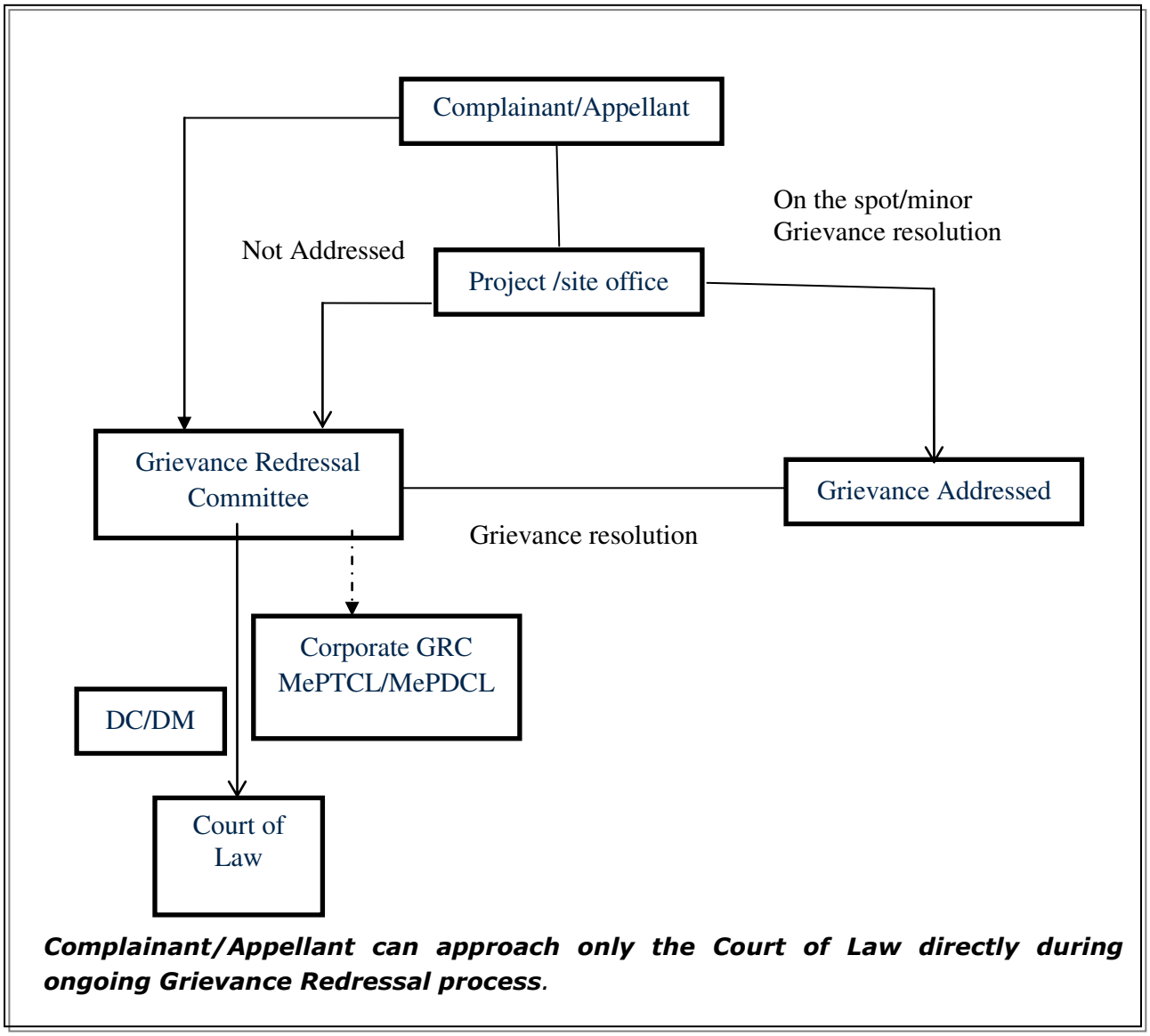
96. The complainant will also be allowed to submit its complaint to local project official who will pass it to GRC immediately but not more than 5 days of receiving such complaint. The first meeting of GRC will be organized within 15 days of its constitution/disclosure to formulate procedure and frequency 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.

97. 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.

98. 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

99. 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 (@ 85% of the land cost) and RoW Corridor (max. @15% of the land cost) as per the norms. Accordingly, cost has been estimated for proposed 132 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 crops losses, other damages etc. As per MePTCL/MePDCL & POWERGRID's previous projects and 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. In any case no residential structure shall be affected. Therefore, provisions of budget expenditure for implementation of CPTD for the subprojects considering corridor of 20 meter & 10 meter maximum for 132 kV & 33 kV line respectively.

9.1. Compensation for Land for Tower Base and RoW Corridor

100. The land area for 132 kV tower base is estimated as 0.036 acre per km. Similarly, for RoW corridor the area is estimated 6.635 acre per km. The cost of land is estimated @ Rs. 15 lakh/acre considering the land use type as agriculture land in rural setting. Accordingly the cost of land compensation towards tower base & RoW corridor for overhead line is thus estimated as Rs. 415.455 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)	Land Area for RoW Corridor* (acre)	Avg. Cost of Land (Lakhs / acre)	Total in Lakhs (Tower base @ 85% & Corridor @15%)
LILO MLHEP – Khliehriat 132 kV D/C line	27	0.97	179.15	15.00	415.455

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

9.2. Compensation for Crops and Trees

101. 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

Sl No	Name of the Line	Total Length (Km)	Compensation /Km (In Lakh)	Total compensation cost for Crops & trees (Lakh)
1.	LILO MLHEP – Khliehriat 132 kV D/C line at Mynkre	27	5.0	135.00
2.	132/33kV Mynkre (New) to 33/11 kV Mynkre (New) 33kV	0.5	0.5	0.25
3.	132/33kV Mynkre (New) to 33/11 kV Rymbai (New) 33kV	16	0.5	8.00
4.	132/33kV Mynkre (New) to 33/11 kV Lumshnong 33kV	10	0.5	5.00
5.	132/33 kV Mynkre (New) to 33/11kV Latyrke (New) 33kV	18	0.5	9.00
Total				**157.25**

9.3. Summary of Budget

102. The total indicative cost is estimated to be **INR 609.56 Lakhs** equivalent to **USD 1.017** 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	157.25
A-2: Land Compensation for Tower Base and RoW Corridor[9]	415.46
Sub Total-A	**572.71**

[9] *Payment of Compensation subject to adoption/implementation of MoP guidelines of Oct.'15 by Govt. of Meghalaya*

B: Implementation Support Cost	
B-1: Man-power involved for CPTD Implem. & Monitoring	4.90
B-2: External Monitoring, if required	5.00
Sub Total- B	**9.90**
Total (A+B)	**582.61**
Contingency (3%)	**17.48**
Grand Total	**600.09 ≅ 0.92 million USD**

X. IMPLEMENTATION SCHEDULE

103. 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	2017				2018				2019			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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

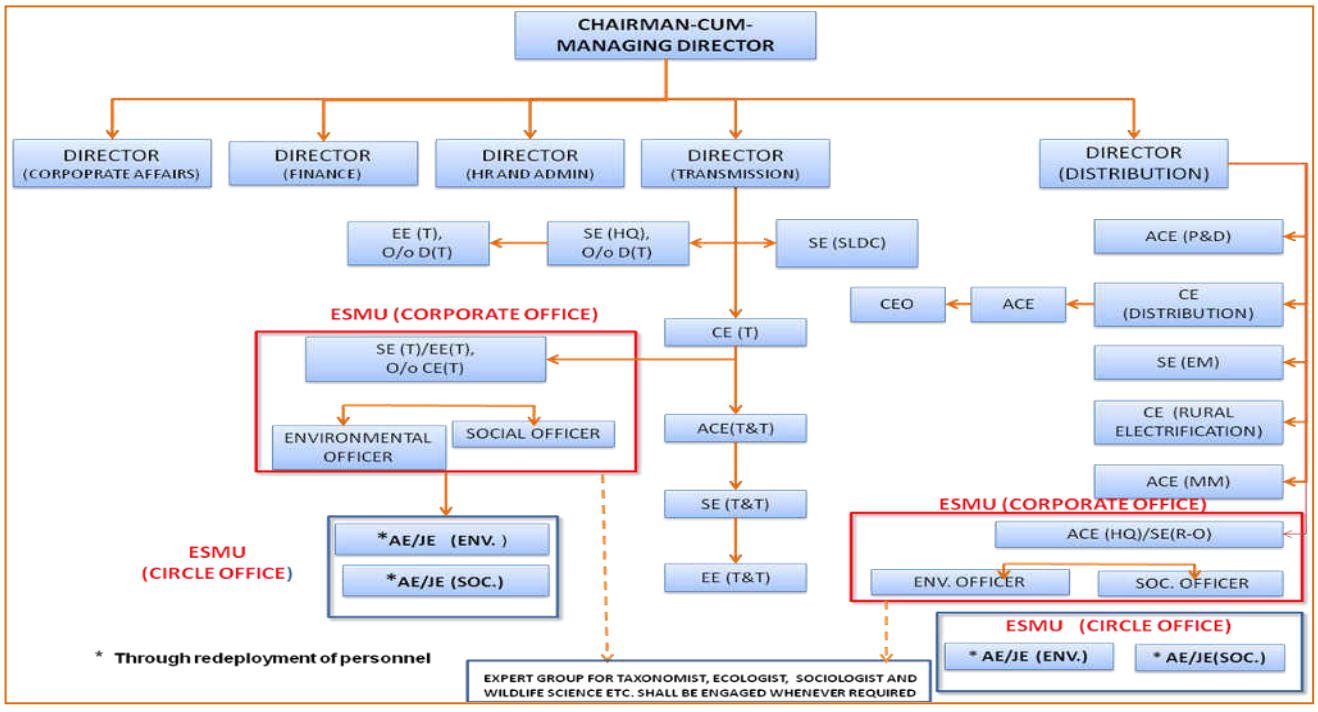
104. Monitoring is a continuous process at all stages of project. Monitoring of CPTD implementation will be the responsibility of POWERGRID as well as the State Utility.

105. 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.

106. 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.

107. 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



ANNEXURE – 1

EVALUATION OF ALTERNATIVES ROUTE ALIGNMENT

EVALUATION OF ALTERNATIVES ROUTE ALIGNMENT

A. LILO of both circuits of MLHEP – Khliehriat 132 kV D/C line at Mynkre

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)	27.0	28.4	30.6
ii.	Terrain			
	Hilly (Gentle slopes)	90%	90%	90%
	Plain	10%	10%	10%
2.	**Environmental details**			
i.	Name of District through which the line passes	East Jaintia Hills	East Jaintia Hills	East Jaintia Hills
ii.	Town in alignment	No major towns are encountered. However, the route touches villages Diensatlang & Musniang.	No major towns are encountered. However, the route touches villages namely Moo-Nongtdu, Pynurkba, Umrasian & Umrasong .	No major towns are encountered. However, the route touches villages Musnianggrim, Umsatai & Ladwahwapung.
iii.	House within ROW	Shall be ascertaine after detaile survey	Shall be ascertaine after detailed surve	Shall be ascertaine after detailed surve
iv.	Forest involvement in Ha/Km	Nil	Nil	Nil
v.	Type of Fore (RF/PF/Wildlife Area/Elephant corridor/Biodiversity Hotspots/Biosphere Reserve/Wetlands any oth environmentally sensitive area.			
vi.	Density of Forests	N.A.	NA	NA

S.N	Description	Alternative-I	Alternative-II	Alternative-III
vii.	Type of flora	Arcea Nut (*Areca catechu*), Teak (*Tectona grandis*), Sal (*Shorea robusta*), Bamboo (*Bambusa vulgaris* Banana (*Musa acuminate*), Pineapple (*Anana comosus*) etc	Arcea Nut (*Areca catechu*), Teak (*Tectona grandis*), Sal (*Shorea robusta*), Bamboo (*Bambusa vulgaris* Banana (*Musa acuminate*), Pineapple (*Anana comosus*) etc	Arcea Nut (*Areca catechu*), Teak (*Tectona grandis*), Sal (*Shorea robusta*), Bamboo (*Bambusa vulgaris* Banana (*Musa acuminate*), Pineapple (*Anana comosus*) etc
viii.	Type of fauna	Monitor Liza (*Veranus benghalensis*), Sparrow (*Passer domesticus*), Bo (*Sus scro cristatus*), Jung Cat (Felis chaus Assamese Macaqu (*Macaca assamensis*), etc	Monitor Liza (*Veranus benghalensis*), Sparrow (*Passer domesticus*), Bo (*Sus scro cristatus*), Jung Cat (Felis chaus Assamese Macaqu (*Macaca assamensis*), etc	Monitor Liza (*Veranus benghalensis*), Sparrow (*Passer domesticus*), Bo (*Sus scro cristatus*), Jung Cat (Felis chaus Assamese Macaqu (*Macaca assamensis*), etc
ix.	Endangered species, any	Nil	Nil	Nil
x.	Historical/cultural monuments	Nil	Nil	Nil
xi.	Any other relevant information	Line is mostly passing through barren/ abandoned coal mine areas.	Line is mostly passing through village council owned land having tree cover and also through barren/ abandoned coal mine area.	Line is mostly passing village council owned land having tree cover and also through barren/ abandoned coal mine area.
3	**Compensation Cost (in Lakhs)**			
i.	Crop (Non Forest)	Estimated @ 5 Lakhs per Km	Estimated @ 5 Lakhs per Km	Estimated @ 5 Lakhs per Km
ii.	Forest (CA+NPV)	N.A.	N.A.	N.A.
4.	**No. of Crossings (Nos.)**			
i.	Highway (National/State)	Nil	Nil	Nil
ii.	Power line	Nil	Nil	Nil
iii.	Railway line	Nil	Nil	Nil
iv.	River crossing	Nil	Nil	Nil

S.N	Description	Alternative-I	Alternative-II	Alternative-III
5.	**Overall Remarks**	Easier access due to existing approach roads & paths with fewer RoW problems as line is mostly passing through barren abandoned coal mine areas.	Relatively more difficult due to poor approach roads an paths up to tower locations. Line is mostly passing through village council owned land having tree cover.	Access is very difficult due to poor approach roads an paths up to tower locations. Line is mostly passing through village council owned land having tree cover.

From the above comparison of the three different alternatives, it is evident that Alternative-I is not only shorter in length than Alternative –II and Alternative-III, but doesn't have any Forest Involvement also. At the same time, Alternative-I is passing mostly along the existing state Road and has involvement of more plain area. So, lesser degree of construction and O&M problems are expected in Alternative-I, compared to other two Alternatives. Hence, Alternative - I is considered as the most optimum route and recommended for detailed survey.

B. ANALYSIS OF ALTERNATIVES FOR DISTRIBUTION LINES

Following distribution lines are proposed under subject schemes;

S. No	Name of the distribution line with length	
1	132/33kV Mynkre (New) to 33/11 kV Mynkre (New) 33kV line	- 0.5 km
2	132/33kV Mynkre (New) to 33/11 kV Rymbai (New) 33kV line	-16.0 km
3	132/33kV Mynkre (New) to 33/11 kV Lumshnong (New) 33kV line	-10.0 km
4	132/33 kV Mynkre (New) to 33/11kV Latyrke (New) 33kV line	-18.0 km

Since the subproject distribution lines at Sl. No. 1, & 3 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 & 4 having line length of more than 10 kms, detail alternative route alignment study is as follows:

1. 33 kV LINE MYNKRE (NEW) 132 kV S/S - RYMBAI (NEW) 33 kV S/S

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)	16.0	17.3	18.7
ii.	Terrain			
	Hilly (Gentle slopes)	90%	90%	90%

S.N	Description	Alternative-I	Alternative-II	Alternative-III
	Plain	10%	10%	10%
2.	**Environmental details**			
i.	Name of District through which the line passes	East Jaintia Hills	East Jaintia Hills	East Jaintia Hills
ii.	Town in alignment	No major towns. However two villages Rymbai & Mynkre are encountered.	No major towns. However two villages Rymbai & Mynkre are encountered.	No major towns. However, few villages like Kairang, Mynkre Nongthyme, Nongshing & encountered.
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
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 (*Areca catechu*), Teak (*Tectona grandis*), Sal (*Shorea robusta*), Bamboo (*Bambusa vulgaris*), Banana (*Musa acuminate*), Pineapple (*Ananas comosus*) etc	Arcea Nut (*Areca catechu*), Teak (*Tectona grandis*), Sal (*Shorea robusta*), Bamboo (*Bambusa vulgaris*), Banana (*Musa acuminate*), Pineapple (*Ananas comosus*) etc	Arcea Nut (*Areca catechu*), Teak (*Tectona grandis*), Sal (*Shorea robusta*), Bamboo (*Bambusa vulgaris*), Banana (*Musa acuminate*), Pineapple (*Ananas comosus*) etc
viii.	Type of fauna	Monitor Lizard (*Veranus benghalensis*), Sparrow (*Passer domesticus*), Boar (*Sus scrofa cristatus*), Jungle Cat (Felis chaus), Assamese Macaque (*Macaca assamensis*), etc	Monitor Lizard (*Veranus benghalensis*), Sparrow (*Passer domesticus*), Boar (*Sus scrofa cristatus*), Jungle Cat (Felis chaus), Assamese Macaque (*Macaca assamensis*), etc	Monitor Lizard (*Veranus benghalensis*), Sparrow (*Passer domesticus*), Boar (*Sus scrofa cristatus*), Jungle Cat (Felis chaus), Assamese Macaque (*Macaca assamensis*), etc
ix.	Endangered species, if any	Nil	Nil	Nil
x.	Historical/cultural monuments	Nil	Nil	Nil

S.N	Description	Alternative-I	Alternative-II	Alternative-III
xi.	Any other relevant information	Line is mostly passing through barren coal mine areas	Line is mostly passing village council owned land and reclaimed coal mine areas having some plantation.	Line is mostly passing village council owned land having medium dense tree cover.
3	**Compensation Cost (in Lakhs)**			
iii.	Crop (Non Forest)	Estimated @ 0.5 Lakhs per Km	Estimated @ 0.5 Lakhs per Km	Estimated @ 0.5 Lakhs per Km
iv.	Forest (CA+NPV)	N.A.	N.A.	N.A.
4.	**No. of Crossings (Nos.)**			
v.	Highway (National/State)	Nil	Nil	Nil
vi.	Power line	Nil	Nil	Nil
vii.	Railway line	Nil	Nil	Nil
viii.	River crossing	Nil	Nil	Nil
5.	**Overall Remarks**	Shortest line length with minimum tree felling as the line is passing through and barren coal mine area	Line is mostly passing through village council owned land and reclaimed coal mine areas having plantation.	Line is mostly passing through village council owned land having tree cover and also longest in line length

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. 33 KV LINE MYNKRE (NEW) 132 KV S/S - LATYRKE (NEW) 33 kV S/S

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)	18	16.4	16.2
ii.	Terrain			
	Hilly (Gentle slopes)	95%	100%	100%
	Plain	5%	-	-
2.	**Environmental details**			
i.	Name of District through which the line passes	East Jaintia Hills	East Jaintia Hills	East Jaintia Hills

S.N	Description	Alternative-I	Alternative-II	Alternative-III
ii.	Town in alignment	Nil Nearby villages are Latyrke, Lamyisiang & Mynkre	Nil Nearby villages are Latyrke, Tangsko, Larseng & Mynkre	Nil Nearby villages are Latyrke & Mynkre.
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
v.	Type of Forest (RF/PF/Mangrove/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 (*Areca catechu*), Teak (*Tectona grandis*), Sal (*Shorea robusta*), Bamboo (*Bambusa vulgaris*), Banana (*Musa acuminate*), Pineapple (*Ananas comosus*) etc	Arcea Nut (*Areca catechu*), Teak (*Tectona grandis*), Sal (*Shorea robusta*), Bamboo (*Bambusa vulgaris*), Banana (*Musa acuminate*), Pineapple (*Ananas comosus*) etc	Arcea Nut (*Areca catechu*), Teak (*Tectona grandis*), Sal (*Shorea robusta*), Bamboo (*Bambusa vulgaris*), Banana (*Musa acuminate*), Pineapple (*Ananas comosus*) etc
viii.	Type of fauna	Monitor Lizard (*Veranus benghalensis*), Sparrow (*Passer domesticus*), Boar (*Sus scrofa cristatus*), Jungle Cat (Felis chaus), Assamese Macaque (*Macaca assamensis*), etc	Monitor Lizard (*Veranus benghalensis*), Sparrow (*Passer domesticus*), Boar (*Sus scrofa cristatus*), Jungle Cat (Felis chaus), Assamese Macaque (*Macaca assamensis*), etc	Monitor Lizard (*Veranus benghalensis*), Sparrow (*Passer domesticus*), Boar (*Sus scrofa cristatus*), Jungle Cat (Felis chaus), Assamese Macaque (*Macaca assamensis*), etc
ix.	Endangered species, if any	Nil	Nil	Nil
x.	Historical/cultural monuments	Nil	Nil	Nil
xi.	Any other relevant information	Line is routed mostly along the NH and passing through coal mine areas and some village council owned land	Line is mostly passing village council owned land having tree cover.	Line is mostly passing village council owned land having tree cover.
3	**Compensation Cost (in Lakhs)**			
v.	Crop (Non Forest)	Estimated @ 0.5 Lakhs per Km	Estimated @ 0.5 Lakhs per Km	Estimated @ 0.5 Lakhs per Km

S.N	Description	Alternative-I	Alternative-II	Alternative-III
vi.	Forest (CA+NPV)	N.A	N.A	N.A
4.	**No. of Crossings (Nos.)**			
ix.	Highway (National/State)	Nil	Nil	Nil
x.	Power line	Nil	Nil	Nil
xi.	Railway line	Nil	Nil	Nil
xii.	River crossing	Nil	Nil	Nil
5.	**Overall Remarks**	Although line length is longer, fewer problems is anticipated as route is accessible due to its proximity to National Highway and involvement of minimum tree felling.	Relatively more due to inaccessibility, involvement of more tree felling.	Comparatively more due to inaccessibility up to route alignment and involvement of more tree felling. .

From the comparative analysis of three alternatives route alignment studied, it is observed that though Alternative-I is longer in length than other two alternative but it mostly passes through barren coal mine land devoid of trees thus, significantly reducing RoW issues and unnecessary tree felling. Also since the proposed route is aligned along the National Highway to a large extent, construction, operation and maintenance will be easier due to easy accessibility. Hence, Alternative - I is considered as the most optimized route and recommended for detailed survey.

ANNEXURE – 2

MOP GUIDELINES DATED 15TH OCT.'15 FOR PAYMENT OF COMPENSATION FOR TRANS LINE

No.3/7/2015-Trans
Government of India
Ministry of Power
Shram Shakti Bhawan
Rafi Marg, New Delhi – 110001

Dated, 15th October, 2015

To

1. Chief Secretaries/Administrators of all the States/UTs
   (As per list attached)
2. Chairperson, CEA, New Delhi with the request to disseminate the above guidelines to all the stakeholders.
3. CMD, PGCIL, Gurgaon.
4. CEO, POSOCO, New Delhi.
5. Secretary, CERC, New Delhi.
6. CMD of State Power Utilities/SEBs

Subject: Guidelines for payment of compensation towards damages in regard to Right of Way for transmission lines.

During the Power Ministers Conference held on April 9-10, 2015 at Guwahati with States/UTs, it has, *inter alia*, been decided to constitute a Committee under the chairmanship of Special Secretary, Ministry of Power to analyse the issues related to Right of Way for laying of transmission lines in the country and to suggest a uniform methodology for payment of compensation on this count. Subsequently, this Ministry had constituted a Committee with representatives from various State Governments and others. The Committee held several meetings to obtain the views of State Governments on the issue and submitted its Report along with the recommendations (copy of the Report is at **Annex-1**).

2. The Recommendations made by the Committee are hereby formulated in the form of following guidelines for determining the compensation towards "damages" as stipulated in section 67 and 68 of the Electricity Act, 2003 read with Section 10 and 16 of Indian Telegraph Act, 1885 which will be in addition to the compensation towards normal crop and tree damages. This amount will be payable only for transmission lines supported by a tower base of 66 KV and above, and not for sub-transmission and distribution lines below 66 KV:-

(i) Compensation @ 85% of land value as determined by District Magistrate or any other authority based on Circle rate/ Guideline value/ Stamp Act rates for tower base area (between four legs) impacted severely due to installation of tower/pylon structure;

(ii) Compensation towards diminution of land value in the width of Right of Way (RoW) Corridor due to laying of transmission line and imposing certain restriction would be decided by the States as per categorization/type of land in different places of States, subject to a maximum of 15% of land value as determined based on Circle rate/ Guideline value/ Stamp Act rates;

(iii) In areas where land owner/owners have been offered/ accepted alternate mode of compensation by concerned corporation/ Municipality under Transfer Development Rights (TDR) policy of State, the licensee /Utility shall deposit compensation amount as per (i) & (ii) above with the concerned Corporation/ Municipality/ Local Body or the State Government.

(iv) For this purpose, the width of RoW corridor shall not be more than that prescribed in the table at **Annex-2**and shall not be less than the width directly below the conductors.

3. Necessary action may kindly be taken accordingly. These guidelines may not only facilitate an early resolution of RoW issues and also facilitate completion of the vital transmission lines through active support of State/ UT administration.

4. All the States/UTs etc. are requested to take suitable decision regarding adoption of the guidelinesconsidering that acquisition of land is a State subject.

Yours faithfully,

Jyoti Arora.

(Jyoti Arora)
Joint Secretary (Trans.)
Tele: 011-2371 0389

Copy, along with enclosure, forwarded to the following:

1. Secretaries of Government of India (Infrastructure Ministries/Deptt including MoEF - As per attached list)
2. Prime Minister's Office (Kind Attn: Shri Nripendra Mishra, Principal Secretary to PM).
3. Technical Director, NIC, Ministry of Power with the request to host on the website of Ministry of Power.

Copy to PS to Hon'ble MoSP (IC) / Secretary (Power) / AS (BNS) / AS (BPP) / All Joint Secretaries/EA/ All Directors/DSs, Ministry of Power.

ANNEXURE – 3

DETAILS OF TOWER/POLE SCHEDULE OF PROPOSED LINES

UNIQUE STRUCTURES & TOWERS LTD

TW-02 (Pro-053B):- Construction of LILo of both circuits of 132kV D/c MLHEP_Khliehriat line at Mynkre Sub-station.

Tower Schedule of Loop In Line from Tapping point i.e. Existing Location 62 to AP 23A (Route Length-6.029Kms).

Client:- Power Grid Corporation of India Limited.

Date:- ~~3 Oct 17~~ 25.09.2017

SL. NO.	AP NO.	Tower No	Angle of Deviation	TOWER TYPE	GPS Coordinates		Reduced Level at Locatin (M)	SPAN (M)	Section Length (M)	Cum-ulative route in Length (M)	Sum of adjacent Span (M)	Wind Span	Weight Span HOT(M)			Weight Span COLD (M)			Remarks, if any
					Easting	Northing							LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
1	Ex Loc 62	Ex Loc 62	00°00'00"		432274	2801255	1137.795				66	33	0	181	181	0	275	275	
								66											
2	AP 1A	1A/0	48°44'50" RT	DD+0	432334	2801282	1132.393		66	66	246	123	-115	-120	-235	-209	-252	-461	
								180											NALLA.
3	AP 2A	2A/0	27°22'15" RT	DC+0	432482	2801225	1153.200		180	246	485	243	300	193	493	432	218	650	
								305											METAL ROAD.
4	AP 3A	3A/0	02°28'02" LT	DB+0	432689	2800971	1146.470		305	551	712	356	112	251	363	87	281	368	
								407											11 KV LINE.
5	AP 4A	4A/0	05°59'35" LT	DB+6	432946	2800656	1129.808		407	958	682	341	156	240	396	126	304	430	
								275											METAL ROAD., 11 KV LINE
6	AP 5A	5A/0	22°02'40" RT	DC+0	433141	2800462	1120.312		275	1233	455	228	35	96	131	-29	100	71	
								180											METAL ROAD.
7	AP 6A	6A/0	22°24'40" RT	DC+0	433212	2800297	1119.696		180	1413	388	194	84	169	253	80	209	289	
								208											CART TRACK.
8	AP 7A	7A/0	16°23'35" RT	DC+0	433214	2800089	1112.300		208	1621	438	219	39	145	184	-1	165	164	
								230											METAL ROAD.
9	AP 8A	8A/0	20°13'55" LT	DC+0	433160	2799865	1108.449		230	1851	489	245	85	145	230	65	154	219	
								259											METAL ROAD.
10	AP 9A	9A/0	11°43'40" RT	DB+0	433189	2799608	1106.269		259	2110	472	236	114	168	282	105	206	311	
								213											
11	AP 10A	10A/0	02°28'50" LT	DB+0	433170	2799396	1099.100		213	2323	592	296	45	264	309	7	311	318	
								379											NALLA
12	AP 11A	11A/0	03°54'15" LT	DB+3	433146	2799019	1080.542		379	2702	625	313	115	91	206	68	70	138	
								246											NALLA

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6/10/17

06/10/17

अ. कु. कुलश्रेष्ठ / A. K. Kulshreshtha
वरिष्ठ अभियन्ता / Manager
पावरग्रिड खिलेरयाट / NERPSIP

6/10/2017

	NO.	Tower No	Angle of Deviation	TOWER TYPE	GPS Coordinates		Reduced Level at Locatin (M)	SPAN (M)	Section Length (M)	Cum-ulative route in Length (M)	Sum of adjacent Span (M)	Wind Span	Weight Span HOT(M)			Weight Span COLD (M)			Remarks, if any
					Easting	Northing							LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
13	AP 12A	12A/0	21°19'40" RT	DC+0	433146	2798773	1087.934		246	2948	520	260	155	239	394	176	304	480	
								274											
14	AP 13A	13A/0	10°14'50" LT	DB+0	433048	2798517	1072.469		274	3222	643	322	35	238	273	-30	273	243	
								369											VALLEY
15	AP 14A	14A/0	11°30'20" LT	DB+0	432978	2798155	1061.491		369	3591	621	311	131	195	326	96	239	335	
								252											
16	AP 15A	15A/0	11°40'20" RT	DB+0	432981	2797903	1051.867		252	3843	537	269	57	172	229	13	191	204	
								285											METAL ROAD.
17	AP 16A	16A/0	44°02'18" RT	DD+0	432926	2797623	1047.246		285	4128	454	227	113	104	217	94	116	210	
								169											
18	AP 17A	17A/0	27°32'11" LT	DC+0	432788	2797527	1045.437		169	4297	369	185	65	139	204	53	164	217	
								200											
19	AP 18A	18A/0	08°57'47" RT	DB+0	432695	2797349	1041.145		200	4497	361	181	61	344	405	36	511	547	
								161											
20	AP 19A	19A/0	06°41'29" LT	DD+0	432599	2797220	1017.764		161	4658	314	157	-183	565	382	-350	874	524	
								153											VALLEY
21	AP 20A	20A/0	05°20'26" LT	DD+0	432525	2797090	976.583		153	4811	698	349	-412	151	-261	-721	74	-647	
								545											
22	AP 21A	21A/0	50°16'09" LT	DD+3	432298	2796591	1010.183		545	5356	898	449	394	211	605	471	233	704	
								353											
23	AP 22A	22A/0	05°40'44" RT	DB+0	432452	2796271	1006.488		353	5709	673	337	142	299	441	120	388	508	
								320											VALLEY
24	AP 23A	23A/0	19°18'41" LT	DC+0	432561	2795973	981.885		320	6029	611	306	21	274	294	-68	355	287	
(M):-								6029	6029										

Surveyed by USTL

Checked by USTL 25/09/17

Submitted by USTL 25/09/2017

Checked by PGCIL

Immende PGCIL

Approved by PGCIL 16/10/2017

प्रबन्धक / Manager

एनईआरपीएसआईपी / NERPSIP

पावरग्रिड खितेरयाट / POWERGRID Khiehrlat

UNIQUE STRUCTURES & TOWERS LTD

TW-02 (Pro-053B):- Construction of Lilo of both circuits of 132kV D/c MLHEP_Khliehriat line at Mynkre Sub-station.
Tower Schedule of Loop In Line from AP23A/0 to Gantry of Mynkre Sub-station (Route Length-6.713Kms).
Client:- Power Grid Corporation of India Limited.

Date:- 5-Feb-18

Sr. No.	Location No.	Tower No	Angle of Deviation	Tower Type	GPS Coordinates		Reduced Level at center peg of 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/ Crossing.
					Easting	Northing							LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
1	AP 23A	23A/0	19°18'41" LT	DC+0	432561	2795973	981.885			6019	611	306	21	269	290	-68	344	277	
								291											VALLEY
2	AP 24A	24A/0	20°34'47" RT	DC+0	432745	2795748	962.340		291	6310	834	417	22	301	323	-53	320	267	
								543											VALLEY
3	AP 25A	25A/0	38°46'35" LT	DD+6	432920	2795237	947.471		543	6853	795	398	242	320	562	223	444	667	
								252											
4	AP 26A	26A/0	02°44'20" RT	DB+0	433132	2795102	926.768		252	7105	647	324	-68	239	171	-192	265	73	
								395											
5	AP 27A	27A/0	46°38'00" RT	DD+0	433464	2794882	917.742		395	7500	719	360	156	309	465	130	402	532	
								324											
6	AP 28A	28A/0	05°59'16" LT	DD+0	433520	2794566	891.708		324	7824	618	309	15	443	458	-78	621	543	
								294											NALA
7	**AP 29A**	**29A/0**	11°27'32"RT	SPL+0	433651	2794306	843.095		294	8118	1173	587	-149	544	395	-327	610	283	
								879											SESYENMPA RIVER
8	**AP 31A**	**31A/0**	23°30'12"LT	SPL+0	433873	2793459	792.486		879	8997	1114	557	335	-152	183	269	-322	-53	
								235											
9	AP 32A	32A/0	22°33'20" RT	DC+0	434028	2793279	827.357		235	9232	542	271	387	207	594	557	241	798	
								307											NALA
10	AP 33A	33A/0	52°26'38"LT	DD+0	434110	2792977	818.292		307	9539	517	259	99	140	239	66	161	227	
								210											NALA
11	AP 34A	34A/0	15°19'26" LT	DC+0	434299	2792887	814.293		210	9749	301	151	70	333	403	49	514	563	
								91											
12	AP 34A/1	34A/1	01°41'31" RT	DD-4.5	434388	2792883	804.388		91	9840	184	92	-242	25	-217	-423	11	-412	Earth wire d.cut
								93											400KV LINE d/c line T.NO 206 T.NO. 207
13	AP 34A/2	34A/2	41°31'13" RT	DD-4.5	434479	2792876	805.494		93	9933	228	114	68	-27	41	82	-86	-4	Earth wire d.cut

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05/02/18

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UNIQUE STRUCTURES & TOWERS LTD

TW-02 (Pro-053B):- Construction of Lilo of both circuits of 132kV D/c MLHEP_Khliehriat line at Mynkre Sub-station.
Tower Schedule of Loop In Line from AP23A/0 to Gantry of Mynkre Sub-station (Route Length-6.713Kms).
Client:- Power Grid Corporation of India Limited.

Date:- 5-Feb-18

								135											
14	AP 35A	35A/0	32°44'41" RT	DD+0	434572	2792781	808.001		135	10068	365	183	163	51	213	221	10	231	
								230											
15	AP 36A	36A/0	25°47'20"LT	DC+3	434639	2792550	813.144		230	10298	639	320	180	129	309	220	82	302	
								409											
16	AP 37A	37A/0	11°03'10" RT	DB+3	434899	2792244	830.100		409	10707	619	310	281	183	463	327	232	559	
								245											
17	AP 38A	38A/0	07°42'05" RT	DD+6	434984	2792084	818.101		245	10952	529	265	62	490	552	-13	674	661	
								319											
18	AP 40A	40A/0	25°37'54" LT	DC+0	435192	2791685	769.898		319	11271	579	290	-171	220	49	-355	278	-77	
								260											
19	AP 41A	41A/0	21°56'05" LT	DC+0	435329	2791601	756.783		260	11531	500	250	40	253	293	-19	338	318	
								240											NALA
20	AP 42A	42A/0	23°27'13" RT	DC+0	435554	2791516	739.134		240	11771	715	358	-15	239	224	-98	240	142	
								475											Metal road
21	AP 43A	43A/0	17°45'55" LT	DC+0	435898	2791192	738.703		475	12246	669	335	236	152	387	235	186	421	
								194											
22	AP 44A	44A/0	05°59'56" LT	DB+0	436077	2791105	732.868		194	12440	375	188	42	232	274	8	319	327	
								181											
23	AP 45A	45A/0	10°54'14" LT	DD+0	436247	2791046	718.903		181	12621	292	146	-51	294	243	-138	445	307	
								111											
24	GANTRY	GAN	00°00'00"		436352	2791024	704.301		111	12732	111	56	-186	0	-186	-334	0	-334	
							ROUTE LENGTH in Kms	6713											

Surveyed by	Checked by	Submitted by	Checked by	Recommended by	Approved by
USTL	USTL	USTL	अ. कु. कुलश्रेष्ठ / वरिष्ठ अभियन्ता पावरग्रिड खिलेरियाट / PGCIL	वि मेघि / V. MEDHI प्रबन्धक / Manager एनईआरपीएसआईपी / NERPSIP पावरग्रिड खिलेरियाट / POWERGRID Khliehriat	9/2/2018 PGCIL

टी मार्बनियांग / T. Marbaniang
कनिष्ठ अभियन्ता / Jr. Engineer
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पावरग्रिड खिलेरियाट / POWERGRID Khliehriat

UNIQUE STRUCTURES & TOWERS LTD

TW-02 (Pro-053B):- Construction of LiIo of both circuits of 132kV D/c MLHEP_Khliehriat line at Mynkre Sub-station.

Tower Schedule of Loop In Line from AP 41A/0 TO GANTRY of Mynkre Sub-station (Route Length-1.21349Kms).

Client:- Power Grid Corporation of India Limited.

DEVIATED DETAIL SURVEY AP 41A-GANTRY(MYNKRE)

22-May-18

SL. NO.	Location No.	Tower No	Angle of Deviation	Tower Type	GPS Coordinates		EXTN	CPD	Reduced Level at center peg of Location.	Span (M)	Section Length (M).	Sum of Adjacent Span (M).	Wind Span (M)	LD	Weight Span HOT(M)			Weight Span COLD (M)			Remarks/ Crossing.
					Easting	Northing									LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
1	AP41A/0	AP41A/0	10 ° 35 ' 14 " LT	DB + 0	435319	2791601	0	0	756.783		260	521	260	10.002	38	200	238	-19	244	225	
										260.87											Pine & mixed jungle
2	AP42A/0	AP42A/0	15 ° 53 ' 35 " RT	DD + 18	435552	2791458	18	0	728.781		520.87	557	278	10.25	61	211	272	17	251	268	
										296											U/C 132KV D/C AMRIT CEMENT T/L BETWEEN AP 19/0 DC+0 - AP20/0 DB+3 XING ANGLE 61°,Metal Road
3	AP43A/0	AP43A/0	15 ° 32 ' 19 " LT	DC + 9	435801	2791226	9	0	727.531		816.87	589	295	-5.38	85	113	198	45	92	137	Proposed TOT DD due to power line xing
										293											cart track,Pine & mixed jungle
4	AP44A/0	AP44A/0	32 ° 33 ' 47 " LT	DD + 6	436048	2791096	6	0	735.906		1109.87	513	257	20.80	180	282	462	201	390	591	
										220											cart track,Pine & mixed jungle
5	AP44A1/0	AP44A1/0	7 ° 42 ' 31 " RT	DB + 0	436048	2791096	0	0	721.106		1329.87	290	145	11.82	-62	343	281	-170	538	368	
										69.58											Pine & mixed jungle
6	AP45A/0	AP45A/0	21 ° 52 ' 40 " RT	DD + 0	436247	2791046	0	0	709.283		1399.45	144	72	4.94	-273	158	-115	-469	235	-234	
										74.04											Pine & mixed jungle
7	GANNTRY	GANNTRY	0 ° 0 ' 0 "	GANNTRY	436383	2791071	-1	0	705.343		1473.49	144	72		-84	0	-84	-161	0	-161	Mynkre gantry bay
				ROUTE LENGTH IN KM						1.2135											

Surveyed by

USTL

CHECKED BY

USTL

Submitted by

USTL

Md. Anamul Hoque
Project Manager
M/s. Unique Structures & Towers Limited

Checked by

POWER GRID

Recommended by

POWER GRID

23/6/18

अ. कु. कुलश्रेष्ठ / A. K. Kulshrestha
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पावरग्रिड खिलेरयाट / POWERGRID Khliehriat

Approved by

POWER GRID

5/6/18

UNIQUE STRUCTURES & TOWERS LTD

TW-02 (Pro-053B):- Construction of Lilo of both circuits of 132kV D/c MLHEP_Khliehriat line at Mynkre Sub-station.

Tower Schedule of Loop Out Line from Merging point i.e. Existing Location 66 to AP 23B (Route Length-7.201Kms).

Client:- Power Grid Corporation of India Limited.

Date:- 4-Oct-17

SL. No.	AP NO.	Tower No	Angle of Deviation	Tower Type	GPS Coordinates		Reduced Level of the Location	Span (M)	Section Length (M)	Cum-ulative Route Length (M)	Sum of Adjacent Span (M)	Wind Span	Weight Span HOT (M)			Weight Span COLD (M)			Remarks/Crossing
					Easting	Northing							LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
	Ex Loc 66	Ex Loc 66		DC+0	433293	2801866	1135.441				181	91	0	207	207	0	280	280	
								181											POND.
1	AP 1B/0	1B/0	08°07'00" LT	DB+0	433202	2801721	1123.850		181	181	560	280	-26	148	122	-99	122	23	
								379											NALLA
2	AP 2B/0	2B/0	38°00'25" LT	DD+0	432983	2801404	1132.426		379	560	704	352	231	83	314	257	32	289	
								325											CT, 2 Nos NALLA.
3	AP 3B/0	3B/0	22°28'00" LT	DC+6	433022	2801081	1140.746		325	885	750	375	242	272	514	293	310	603	
								425											
4	AP 4B/0	4B/0	20°21'00" RT	DC+0	433229	2800708	1132.736		425	1310	733	367	153	202	355	115	232	347	
								308											NALLA
5	AP 5B/0	5B/0	02°46'20" RT	DB+0	433275	2800405	1124.668		308	1618	578	289	106	181	287	76	211	287	
								270											CART TRACK.
6	AP 6B/0	6B/0	17°24'55" RT	DC+0	433304	2800138	1117.777		270	1888	515	258	89	167	256	59	195	254	
								245											
7	AP 7B/0	7B/0	13°21'50" LT	DB+0	433255	2799895	1111.820		245	2133	520	260	78	152	230	50	161	211	
								275											2 Nos METAL ROAD.
8	AP 8B/0	8B/0	02°22'40" LT	DB+0	433263	2799624	1109.628		275	2408	586	293	123	268	391	114	311	425	
								311											VALLEY
9	AP 9B/0	9B/0	04°28'5" RT	DB+3	433275	2799311	1090.272		311	2719	839	420	60	302	362	0	326	326	
								528											VALLEY
10	AP 10B/0	10B/0	07°07'00" RT	DB+0	433253	2798785	1082.284		528	3247	783	392	226	270	496	202	360	562	
								255											
11	AP 11B/0	11B/0	15°11'15" RT	DC+0	433207	2798534	1062.296		255	3502	644	322	-14	195	181	-104	195	91	
								389											VALLEY
12	AP 12B/0	12B/0	22°58'53" LT	DC+0	433048	2798181	1062.169		389	3891	694	347	194	183	377	194	202	396	
								305											NALLA, Cart Track

UNIQUE STRUCTURES & TOWERS LTD. R.O. SHILLONG

04/10/17

वरिष्ठ अभियन्ता

प्रबंधक / Manager

पावरग्रिड खलिहरियाट / POWERGRID Khliehriat

16/10/17

SL. No.	AP NO.	Tower No	Angle of Deviation	Tower Type	GPS Coordinates		Reduced Level of the Location	Span (M)	Section Length (M)	Cum-ulative Route Length (M)	Sum of Adjacent Span (M)	Wind Span	Weight Span HOT (M)			Weight Span COLD (M)			Remarks/Crossing
					Easting	Northing							LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
13	AP 13B/0	13B/0	15°54'10" RT	DC+0	433041	2797874	1056.975		305	4196	442	221	121	259	380	102	283	385	
								442											METAL ROAD
14	AP 14B/0	14B/0	08°27'30" RT	DB+0	432910	2797451	1047.706		442	4638	562	281	183	98	281	159	122	281	
								120											
15	AP 15B/0	15B/0	14°18'00" RT	DB+0	432858	27997344	1045.210		120	4758	307	154	22	279	301	-2	396	394	
								187											
16	AP 16B/0	16B/0	12°52'14" RT	DD+0	432738	2797200	1026.131		187	4945	437	219	-92	524	432	-209	777	568	
								250											
17	AP 17B/0	17B/0	28°32'22" LT	DC+0	432538	2797049	971.123		250	5195	741	371	-274	113	-161	-527	29	-498	
								491											
18	AP 18B/0	18B/0	50°22'00" LT	DD+0	432336	2796602	1007.058		491	5686	771	386	378	128	506	462	120	582	
								280											
19	AP 19B/0	19B/0	03°05'50" LT	DB+0	432459	2796350	1008.974		280	5966	463	232	152	213	365	160	290	450	
								183											
20	AP 20B/0	20B/0	13°31'06" RT	DB+0	432549	2796190	996.727		183	6149	470	235	-30	276	246	-107	360	253	
								287											
21	AP 21B/0	21B/0	21°26'45" LT	DC+0	432626	2795914	975.719		287	6436	576	288	11	261	272	-73	335	262	
								289											
22	AP 22B/0	22B/0	17°07'08" RT	DC+0	432800	2795684	957.184		289	6725	765	383	28	285	313	-46	315	270	
								476											
23	AP 23B/0	23B/0	DECIDED LATER	HOLD	432963	2795236	944.756		476	7201	476	238	191	0	191	161	0	161	
							Total Route Length:-	7201	7201										

UNIQUE STRUCTURES TOWERS LTD. R.O. SHILLONG — Surveyed by USTL

UNIQUE STRUCTURES TOWERS LTD. R.O. SHILLONG — Checked by USTL 04/10/17

UNIQUE STRUCTURES TOWERS LTD. R.O. SHILLONG — Submitted by USTL 10/2017

Checked by PGCIL 6/10/17

Recommended PGCIL 06/10/17

Approved by PGCIL 06/10/2017

UNIQUE STRUCTURES & TOWERS LTD

TW-02 (Pro-053B):- Construction of Lilo of both circuits of 132kV D/c MLHEP_Khliehriat line at Mynkre Sub-station.

Tower Schedule of Loop Out Line from Merging point i.e. Existing Location 66 to Gantry of Mynkre Sub-station (Route Length-5.789Kms).

Client:- Power Grid Corporation of India Limited.

Date:- *1-Feb-18*

Sr. No.	Location No.	Tower No	Angle of Deviation	Tower Type	GPS Coordinates		Reduced Level at center peg of 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/ Crossing.
					Easting	Northing							LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
1	AP23B/0	23B/0	45°08'11" LT	DD+0	432963	2795236	943.459			7170	826	413	185	199	384	153	215	368	
								350											
2	AP24B/0	24B/0	18°33'20" RT	DC+0	433285	2795130	938.748		350	7520	690	345	151	275	426	135	340	475	
								340											
3	AP25B/0	25B/0	20°02'36" RT	DC+3	433525	2794885	916.050		340	7860	585	293	65	283	348	0	386	386	
								245											
4	AP26B/0	26B/0	11°53'46" RT	DD+0	433636	2794673	897.575		245	8105	632	316	-38	470	432	-141	645	504	DD tower type is proposed due to wt span retriction.
								387											
5	AP27B/0	27B/0	02°16'41" LT	SPL+6	433737	2794300	832.591		387	8492	1235	618	-83	511	428	-258	568	310	
								848											SESYAMPA RIVER
6	AP29B/0	29B/0	33°23'20" LT	SPL+6	433982	2793487	791.479		848	9340	1111	556	337	-105	232	280	-252	28	
								263											
7	AP30B/0	30B/0	47°53'42" RT	DD+3	434180	2793326	827.987		263	9603	478	239	368	182	550	515	228	743	
								215											
8	AP31B/0	31B/0	42°40'01" LT	DD+0	434191	2793114	822.103		215	9818	469	235	33	275	308	-13	370	357	
								254											Nalla
9	AP32B/0	32B/0	34°17'20" LT	DD-3	434372	2792937	804.308		254	10072	390	195	-21	23	2	-116	-1	-117	E/wire to be diamond cut
								136											400 KV D/C XING
10	AP33B/0	33B/0	31°29'40" RT	DD-3	434486	2792908	807.692		136	10208	361	181	113	1	114	137	-71	66	E/wire to be diamond cut
								225											

UNIQUE STRUCTURES TOWERS LTD. R. O. SHILLONG

UNIQUE STRUCTURES TOWERS LTD. R. O. SHILLONG

05/02/18

UNIQUE STRUCTURES TOWERS LTD. R. O. SHILLONG

टी मार्विन / T. Marwein
कनिष्ठ अभियन्ता / Jr. Engineer
एनईआरपीएसआईपी / NERPSIP
पावरग्रिड खिलेरियाट / POWERGRID Khliehriat

बि मेधि / B. MEDHI
प्रबन्धक / Manager
एनईआरपीएसआईपी / NERPSIP
पावरग्रिड खिलेरियाट / POWERGRID Khliehriat

Sr. No.	Location No.	Tower No	Angle of Deviation	Tower Type	GPS Coordinates		Reduced Level at center peg of 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/ Crossing.
					Easting	Northing							LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	
11	AP 34B/0	34B/0	15°45'54" RT	DC+6	434653	2792734	812.618		225	10433	799	400	224	201	425	296	141	437	
								574											Valley.
12	AP 35B/0	35B/0	11°37'50" RT	DC+0	434917	2792229	845.719		574	11007	758	379	373	212	585	433	289	722	
								184											
13	AP 36B/0	36B/0	01°35'50" LT	DD+3	435034	2792082	830.506		184	11191	544	272	-28	518	490	-105	726	621	DD tower type is proposed due to wt span retriction.
								360											
14	AP 38B/0	38B/0	40°29'48" LT	DD+0	435180	2791749	766.349		360	11551	808	404	-158	308	150	-366	361	-5	
								448											
15	AP 40B/0	40B/0	10°24'30" RT	DB+6	435538	2791486	739.692		448	11999	655	328	140	213	353	87	282	369	
								207											Nalla
16	AP 41B/0	41B/0	02°19'34" RT	DB+0	435740	2791430	733.247		207	12206	467	234	-6	66	60	-75	26	-49	
								260											Nalla
17	AP 42B/0	42B/0	24°10'00" RT	DC+0	435944	2791272	742.351		260	12466	541	271	194	164	358	234	179	413	
								281											Metal road, 11kV Line.
18	AP 43B/0	43B/0	37°40'52" RT	DD+0	436222	2791197	738.658		281	12747	394	197	117	262	379	102	390	492	
								113											
19	AP 44B/0	44B/0	31°49'03" LT	DD+0	436291	2791107	725.663		113	12860	212	106	-149	380	231	-277	567	290	
								99											
20	GANTRY	GANTRY	00°00'00"	GANTRY	436383	2791071	707.483		99	12959	99	50	-281		-281	-468		-468	

Route Length :- 5.789 Kms.

Surveyed by	Checked by	Submitted by	Checked by	Recommended by	Approved by
UNIQUE STRUCTURES TOWERS LTD. R. O. SHILLONG USTL	UNIQUE STRUCTURES TOWERS LTD. R. O. SHILLONG USTL	UNIQUE STRUCTURES TOWERS LTD. R. O. SHILLONG USTL	अ. कु. कुलश्रेष्ठ / A. K. Kulshrestha वरिष्ठ अभियन्ता / SR. ENGINEER पावरग्रिड खिलेरयाट / POWERGRID Khlierriat PGCIL	08/02/18 PGCIL बि. मेधि / B. MEDHI प्रबन्धक / Manager एनईआरपीएसआईपी / NERPSIP पावरग्रिड खिलेरयाट / POWERGRID Khlierriat	9/2/2018 PGCIL

टी. गार्विन / T. Garvin
कनिष्ठ अभियन्ता / Jr. Engineer
एनईआरपीएसआईपी / NERPSIP
पावरग्रिड खिलेरयाट / POWERGRID Khlierriat

UNIQUE STRUCTURES & TOWERS LTD

TW-02 (Pro-053B):- Construction of Lilo of both circuits of 132kV D/c MLHEP_Khliehriat line at Mynkre Sub-station.
Tower Schedule of Loop OUT Line from AP 38B/0 TO Gantry of Mynkre Sub-station (Route Length-1.40825Kms).
Client:- Power Grid Corporation of India Limited.

DEVIATED DETAIL SURVEY AP 41A-GANTRY(MYNKRE)

Date:- 22-May-18

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	TOTAL	LEFT	RIGHT	TOTAL	
1	AP 38B/0	AP 38B/0	31°08'40" LT	DD+0	435180	2791749	766.349			184	92	-147	261	114	-348	368	20	
								183.92										Pine & mixed jungle
2	AP 39B/0	AP 39B/0	09°58'36" LT	DB+0	435322	2791641	749.188		183.92	447	223	-79	201	122	-184	245	60	
								263.02										
3	AP 40B/0	AP 40B/0	05°57'12" LT	DB+0	435554	2791516	739.134		263.02	469	234	61	155	44.00	18	188	206	
								205.86										Pine & mixed jungle
4	AP 41B/0	AP 41B/0	17°18'43" RT	DC+0	435740	2791430	733.247		205.86	466	233	50	14	65	18	-59	-41	
								260.3										Pine & mixed jungle
5	AP 42B/0	AP 42B/0	18°20'47" RT	DD+7.5	435944	2791272	742.351		260.3	364	182	247	72	319	319	85	404	Proposed TOT DD due to power line xing
								104.05										U/C 132KV D/C AMRIT CEMENT T/L BETWEEN AP 17/0 -AP18/0 XING ANGLE 61°,Metal Road
6	AP 43B/0	AP 43B/0	41°53'37" LT	DD+18	435998	2791193	732.196		104.05	394	197	32	295	327	19	390	409	
								289.5										Pine & mixed jungle,Cart track
7	AP 44B/0	AP 44B/0	14°44'09" RT	DD+0	436291	2791107	724.708		289.5	391	196	-7	407	400	-101	632	532	
								101.6										Pine & mixed jungle
8	GANTRY	GANTRY	00°00'00"	GANTRY	436383	2791071	705.767		101.6			-309	0	-309	-531	0	-531	
				ROUTE LENGTH IN KM				1.408										

Surveyed by	Checked by	Submitted by	Checked by	Recommended by	Approved by
USTL	USTL	USTL	POWER GRID	POWER GRID	POWER GRID

02/06/18

05/06/2018

Md. Nesmul Hoque
Project Manager
M/s. Unique Structures & Towers Limited

कुलश्रेष्ठ / A. K. Kulshrestha एनईआरपीएसआईपी / NERPSIP
अभियन्ता / SR. ENGINEER पावरग्रिड खिलेरयाट / POWERGRID Khliehriat
खिलेरयाट / POWERGRID Khliehriat

Package :			**MEG-DMS-01**
Name of Distribution line :			**33KV line from proposed 132/33KV Mynkre to 33/11KV Rymbai S/S.**

SL. No.	Location	Extension	Pole From	Pole To	(Span in mt)	Cumulative Span	Description Land	Nature of Damege(tree/hut)	Village Name	Angle of deviation	Latitude	Longitude	Line Crossings	Remarks
1	AP1		FP-1	FP-2	22	22	Along the substation Boundary		Umlaper Village		25.234108	92.369159		S/S Boundary
2	AP2		FP-2	DP-1	60	82	Along the substation Boundary		Umlaper Village	74°60'56"	25.234023	92.369349		S/S Boundary
3	AP3		DP-1	FP-3	53	135	Along the substation Boundary		Umlaper Village	10°77'16"	25.234431	92.369751		S/S Boundary
4	AP4		FP-3	FP-4	66	201	Along the substation Boundary		Umlaper Village	76°65'41"	25.234843	92.370024		S/S Boundary
5	AP5		FP-4	SP-1	59	260	Along the Road-Pvt.		Umlaper Village	28°47'11"	25.235270	92.369540		
6	AP6		SP-1	SP-2	62	322	Along the Road-Pvt.		Umlaper Village	1°25'81"	25.235415	92.368974		
7	AP7		SP-2	DP-2	66	388	Along the Road-Pvt.		Umlaper Village	2°57'86"	25.235580	92.368380		span
8	AP8		DP-2	SP-3	61	449	Along the Road-Pvt.		Umlaper Village	1°27'34"	25.235728	92.367747		
9	AP9		SP-3	SP-4	52	501	Along the Road-Pvt.		Umlaper Village	5°53'19"	25.235854	92.367154		
10	AP10		SP-4	SP-5	58	559	Along the Road-Pvt.		Umlaper Village	0°13'02"	25.235917	92.366638		
11	AP11		SP-5	SP-6	60	619	Along the Road-Pvt.		Umlaper Village	2°23'15"	25.235986	92.366063		
12	AP12		SP-6	DP-3	52	671	Along the Road-Pvt.		Umlaper Village	2°89'06"	25.236036	92.365470		
13	AP13		DP-3	SP-7	36	707	Along the Road-Pvt.		Umlaper Village	36°28'36"	25.236056	92.364950		
14	AP14		SP-7	SP-8	40	747	Along the Road-Pvt.		Umlaper Village	20°81'33"	25.235874	92.364650		
15	AP15		SP-8	SP-9	48	795	Along the Road-Pvt.		Umlaper Village	10°00'00"	25.235794	92.364268		
16	AP16		SP-9	DP-4	47	842	Along the Road-Pvt.		Umlaper Village	10°01'00"	25.235796	92.363782		
17	AP17		DP-4	DP-5	70	912	Along the Road-Pvt.		Umlaper Village	24°11'63"	25.235887	92.363328		long span
18	AP18		DP-5	SP-10	45	957	Along the Road-Pvt.		Umlaper Village	5°51'91"	25.236262	92.362770		
19	AP19		SP-10	SP-11	49	1006	Along the Road-Pvt.		Umlaper Village	1°79'73"	25.236532	92.362440		
20	AP20		SP-11	DP-6	56	1062	Along the Road-Pvt.		Umlaper Village	10°14'00"	25.236820	92.362065		Elev.-2418 ft
21	AP21		DP-6	SP-12	40	1102	Along the Road-Pvt.		Umlaper Village	24°86'17"	25.237060	92.361570		Elev.-2407 ft
22	AP22		SP-12	SP-13	56	1158	Along the Road-Pvt.		Umlaper Village	3°33'00"	25.237080	92.361190		Elev.-2410 ft
23	AP23		SP-13	SP-14	50	1208	Along the Road-Pvt.		Umlaper Village	1°25'41"	25.237080	92.360610		Elev.-2410
24	AP24		SP-14	SP-15	57	1265	Along the Road-Pvt.		Umlaper Village	5°34'44"	25.237090	92.360105		Elev.-2408
25	AP25		SP-15	SP-16	51	1316	Along the Road-Pvt.		Umlaper Village	7°47'73"	25.237053	92.359533		Elev.-2409
26	AP26		SP-16	DP-7	48	1364	Along the Road-Pvt.		Umlaper Village	18°16'29"	25.237080	92.359028		Elev.-2410
27	AP27		DP-7	SP-17	58	1422	Along the Road-Pvt.		Umlaper Village	5°94'00"	25.237240	92.358580		Elev.-2415
28	AP28		SP-17	SP-18	39	1461	Along the Road-Pvt.		Umlaper Village	9°34'41"	25.237480	92.358070		Elev.-2423
29	AP29		SP-18	SP-19	48	1509	Along the Road-Pvt.		Umlaper Village	9°06'56"	25.237690	92.357760		Elev.-2424
30	AP30		SP-19	DP-8	54	1563	Along the Road-Pvt.		Umlaper Village	13°72'61"	25.237890	92.357340		Elev.-2437
31	AP31		DP-8	SP-20	53	1616	Along the Road-Pvt.		Umlaper Village	8°00'27"	25.238210	92.356940		Elev.-2447
32	AP32		SP-20	SP-21	49	1665	Along the Road-Pvt.		Umlaper Village	3°65'62"	25.238570	92.356600		Elev.-2455
33	AP33		SP-21	DP-9	41	1706	Along the Road-Pvt.		Umlaper Village	10°49'56"	25.238920	92.356310		Elev.-2470
34	AP34		DP-9	DP-10	70	1776	Along the Road-Pvt.		Umlaper Village	5°82'80"	25.239170	92.356010		Elev.-2485
35	AP35		DP-10	DP-11	58	1834	Along the Road-Pvt.		Umlaper Village	3°54'83"	25.239640	92.355550		Elev.-2497
36	AP36		DP-11	DP-12	46	1880	Along the Road-Pvt.		Umlaper Village	0°76'07"	25.240010	92.355140	400 kv line crossing	400 kv line crossing; elev.-2502 ft.
37	AP37		DP-12	SP-22	52	1932	Along the Road-Pvt.		Umlaper Village	5°46'01"	25.240300	92.354810		Elev.-2514
38	AP38		SP-22	SP-23	51	1983	Along the Road-Pvt.		Umlaper Village	10°69'64"	25.240590	92.354410		Elev.-2523
39	AP39		SP-23	SP-24	52	2035	Along the Road-Pvt.		Umlaper Village	1°71'46"	25.240940	92.354090		Elev.-2527
40	AP40		SP-24	SP-25	52	2087	Along the Road-Pvt.		Umlaper Village	4°14'87"	25.241290	92.353750		Elev.-2532
41	AP41		SP-25	SP-26	49	2136	Along the Road-Pvt.		Umlaper Village	16°45'20"	25.241660	92.353440		Elev.-2542
42	AP42		SP-26	DP-13	49	2185	Along the Road-Pvt.		Umlaper Village	00°00'00"	25.241920	92.353050		Elev.-2553
43	AP43	2M	DP-13	DP-14	62	2247	Along the Road-Pvt.		Umlaper Village	8°05'23"	25.242180	92.352660	11KV Line X-ing	Elev.-2569
44	AP44		DP-14	DP-15	49	2296	Forest Land-Pvt.	8 Nos Tree	Umlaper Village	1°67'78"	25.242573	92.352217		Elev.-2574
45	AP45		DP-15	SP-27	54	2350	Forest Land-Pvt.	9 Nos Tree	Umlaper Village	20°99'30"	25.242890	92.351880		
46	AP46		SP-27	DP-16	43	2393	Forest Land-Pvt.	10 Nos Tree	Umlaper Village	3°99'15"	25.243340	92.351670		Approaching raised level
47	AP47		DP-16	SP-28	52	2445	Forest Land-Pvt.	11 Nos Tree	Umlaper Village	24°06'16"	25.243710	92.351530		
48	AP48		SP-28	DP-17	56	2501	Forest Land-Pvt.	12 Nos Tree	Umlaper Village	6°30'95"	25.244210	92.351580		
49	AP49		DP-17	DP-18	70	2571	Forest Land-Pvt.	8 Nos Tree	Umlaper Village	41°85'87"	25.244700	92.351690		

Approved

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Khliehriat Distribution Division
MePDCL Khliehriat

SL. No.	Location	Extension	Pole From	Pole To	(Span in mt)	Cumulative Span	Description Land	Nature of Damege(tree/hut)	Village Name	Angle of deviation	Latitude	Longitude	Line Crossings	Remarks
50	AP50		DP-18	DP-19	47	2618	Forest Land-Pvt.	14 Nos Tree	Umlaper Village	4°52'47"	25.245240	92.351340		
51	AP51		DP-19	SP-29	48	2666	Forest Land-Pvt.	10 Nos Tree	Umlaper Village	17°98'86"	25.245590	92.351070		Approaching raised level
52	AP52		SP-29	SP-30	52	2718	Forest Land-Pvt.	16 Nos Tree	Umlaper Village	19°01'76"	25.245850	92.350690		
53	AP53		SP-30	DP-20	47	2765	Vacant Land-Pvt.		Umlaper Village	4°44'94"	25.246238	92.350402		
54	AP54		DP-20	SP-31	52	2817	Vacant Land-Pvt.		Umlaper Village	31°63'08"	25.246610	92.350170		
55	AP55		SP-31	SP-32	48	2865	Vacant Land-Pvt.		Umlaper Village	16°82'95"	25.247080	92.350190		
56	AP56		SP-32	DP-21	48	2913	Vacant Land-Pvt.		Umlaper Village	1°26'64"	25.247489	92.350346		
57	AP57		DP-21	SP-33	52	2965	Vacant Land-Pvt.		Umlaper Village	50°75'14"	25.247890	92.350510		
58	AP58		SP-33	SP-34	48	3013	Vacant Land-Pvt.		Umlaper Village	5°08'07"	25.248290	92.350250		
59	AP59		SP-34	DP-22	51	3064	Vacant Land-Pvt.		Umlaper Village	1°50'04"	25.248681	92.350045		
60	AP60		DP-22	SP-35	66	3130	Vacant Land-Pvt.		Umlaper Village	13°57'72"	25.249100	92.349840		
61	AP61		SP-35	DP-23	40	3170	Crop Land-Pvt.		Umlaper Village	8°92'05"	25.249608	92.349738		
62	AP62		DP-23	DP-24	53	3223	Crop Land-Pvt.		Umlaper Village	5°51'10"	25.249910	92.349730		
63	AP63		DP-24	DP-25	66	3289	Vacant Land-Pvt.		Umlaper Village	35°22'71"	25.250410	92.349770		
64	AP64		DP-25	DP-26	60	3349	Vacant Land-Pvt.		Umlaper Village	54°62'46"	25.250920	92.349430	400KV Line X-ing	
65	AP65		DP-26	SP-36	42	3391	Vacant Land-Pvt.		Umlaper Village	34°48'43"	25.250960	92.348840		
66	AP66		SP-36	DP-27	48	3439	Vacant Land-Pvt.		Umlaper Village	5°16'74"	25.251199	92.348511		
67	AP67		DP-27	SP-37	49	3488	Forest Land-Pvt.		Umlaper Village	48°11'19"	25.251440	92.348110		
68	AP68		SP-37	DP-28	47	3535	Forest Land-Pvt.		Umlaper Village	25°39'25"	25.251330	92.347640		
69	AP69		DP-28	DP-29	107	3642	Forest Land-Pvt.		Umlaper Village	13°27'35"	25.251410	92.347180		
70	AP70		DP-29	SP-38	51	3693	Vacant Land-Pvt.		Umlaper Village	46°10'76"	25.251370	92.346120		
71	AP71		SP-38	DP-30	58	3751	Vacant Land-Pvt.		Umlaper Village	1°73'29	25.251690	92.345750		
72	AP72		DP-30	SP-39	54	3805	Vacant Land-Pvt.		Umlaper Village	52°32'45"	25.252040	92.345320		
73	AP73		SP-39	DP-31	50	3855	Vacant Land-Pvt.		Umlaper Village	8°90'66"	25.252520	92.345360		
74	AP74		DP-31	SP-40	47	3902	Vacant Land-Pvt.		Umlaper Village	32°82'64"	25.252970	92.345320		
75	AP75		SP-40	SP-41	50	3952	Vacant Land-Pvt.		Umlaper Village	1°83'36"	25.253340	92.345540		
76	AP76		SP-41	DP-32	52	4004	Vacant Land-Pvt.		Umlaper Village	13°65'66"	25.253730	92.345790		
77	AP77		DP-32	SP-42	53	4057	Vacant Land-Pvt.		Umlaper Village	3°25'67"	25.254070	92.346150		
78	AP78		SP-42	SP-43	53	4110	Vacant Land-Pvt.		Umlaper Village	8°16'55"	25.254430	92.346490		
79	AP79		SP-43	DP-33	49	4159	Vacant Land-Pvt.		Umlaper Village	18°49'22"	25.254830	92.346770		
80	AP80		DP-33	SP-44	57	4216	Vacant Land-Pvt.		Umlaper Village	50°82'98"	25.255110	92.347150		
81	AP81		SP-44	DP-34	46	4262	Vacant Land-Pvt.		Umlaper Village	20°35'69"	25.255620	92.347150		
82	AP82		DP-34	SP-45	51	4313	Vacant Land-Pvt.		Umlaper Village	31°72'08"	25.256010	92.347310		
83	AP83		SP-45	SP-46	37	4350	Scrub Land-Pvt.	4 Nos Tree	Umlaper Village	5°90'61"	25.256460	92.347210		
84	AP84		SP-46	DP-35	48	4398	Scrub Land-Pvt.	3 Nos Tree	Umlaper Village	26°82'11"	25.256780	92.347100		
85	AP85		DP-35	SP-47	48	4446	Scrub Land-Pvt.	6 Nos Tree	Umlaper Village	49°76'80"	25.257210	92.347180		
86	AP86		SP-47	DP-36	54	4500	Scrub Land-Pvt.	5 Nos Tree	Umlaper Village	1°23'11"	25.257430	92.347590		
87	AP87		DP-36	DP-37	50	4550	Scrub Land-Pvt.	8 Nos Tree	Umlaper Village	38°29'91"	25.257670	92.348060		
88	AP88		DP-37	DP-38	75	4625	Scrub Land-Pvt.	6 Nos Tree	Umlaper Village	4°88'37"	25.258090	92.348250		
89	AP89		DP-38	SP-48	57	4682	Scrub Land-Pvt.	10 Nos Tree	Umlaper Village	1°87'40"	25.258690	92.348590		
90	AP90		SP-48	DP-39	48	4730	Scrub Land-Pvt.	12 Nos Tree	Umlaper Village	6°16'75"	25.259150	92.348830		
91	AP91		DP-39	SP-49	58	4788	Scrub Land-Pvt.	9 Nos Tree	Umlaper Village	23°35'84"	25.259520	92.349080		
92	AP92		SP-49	SP-50	58	4846	Scrub Land-Pvt.	8 Nos Tree	Umlaper Village	19°76'13"	25.259820	92.349550		
93	AP93		SP-50	FP-5	54	4900	Scrub Land-Pvt.	Bamboo jhari-2Nos	Umlaper Village	22°84'94"	25.259960	92.350110		
94	AP94		FP-5	DP-40	45	4945	Forest Land-Pvt.	20 Nos Tree	Umlaper Village	98°71'32"	25.260260	92.350530		Acute downward slope from hill;Elev.-2589 ft
95	AP95		DP-40	DP-41	48	4993	Forest Land-Pvt.	18 Nos Tree	Umlaper Village	0°01'37"	25.260539	92.350199		Acute downward slope from hill;elev.-2520ft
96	AP96		DP-41	DP-42	50	5043	Forest Land-Pvt.	22 Nos Tree	Umlaper Village	0°03'24"	25.260835	92.349848		Acute downward slope from hill;elev.-2416 ft
97	AP97		DP-42	DP-43	50	5093	Forest Land-Pvt.	20 Nos Tree	Umlaper Village	0°13'71"	25.261144	92.349482		Acute downward slope from hill;elev.-2321 ft
98	AP98		DP-43	DP-44	48	5141	Forest Land-Pvt.	24 Nos Tree	Umlaper Village	0°18'62"	25.261449	92.349119		Acute downward slope from hill;eleva.-2256 ft
99	AP99		DP-44	DP-45	133	5274	River crossing	25 Nos Tree	Umsatai Village	0°11'12"	25.261745	92.348769		span, RIVER CROSSING' elev. 2231ft.
100	AP100		DP-45	DP-46	46	5320	Scrub Land-Pvt.	10 Nos Tree	Umsatai Village	0°06'37"	25.262563	92.347798		Acute upward slope to hill;elev.-2300 ft

SL. No.	Location	Extension	Pole From	Pole To	(Span in mt)	Cumulative Span	Description Land	Nature of Damege(tree/hut)	Village Name	Angle of deviation	Latitude	Longitude	Line Crossings	Remarks
101	AP101		DP-46	DP-47	50	5370	Scrub Land-Pvt.	12 Nos Tree	Umsatai Village	0°07'00"	25.262845	92.347464		Acute upward slope to hill;elev.-2388 ft
102	AP102		DP-47	SP-51	20	5390	Scrub Land-Pvt.	10 Nos Tree	Umsatai Village	11°64'03"	25.263160	92.347090		
103	AP103		SP-51	SP-52	34	5424	Scrub Land-Pvt.		Umsatai Village	26°57'28"	25.263300	92.346980		
104	AP104		SP-52	DP-48	50	5474	Scrub Land-Pvt.		Umsatai Village	10°27'17"	25.263430	92.346710		
105	AP105		DP-48	DP-49	47	5521	Scrub Land-Pvt.		Umsatai Village	50°46'37"	25.263730	92.346290		elev.-2456
106	AP106		DP-49	SP-53	51	5572	Scrub Land-Pvt.		Umsatai Village	42°57'23"	25.264150	92.346280		
107	AP107		SP-53	DP-50	49	5621	Scrub Land-Pvt.		Umsatai Village	15°73'32"	25.264480	92.345930		elev. 2541
108	AP108		DP-50	DP-51	57	5678	Scrub Land-Pvt.		Umsatai Village	24°62'91"	25.264870	92.345700		
109	AP109		DP-51	DP-52	52	5730	Scrub Land-Pvt.		Umsatai Village	45°97'40"	25.265180	92.345250		
110	AP110		DP-52	SP-54	55	5785	Scrub Land-Pvt.		Umsatai Village	43°15'85"	25.265640	92.345190		
111	AP111		SP-54	SP-55	46	5831	Scrub Land-Pvt.		Umsatai Village	7°76'16"	25.265960	92.344770		
112	AP112		SP-55	SP-56	48	5879	Scrub Land-Pvt.		Umsatai Village	4°41'05"	25.266270	92.344460		
113	AP113		SP-56	SP-57	56	5935	Scrub Land-Pvt.		Umsatai Village	7°47'25"	25.266570	92.344110		
114	AP114		SP-57	DP-53	49	5984	Scrub Land-Pvt.		Umsatai Village	10°99'00"	25.266960	92.343760		
115	AP115		DP-53	SP-58	47	6031	Scrub Land-Pvt.		Umsatai Village	35°35'20"	25.267350	92.343530		
116	AP116		SP-58	DP-54	49	6080	Scrub Land-Pvt.		Umsatai Village	20°00'53"	25.267540	92.343110		
117	AP117		DP-54	SP-59	40	6120	Vacant Land-Pvt.		Umsatai Village	35°89'22"	25.267590	92.342630		
118	AP118		SP-59	SP-60	57	6177	Vacant Land-Pvt.		Umsatai Village	3°65'62"	25.267830	92.342340		
119	AP119		SP-60	SP-61	52	6229	Vacant Land-Pvt.		Umsatai Village	12°02'13"	25.268150	92.341900		
120	AP120		SP-61	DP-55	60	6289	Vacant Land-Pvt.		Umsatai Village	16°79'08"	25.268360	92.341440		
121	AP121		DP-55	DP-56	52	6341	Vacant Land-Pvt.		Umsatai Village	21°05'39"	25.268730	92.341010		Upward hilly slope
122	AP122		DP-56	DP-57	67	6408	Vacant Land-Pvt.		Umsatai Village	00°98'96"	25.268910	92.340530		long span
123	AP123		DP-57	SP-62	48	6456	Vacant Land-Pvt.		Umsatai Village	5°42'59"	25.269150	92.339920		
124	AP124		SP-62	DP-58	52	6508	Vacant Land-Pvt.		Umsatai Village	3°73'88"	25.269360	92.339500		upward hilly slope
125	AP125		DP-58	SP-63	46	6554	Vacant Land-Pvt.		Umsatai Village	17°12'35"	25.269560	92.339030		
126	AP126		SP-63	FP-6	57	6611	Vacant Land-Pvt.		Umsatai Village	21°50'39"	25.269840	92.338690		
127	AP127		FP-6	SP-64	53	6664	Vacant Land-Pvt.		Umsatai Village	60°99'59"	25.270300	92.338440		
128	AP128		SP-64	DP-59	60	6724	Vacant Land-Pvt.		Umsatai Village	4°72'31"	25.270690	92.338740		
129	AP129		DP-59	SP-65	49	6773	Vacant Land-Pvt.		Umsatai Village	41°29'90"	25.271080	92.338990		
130	AP130		SP-65	SP-66	52	6825	Vacant Land-Pvt.		Umsatai Village	6°59'91"	25.271220	92.339450		
131	AP131		SP-66	DP-60	46	6871	Vacant Land-Pvt.		Umsatai Village	0°69'59"	25.271420	92.339920		
132	AP132		DP-60	SP-67	50	6921	Vacant Land-Pvt.		Umsatai Village	23°70'28"	25.271600	92.340330		
133	AP133		SP-67	DP-61	49	6970	Scrub Land-Pvt.		Umsatai Village	22°50'26"	25.271940	92.340650		Downward hilly slope
134	AP134		DP-61	SP-68	44	7014	Scrub Land-Pvt.		Umsatai Village	13°55'68"	25.272360	92.340800		
135	AP135		SP-68	FP-7	57	7071	Scrub Land-Pvt.		Umsatai Village	7°58'46"	25.272700	92.341030		
136	AP136		FP-7	DP-62	92	7163	Nala		Rymbai Village	68°31'85"	25.273170	92.341260		span
137	AP137		DP-62	SP-69	34	7197	Forest Land-Pvt.		Rymbai Village	6°13'27"	25.273760	92.340620		
138	AP138		SP-69	SP-70	56	7253	Forest Land-Pvt.		Rymbai Village	4°85'06"	25.273954	92.340359		
139	AP139		SP-70	SP-71	46	7299	Forest Land-Pvt.		Rymbai Village	1°08'35"	25.274240	92.339900		
140	AP140		SP-71	DP-63	49	7348	Forest Land-Pvt.		Rymbai Village	14°84'25"	25.274480	92.339530		
141	AP141		DP-63	DP-64	52	7400	Forest Land-Pvt.	12 Nos Tree	Rymbai Village	31°79'25"	25.274820	92.339220		
142	AP142		DP-64	SP-72	45	7445	Forest Land-Pvt.	2Nos Tree	Rymbai Village	35°82'93"	25.274970	92.338730		
143	AP143		SP-72	DP-65	54	7499	Forest Land-Pvt.		Rymbai Village	3°77'07"	25.275300	92.338470		
144	AP144		DP-65	SP-73	45	7544	Forest Land-Pvt.	15 Nos Tree	Rymbai Village	27°81'74"	25.275710	92.338190		
145	AP145		SP-73	DP-66	49	7593	Forest Land-Pvt.	8 Nos Tree	Rymbai Village	9°74'68"	25.276110	92.338160		
146	AP146		DP-66	SP-74	48	7641	Along the Road-Pvt.		Rymbai Village	51°56'94"	25.276550	92.338210		
147	AP147		SP-74	FP-8	52	7693	Along the Road-Pvt.		Rymbai Village	14°82'13"	25.276850	92.337870		
148	AP148		FP-8	SP-75	53	7746	Along the Road-Pvt.		Rymbai Village	63°63'77"	25.277080	92.337420		
149	AP149		SP-75	SP-76	48	7794	Along the Road-Pvt.		Rymbai Village	22°20'46"	25.276810	92.336980		
150	AP150		SP-76	DP-67	53	7847	Along the Road-Pvt.		Rymbai Village	22°79'21"	25.276720	92.336510		
151	AP151		DP-67	SP-77	47	7894	Along the Road-Pvt.		Rymbai Village	38°87'52"	25.276810	92.335990		
152	AP152		SP-77	SP-78	50	7944	Along the Road-Pvt.	3Nos Tree	Rymbai Village	5°90'54"	25.277130	92.335690		
153	AP153		SP-78	DP-68	47	7991	Along the Road-Pvt.		Rymbai Village	8°93'30"	25.277500	92.335410		5th DP after 4nos SP
154	AP154		DP-68	SP-79	53	8044	Along the Road-Pvt.		Rymbai Village	13°43'52"	25.277880	92.335210		
155	AP155		SP-79	SP-80	51	8095	Along the Road-Pvt.		Rymbai Village	9°05'81"	25.278250	92.334880		
156	AP156		SP-80	SP-81	56	8151	Along the Road-Pvt.		Rymbai Village	18°02'66"	25.278560	92.334500		
157	AP157		SP-81	SP-82	48	8199	Along the Road-Pvt.		Rymbai Village	5°96'45"	25.279000	92.334220		

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Khliehriat Distribution Division
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SL. No.	Location	Extension	Pole From	Pole To	(Span in mt)	Cumulative Span	Description Land	Nature of Damege(tree/hut)	Village Name	Angle of deviation	Latitude	Longitude	Line Crossings	Remarks
158	AP158		SP-82	DP-69	47	8246	Along the Road-Pvt.		Rymbai Village	10°43'11"	25.279350	92.333940		
159	AP159		DP-69	SP-83	50	8296	Along the Road-Pvt.		Rymbai Village	29°50'74"	25.279730	92.333740		
160	AP160		SP-83	DP-70	50	8346	Along the Road-Pvt.		Rymbai Village	15°60'18"	25.279990	92.333330		Downward hilly slope
161	AP161		DP-70	DP-71	64	8410	Along the Road-Pvt.		Rymbai Village	12°43'52"	25.280140	92.332860		
162	AP162		DP-71	DP-72	57	8467	Along the Road-Pvt.		Rymbai Village	5°89'38"	25.280210	92.332230		
163	AP163		DP-72	DP-73	58	8525	Along the Road-Pvt.		Rymbai Village	44°53'90"	25.280220	92.331660		Highland area
164	AP164		DP-73	DP-74	62	8587	Along the Road-Pvt.		Rymbai Village	3°99'62"	25.280590	92.331260		
165	AP165		DP-74	DP-75	69	8656	Along the Road-Pvt.		Rymbai Village	57°60'65"	25.280960	92.330800		
166	AP166		DP-75	DP-76	55	8711	Along the Road-Pvt.		Rymbai Village	43°62'05"	25.281570	92.330910		
167	AP167		DP-76	DP-77	59	8770	Along the Road-Pvt.		Rymbai Village	23°83'97"	25.281980	92.330600		Downward hilly slope
168	AP168		DP-77	SP-84	55	8825	Along the Road-Pvt.		Rymbai Village	14°56'43"	25.282260	92.330100		
169	AP169		SP-84	SP-85	57	8882	Along the Road-Pvt.		Rymbai Village	5°31'43"	25.282620	92.329720		
170	AP170		SP-85	SP-86	49	8931	Along the Road-Pvt.		Rymbai Village	3°23'37"	25.283020	92.329370		
171	AP171		SP-86	DP-78	51	8982	Along the Road-Pvt.		Rymbai Village	19°84'99"	25.283770	92.328820		
172	AP172		DP-78	DP-79	70	9052	Along the Road-Pvt.		Rymbai Village	3°07'15"	25.283380	92.329090		
173	AP173		DP-79	SP-87	52	9104	Along the Road-Pvt.		Rymbai Village	38°10'42"	25.284160	92.328270		
174	AP174		SP-87	FP-9	49	9153	Along the Road-Pvt.		Rymbai Village	1°29'30"	25.284160	92.327750		
175	AP175		FP-9	SP-88	50	9203	Along the Road-Pvt.		Rymbai Village	62°20'00"	25.284150	92.327260		
176	AP176		SP-88	DP-80	60	9263	Along the Road-Pvt.		Rymbai Village	4°32'78"	25.284540	92.327020		
177	AP177		DP-80	SP-89	65	9328	Along the Road-Pvt.		Rymbai Village	15°39'65"	25.285030	92.326770		span
178	AP178		SP-89	DP-81	44	9372	Along the Road-Pvt.		Rymbai Village	6°81'90"	25.285480	92.326350		Downward hilly slope
179	AP179		DP-81	DP-82	61	9433	Along the Road-Pvt.		Rymbai Village	3°46'73"	25.285750	92.326030		Downward hilly slope
180	AP180		DP-82	SP-90	58	9491	Along the Road-Pvt.		Rymbai Village	9°57'71"	25.286150	92.325610		
181	AP181		SP-90	SP-91	52	9543	Along the Road-Pvt.		Rymbai Village	7°59'36"	25.286580	92.325290		
182	AP182		SP-91	DP-83	53	9596	Along the Road-Pvt.		Rymbai Village	16°58'11"	25.287000	92.325060		upward hilly slope
183	AP183		DP-83	DP-84	80	9676	Along the Road-Pvt.		Rymbai Village	11°10'48"	25.287350	92.324700		
184	AP184		DP-84	DP-85	61	9737	Along the Road-Pvt.	13Nos Tree	Rymbai Village	33°89'54"	25.287770	92.324060		
185	AP185		DP-85	DP-86	59	9796	Along the Road-Pvt.		Rymbai Village	40°50'60"	25.287790	92.323450		
186	AP186		DP-86	DP-87	61	9857	Along the Road-Pvt.		Rymbai Village	50°08'03"	25.287460	92.322990		
187	AP187		DP-87	SP-92	53	9910	Along the Road-Pvt.		Rymbai Village	14°04'09"	25.287570	92.322400		
188	AP188		SP-92	DP-88	51	9961	Along the Road-Pvt.		Rymbai Village	7°34'75"	25.287550	92.321870		
189	AP189		DP-88	FP-10	68	10029	Along the Road-Pvt.		Rymbai Village	38°83'85"	25.287590	92.321360		
190	AP190		FP-10	SP-93	59	10088	Along the Road-Pvt.		Rymbai Village	70°86'08"	25.287250	92.320800		
191	AP191		SP-93	DP-89	57	10145	Along the Road-Pvt.		Rymbai Village	12°39'67"	25.287570	92.320330		4th DP after 3 SP
192	AP192		DP-89	SP-94	53	10198	Along the Road-Pvt.		Rymbai Village	7°37'73"	25.287960	92.319960		
193	AP193		SP-94	SP-95	51	10249	Along the Road-Pvt.		Rymbai Village	4°76'59"	25.288360	92.319670		
194	AP194		SP-95	SP-96	56	10305	Along the Road-Pvt.		Rymbai Village	17°00'60"	25.288760	92.319430		
195	AP195		SP-96	DP-90	57	10362	Along the Road-Pvt.		Rymbai Village	5°94'23"	25.289250	92.319320		
196	AP196		DP-90	SP-97	52	10414	Along the Road-Pvt.		Rymbai Village	26°35'23"	25.289740	92.319150		
197	AP197		SP-97	SP-98	57	10471	Along the Road-Pvt.		Rymbai Village	3°87'07"	25.290200	92.319230		
198	AP198		SP-98	DP-91	54	10525	Along the Road-Pvt.		Rymbai Village	0°31'48"	25.290710	92.319280		
199	AP199		DP-91	DP-92	68	10593	Along the Road-Pvt.		Rymbai Village	44°97'79"	25.291190	92.319330		
200	AP200		DP-92	DP-93	50	10643	Along the Road-Pvt.		Rymbai Village	13°65'90"	25.291660	92.318900		
201	AP201		DP-93	SP-99	51	10694	Along the Road-Pvt.		Rymbai Village	56°63'09"	25.291930	92.318500		
202	AP202		SP-99	DP-94	50	10744	Along the Road-Pvt.		Rymbai Village	2°36'21"	25.292390	92.318530		
203	AP203		DP-94	SP-100	53	10797	Along the Road-Pvt.		Rymbai Village	30°56'10"	25.292840	92.318580		
204	AP204		SP-100	SP-101	56	10853	Along the Road-Pvt.		Rymbai Village	13°35'09"	25.293270	92.318360		
205	AP205		SP-101	DP-95	56	10909	Along the Road-Pvt.		Rymbai Village	6°28'24"	25.293760	92.318250		
206	AP206	2M	DP-95	DP-96	47	10956	Along the Road-Pvt.		Rymbai Village	40°40'59"	25.294240	92.318080	11KV Line X-ing	
207	AP207		DP-96	DP-97	43	10999	Along the Road-Pvt.		Rymbai Village	25°30'48"	25.294630	92.318260		
208	AP208		DP-97	DP-98	62	11061	Along the Road-Pvt.		Rymbai Village	17°13'86"	25.295020	92.318240		
209	AP209		DP-98	DP-99	56	11117	Along the Road-Pvt.		Rymbai Village	20°72'28"	25.295580	92.318400		
210	AP210		DP-99	DP-100	80	11197	Along the Road-Pvt.		Rymbai Village	42°46'56"	25.295990	92.318720		
211	AP211		DP-100	SP-102	49	11246	Along the Road-Pvt.		Rymbai Village	42°37'16"	25.296700	92.318620		

SL. No.	Location	Extension	Pole From	Pole To	(Span in mt)	Cumulative Span	Description Land	Nature of Damege(tree/hut)	Village Name	Angle of deviation	Latitude	Longitude	Line Crossings	Remarks
212	AP212		SP-102	SP-103	50	11296	Along the Road-Pvt.		Rymbai Village	9°56'46"	25.297060	92.318900		
213	AP213	2M	SP-103	DP-101	63	11359	Along the Road-Pvt.		Rymbai Village	7°01'04"	25.297380	92.319250	11KV Line X-ing	
214	AP214		DP-101	DP-102	52	11411	Along the Road-Pvt.		Rymbai Village	24°63'42"	25.297730	92.319740		
215	AP215		DP-102	DP-103	58	11469	Along the Road-Pvt.		Rymbai Village	51°54'24"	25.297840	92.320240		
216	AP216		DP-103	DP-104	57	11526	Along the Road-Pvt.		Rymbai Village	25°79'67"	25.298310	92.320480		
217	AP217		DP-104	DP-105	54	11580	Along the Road-Pvt.		Rymbai Village	22°90'68"	25.298820	92.320470		
218	AP218		DP-105	DP-106	59	11639	Along the Road-Pvt.		Rymbai Village	20°94'77"	25.299270	92.320670		5th DP after 4nos SP and span.
219	AP219		DP-106	SP-104	51	11690	Along the Road-Pvt.		Rymbai Village	3°43'14"	25.299660	92.321070		
220	AP220		SP-104	SP-105	53	11743	Along the Road-Pvt.		Rymbai Village	13°02'68"	25.299980	92.321440		
221	AP221		SP-105	SP-106	45	11788	Along the Road-Pvt.		Rymbai Village	10°77'88"	25.300380	92.321730		
222	AP222		SP-106	SP-107	55	11843	Along the Road-Pvt.		Rymbai Village	4°30'02"	25.300670	92.322040		
223	AP223		SP-107	SP-108	46	11889	Along the Road-Pvt.		Rymbai Village	5°27'01"	25.301000	92.322450		
224	AP224		SP-108	DP-107	52	11941	Along the Road-Pvt.		Rymbai Village	3°40'22"	25.301300	92.322760		
225	AP225		DP-107	DP-108	72	12013	Along the Road-Pvt.	11 NOsTree	Rymbai Village	36°46'52"	25.301660	92.323090		
226	AP226		DP-108	SP-109	60	12073	Along the Road-Pvt.		Rymbai Village	32°53'72"	25.302310	92.323130		
227	AP227		SP-109	SP-110	58	12131	Along the Road-Pvt.		Rymbai Village	2°72'15"	25.302750	92.323480		
228	AP228		SP-110	DP-109	52	12183	Along the Road-Pvt.		Rymbai Village	21°67'25"	25.303160	92.323840		
229	AP229		DP-109	SP-111	59	12242	Along the Road-Pvt.		Rymbai Village	28°97'13"	25.303610	92.323990		
230	AP230		SP-111	DP-110	51	12293	Along the Road-Pvt.		Rymbai Village	11°51'35"	25.303980	92.324410		
231	AP231		DP-110	DP-111	54	12347	Along the Road-Pvt.		Rymbai Village	19°57'54"	25.304230	92.324840		
232	AP232		DP-111	DP-112	66	12413	Along the Road-Pvt.		Rymbai Village	43°76'96"	25.304340	92.325360		span
233	AP233		DP-112	SP-112	53	12466	Along the Road-Pvt.		Rymbai Village	13°28'27"	25.304840	92.325720		
234	AP234		SP-112	FP-11	47	12513	Along the Road-Pvt.		Rymbai Village	4°42'50"	25.305285	92.325897		
235	AP235		FP-11	SP-113	43	12556	Along the Road-Pvt.		Rymbai Village	70°23'42"	25.305690	92.326020		
236	AP236		SP-113	DP-113	38	12594	Along the Road-Pvt.		Rymbai Village	7°40'68"	25.305720	92.326450		
237	AP237		DP-113	DP-114	61	12655	Along the Road-Pvt.		Rymbai Village	43°84'51"	25.305790	92.326820		
238	AP238		DP-114	DP-115	63	12718	Along the Road-Pvt.		Rymbai Village	25°16'46"	25.306240	92.327160		
239	AP239		DP-115	DP-116	56	12774	Along the Road-Pvt.		Rymbai Village	33°70'52"	25.306800	92.327260		
240	AP240		DP-116	SP-114	51	12825	Along the Road-Pvt.		Rymbai Village	28°05'55"	25.307170	92.327640		
241	AP241		SP-114	DP-117	52	12877	Along the Road-Pvt.		Rymbai Village	22°25'47"	25.307320	92.328120		
242	AP242		DP-117	SP-115	47	12924	Along the Road-Pvt.		Rymbai Village	36°24'18"	25.307630	92.328510		
243	AP243		SP-115	SP-116	49	12973	Along the Road-Pvt.		Rymbai Village	0°27'24"	25.308040	92.328610		
244	AP244		SP-116	SP-117	54	13027	Along the Road-Pvt.		Rymbai Village	12°93'14"	25.308473	92.328718		
245	AP245		SP-117	SP-118	52	13079	Along the Road-Pvt.		Rymbai Village	6°38'48"	25.308910	92.328950		
246	AP246		SP-118	SP-119	55	13134	Along the Road-Pvt.		Rymbai Village	4°59'04"	25.309350	92.329120		
247	AP247		SP-119	DP-118	50	13184	Along the Road-Pvt.		Rymbai Village	16°54'87"	25.309800	92.329340		slope land on the hill
248	AP248		DP-118	SP-120	53	13237	Along the Road-Pvt.		Rymbai Village	25°00'88"	25.310140	92.329660		
249	AP249		SP-120	DP-119	53	13290	Along the Road-Pvt.		Rymbai Village	9°43'79"	25.310600	92.329800		slope land on the hill
250	AP250		DP-119	SP-121	51	13341	Along the Road-Pvt.		Rymbai Village	9°78'05"	25.311030	92.330020		
251	AP251		SP-121	SP-122	52	13393	Along the Road-Pvt.		Rymbai Village	14°07'38"	25.311410	92.330310		
252	AP252		SP-122	DP-120	46	13439	Along the Road-Pvt.		Rymbai Village	0°84'88"	25.311720	92.330700		
253	AP253		DP-120	SP-123	43	13482	Along the Road-Pvt.		Rymbai Village	3°45'81"	25.311990	92.331050		
254	AP254		SP-123	SP-124	53	13535	Along the Road-Pvt.		Rymbai Village	1°70'55"	25.312260	92.331360		

Approved

Executive Engineer
Khliehriat Distribution Division
ME, PDCL Khliehriat

Final Data Sheet for 132KV Mynkre to 33/11KV Byndhiati Sub-Station

Detail Survey Report												
SL. No.	Loc. No	Pole	Extn	Pole Type	Angle of Deviation	Span (M)	Cumulative Length (M)	Co-Ordinates		Crossing Details	Village Name	Line Crossing
								Longitude	Latitude			
1	AP1	FP-1		Four Pole				92.3689	25.2342		Umrasong	
2	AP2	FP-2		Four Pole	78°47'84"	45		92.3692	25.2339		Umrasong	
3	AP3	DP-1		Double Pole		64	109	92.3697	25.2343		Umrasong	
4	AP4	FP-3		Four Pole	95°67'66"	60	169	92.3701	25.2347		Umrasong	
5	AP5	FP-4	1M	Four Pole	87°55'65"	80	249	92.3695	25.2352		Umrasong	
6	AP6	DP-2	1M	Double Pole	8°55'84"	29	278	92.3697	25.2353	Road	Umrasong	
7	AP7	SP-1		Single Pole	9°00'44"	39	317	92.3700	25.2356		Umrasong	
8	AP8	SP-2		Single Pole	8°65'92"	47	364	92.3703	25.2359		Umrasong	
9	AP9	SP-3		Single Pole	9°50'00"	48	412	92.3706	25.2362		Umrasong	
10	AP10	SP-4		Single Pole	9°79'93"	41	453	92.3708	25.2366		Umrasong	
11	AP11	DP-3		Double Pole	36°06'74"	40	493	92.3708	25.2369		Umrasong	
12	AP12	DP-4		Double Pole	9°88'18"	28	521	92.3710	25.2371	Nala	Umrasong	
13	AP13	SP-5		Single Pole	9°75'25"	35	556	92.3713	25.2373		Umrasong	
14	AP14	SP-6		Single Pole	0°84'47"	44	600	92.3717	25.2374		Umrasong	
15	AP15	DP-5		Double Pole	52°97'85"	50	650	92.3722	25.2376		Umrasong	
16	AP16	SP-7		Single Pole	6°32'00"	47	697	92.3726	25.2374		Umrasong	
17	AP17	SP-8		Single Pole	16°77'37"	50	747	92.3731	25.2372		Umrasong	
18	AP18	FP-5		Four Pole	66°57'79"	47	794	92.3735	25.2372		Umrasong	
19	AP19	DP-6		Double Pole	3°65'62"	36	830	92.3737	25.2375		Umrasong	
20	AP20	DP-7		Double Pole	31°01'02"	75	905	92.3740	25.2381		Umrasong	
21	AP21	DP-8		Double Pole	10°27'82"	70	975	92.3746	25.2384		Umrasong	
22	AP22	DP-9		Double Pole	26°51'76"	62	1037	92.3751	25.2388	Nala	Nongsning	
23	AP23	SP-9		Single Pole	20°59'02"	46	1083	92.3752	25.2392		Nongsning	
24	AP24	DP-10		Double Pole	4°40'18"	53	1136	92.3752	25.2397		Nongsning	
25	AP25	DP-11		Double Pole	5°46'42"	73	1209	92.3751	25.2403		Nongsning	
26	AP26	DP-12		Double Pole	0°98'82"	71	1280	92.3750	25.2410		Nongsning	
27	AP27	SP-10		Single Pole	10°36'77"	54	1334	92.3750	25.2415		Nongsning	
28	AP28	DP-13		Double Pole	27°84'25"	52	1386	92.3749	25.2419		Nongsning	
29	AP29	DP-14		Double Pole	21°95'53"	57	1443	92.3750	25.2424		Nongsning	
30	AP30	SP-11		Single Pole	1°95'71"	47	1490	92.3752	25.2428		Nongsning	
31	AP31	SP-12		Single Pole	6°87'43"	56	1546	92.3755	25.2432		Nongsning	
32	AP32	DP-15		Double Pole	1°05'52'	54	1600	92.3758	25.2436		Nongsning	
33	AP33	FP-6	2M	Four Pole	74°34'07"	74	1674	92.3761	25.2442		Nongsning	33kv line crossing
34	AP34	FP-7	1M	Four Pole	94°45'22"	44	1718	92.3765	25.2441	Nala	Nongsning	
35	AP35	DP-16		Double Pole	0°10'58"	47	1765	92.3766	25.2445		Nongsning	
36	AP36	DP-17		Double Pole	1°46'20"	47	1812	92.3767	25.2450		Nongsning	
37	AP37	SP-13		Single Pole	7°65'05"	47	1859	92.3767	25.2454		Nongsning	
38	AP38	SP-14		Single Pole	7°84'54"	47	1906	92.3768	25.2458		Nongsning	
39	AP39	SP-15		Single Pole	0°58'03"	46	1952	92.3770	25.2462		Nongsning	
40	AP40	DP-18		Double Pole	2°70'02"	50	2002	92.3772	25.2466		Nongsning	
41	AP41	DP-19		Double Pole	3°26'38"	45	2047	92.3773	25.2470	Road	Nongsning	
42	AP42	SP-16		Single Pole	6°10'09"	46	2093	92.3775	25.2473		Nongsning	
43	AP43	SP-17		Single Pole	4°50'00"	48	2141	92.3778	25.2477		Nongsning	
44	AP44	SP-18		Single Pole	4°68'71"	50	2191	92.3780	25.2481		Nongsning	

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Detail Survey Report												
SL. No.	Loc. No	Pole	Extn	Pole Type	Angle of Deviation	Span (M)	Cumulative Length (M)	Co-Ordinates		Crossing Details	Village Name	Line Crossing
								Longitude	Latitude			
45	AP45	SP-19		Single Pole	0°07'04"	49	2240	92.3783	25.2485		Nongsning	
46	AP46	SP-20	2M	Single Pole	7°21'79"	49	2289	92.3786	25.2488		Nongsning	33kv line crossing
47	AP47	DP-20	1M	Double Pole	14°56'12"	50	2339	92.3788	25.2493		Nongsning	
48	AP48	DP-21	1M	Double Pole	0°47'25"	45	2384	92.3789	25.2496		Nongsning	
49	AP49	DP-22		Double Pole	2°17'10"	47	2431	92.3790	25.2501		Nongsning	
50	AP50	DP-23		Double Pole	0°39'41"	59	2490	92.3791	25.2506		Nongsning	
51	AP51	SP-21		Single Pole	9°17'35"	50	2540	92.3791	25.2510		Nongsning	
52	AP52	SP-22		Single Pole	8°49'22"	48	2588	92.3791	25.2515		Nongsning	
53	AP53	DP-24		Double Pole	10°99'93"	48	2636	92.3791	25.2519		Nongsning	
54	AP54	SP-23		Single Pole	9°71'95"	48	2684	92.3789	25.2523		Nongsning	
55	AP55	SP-24		Single Pole	6°22'50"	47	2731	92.3788	25.2527		Nongsning	
56	AP56	SP-25		Single Pole	4°70'33"	50	2781	92.3788	25.2532		Nongsning	132kv line crossing
57	AP57	DP-25		Double Pole	3°39'39"	50	2831	92.3788	25.2536		Nongsning	
58	AP58	DP-26		Double Pole	29°54'88"	51	2882	92.3788	25.2541		Nongsning	
59	AP59	DP-27		Double Pole	5°93'80"	57	2939	92.3790	25.2545		Nongsning	
60	AP60	DP-28	2M	Double Pole	8°15'24"	56	2995	92.3793	25.2550	Road	Nongsning	11kv line crossing
61	AP61	DP-29	2M	Double Pole	3°34'08'	71	3066	92.3798	25.2554		Nongsning	11kv line crossing
62	AP62	DP-30	1M	Double Pole	6°83'02'	47	3113	92.3801	25.2557		Nongsning	
63	AP63	DP-31		Double Pole	4°96'88"	47	3160	92.3804	25.2561		Nongsning	
64	AP64	SP-26		Single Pole	6°56'80"	48	3208	92.3807	25.2564		Nongsning	
65	AP65	DP-32		Double Pole	40°17'59"	54	3262	92.3809	25.2569		Nongsning	
66	AP66	SP-27		Single Pole	6°79'43"	48	3310	92.3813	25.2570		Nongsning	
67	AP67	SP-28		Single Pole	9.13'92"	49	3359	92.3818	25.2572		Nongsning	
68	AP68	SP-29		Single Pole	4°60'25"	50	3409	92.3823	25.2574		Nongsning	
69	AP69	SP-30		Single Pole	1°33'35"	49	3458	92.3827	25.2576		Nongsning	
70	AP70	SP-31		Single Pole	1°23'11"	46	3504	92.3831	25.2578		Nongsning	
71	AP71	DP-33		Double Pole	5°01'33"	45	3549	92.3835	25.2580		Nongsning	
72	AP72	SP-32		Single Pole	10°11'43"	47	3596	92.3839	25.2581		Nongsning	
73	AP73	SP-33		Single Pole	9°88'71"	47	3643	92.3843	25.2584		Nongsning	132kv line crossing
74	AP74	DP-34		Double Pole	9°48'56"	50	3693	92.3847	25.2586		Nongsning	
75	AP75	DP-35		Double Pole	37°75'97"	45	3738	92.3851	25.2588		Nongsning	
76	AP76	SP-34		Single Pole	9°51'75"	47	3785	92.3852	25.2592		Nongsning	
77	AP77	SP-35		Single Pole	7°00'53"	50	3835	92.3853	25.2596		Nongsning	
78	AP78	SP-36		Single Pole	10°55'05"	50	3885	92.3853	25.2601		Nongsning	
79	AP79	DP-36		Double Pole	17°12'04"	49	3934	92.3852	25.2605		Nongsning	
80	AP80	SP-37		Single Pole	3°41'62"	49	3983	92.3850	25.2609		Nongsning	
81	AP81	DP-37		Double Pole	7°68'04"	50	4033	92.3848	25.2613		Nongsning	132kv line crossing
82	AP82	DP-38		Double Pole	1°93'02"	48	4081	92.3846	25.2617		Nongsning	
83	AP83	SP-38		Single Pole	4°99'91"	46	4127	92.3844	25.2621		Nongsning	
84	AP84	SP-39		Single Pole	10°02'98"	49	4176	92.3842	25.2625		Nongsning	
85	AP85	SP-40		Single Pole	11°53'80"	50	4226	92.3838	25.2628		Nongsning	
86	AP86	DP-39		Double Pole	1°75'03"	49	4275	92.3835	25.2631		Nongsning	
87	AP87	SP-41		Single Pole	9°53'40"	49	4324	92.3831	25.2634		Nongsning	
88	AP88	SP-42		Single Pole	6°94'32"	48	4372	92.3827	25.2636		Nongsning	
89	AP89	SP-43		Single Pole	4°73'25"	48	4420	92.3822	25.2638		Nongsning	
90	AP90	SP-44		Single Pole	7°41'64"	49	4469	92.3818	25.2640		Nongsning	
91	AP91	DP-40		Double Pole	1°29'65"	49	4518	92.3814	25.2643		Nongsning	
92	AP92	SP-45		Single Pole	4°77'04"	50	4568	92.3810	25.2645		Nongsning	
93	AP93	SP-46		Single Pole	5°00'52"	50	4618	92.3806	25.2648		Nongsning	

Detail Survey Report

SL. No.	Loc. No	Pole	Extn	Pole Type	Angle of Deviation	Span (M)	Cumulative Length (M)	Co-Ordinates		Crossing Details	Village Name	Line Crossing
								Longitude	Latitude			
94	AP94	SP-47		Single Pole	7°14'42"	48	4666	92.3803	25.2651		Nongsning	
95	AP95	DP-41		Double Pole	1°26'12°	51	4717	92.3800	25.2655		Nongsning	132kv line crossing
96	AP96	DP-42		Double Pole	3°19'14"	48	4765	92.3797	25.2658		Nongsning	
97	AP97	SP-48		Single Pole	0°17'95"	49	4814	92.3794	25.2662		Nongsning	
98	AP98	SP-49		Single Pole	4°27'56"	55	4869	92.3791	25.2666		Nongsning	
99	AP99	DP-43		Double Pole	0°50'38"	49	4918	92.3788	25.2670		Nongsning	
100	AP100	SP-50		Single Pole	3°92'99"	50	4968	92.3786	25.2673		Nongsning	
101	AP101	SP-51		Single Pole	3°86'13"	50	5018	92.3783	25.2677		Nongsning	
102	AP102	SP-52		Single Pole	1°46'85'	48	5066	92.3780	25.2680		Nongsning	
103	AP103	DP-44		Double Pole	29°60'95"	49	5115	92.3777	25.2684		Nongsning	
104	AP104	DP-45		Double Pole	4°07'25"	44	5159	92.3776	25.2688		Nongsning	
105	AP105	DP-46		Double Pole	18°91'89"	77	5236	92.3776	25.2695		Nongsning	
106	AP106	SP-53		Single Pole	8°71'89"	50	5286	92.3774	25.2699		Nongsning	
107	AP107	SP-54		Single Pole	2°00'06"	50	5336	92.3771	25.2703		Nongsning	
108	AP108	SP-55		Single Pole	3°04'23"	49	5385	92.3769	25.2706		Nongsning	
109	AP109	DP-47		Double Pole	0°34'94"	49	5434	92.3767	25.2710		Nongsning	
110	AP110	SP-56		Single Pole	2°55'68"	50	5484	92.3764	25.2714		Nongsning	
111	AP111	SP-57		Single Pole	3°25'22"	48	5532	92.3762	25.2718		Nongsning	
112	AP112	SP-58		Single Pole	8°54'91	44	5576	92.3760	25.2721		Nongsning	
113	AP113	DP-48		Double Pole	32°31'48"	45	5621	92.3759	25.2725		Nongsning	
114	AP114	DP-49		Double Pole	4°10'24"	50	5671	92.3760	25.2730		Nongsning	
115	AP115	SP-59		Single Pole	4°07'01"	53	5724	92.3762	25.2734		Umtra	
116	AP116	SP-60		Single Pole	3°00'67"	52	5776	92.3763	25.2739		Umtra	
117	AP117	DP-50		Double Pole	5°76'59"	50	5826	92.3764	25.2743		Umtra	
118	AP118	DP-51		Double Pole	4°38'63"	60	5886	92.3766	25.2749		Umtra	
119	AP119	SP-61		Single Pole	1°12'13"	50	5936	92.3767	25.2753		Umtra	
120	AP120	DP-52		Double Pole	2°71'56"	50	5986	92.3769	25.2757		Umtra	
121	AP121	DP-53		Double Pole	5°19'09"	42	6028	92.3770	25.2761		Umtra	
122	AP122	DP-54		Double Pole	11°55'67"	48	6076	92.3770	25.2765		Umtra	
123	AP123	SP-62		Single Pole	9°87'78"	50	6126	92.3772	25.2769		Umtra	
124	AP124	DP-55		Double Pole	25°10'58"	46	6172	92.3774	25.2773		Umtra	
125	AP125	DP-56		Double Pole	1°94'09"	51	6223	92.3778	25.2776		Umtra	
126	AP126	SP-63		Single Pole	4°24'93"	46	6269	92.3782	25.2778		Umtra	
127	AP127	DP-57		Double Pole	11°25'12"	37	6306	92.3785	25.2780		Umtra	
128	AP128	DP-58		Double Pole	16°01'27"	59	6365	92.3788	25.2784	NH	Umtra	
129	AP129	DP-59		Double Pole	5°25'81"	54	6419	92.3791	25.2789		Umtra	
130	AP130	DP-60		Double Pole	7°75'01"	98	6517	92.3795	25.2796		Umtra	
131	AP131	DP-61		Double Pole	20°81'23"	58	6575	92.3799	25.2801		Umtra	
132	AP132	DP-62		Double Pole	10.18'81"	68	6643	92.3801	25.2806		Umtra	
133	AP133	SP-64		Single Pole	9°42'08"	43	6686	92.3802	25.2810		Umtra	
134	AP134	DP-63		Double Pole	17°49'34"	46	6732	92.3805	25.2813		Umtra	132kv line crossing
135	AP135	DP-64		Double Pole	0°67'54'	77	6809	92.3811	25.2817		Umtra	
136	AP136	DP-65		Double Pole	15°14'23"	62	6871	92.3816	25.2821		Umtra	
137	AP137	SP-65		Single Pole	2°19'35"	50	6921	92.3819	25.2824		Umtra	
138	AP138	SP-66		Single Pole	10°08'59"	43	6964	92.3822	25.2827		Umtra	
139	AP139	DP-66		Double Pole	2°24'32"	39	7003	92.3825	25.2829		Umtra	
140	AP140	DP-67		Double Pole	31°29'08"	63	7066	92.3830	25.2833		Umtra	
141	AP141	DP-68	1M	Double Pole	6°11'33"	54	7120	92.3832	25.2837		Umtra	
142	AP142	DP-69	1M	Double Pole	6°22'98"	52	7172	92.3833	25.2842		Umtra	

Approved

Executive Engineer
Khliehriat Distribution Division
ME, PDCL Khliehriat

Detail Survey Report

SL. No.	Loc. No	Pole	Extn	Pole Type	Angle of Deviation	Span (M)	Cumulative Length (M)	Co-Ordinates		Crossing Details	Village Name	Line Crossing
								Longitude	Latitude			
143	AP143	DP-70		Double Pole	2°07'56"	45	7217	92.3835	25.2845		Umtra	
144	AP144	SP-67		Single Pole	3°10'60"	49	7266	92.3837	25.2850		Umtra	
145	AP145	SP-68		Single Pole	9°89'44"	57	7323	92.3839	25.2854		Umtra	
146	AP146	DP-71		Double Pole	0°40'27"	50	7373	92.3842	25.2858		Umtra	
147	AP147	SP-69		Single Pole	2°85'31"	50	7423	92.3845	25.2862		Umtra	
148	AP148	SP-70		Single Pole	0°07'87"	50	7473	92.3848	25.2865		Umtra	
149	AP149	DP-72		Double Pole	22°46'69"	50	7523	92.3851	25.2869		Umtra	
150	AP150	DP-73		Double Pole	6°28'41"	50	7573	92.3852	25.2873		Umtra	
151	AP151	DP-74		Double Pole	23°44'80"	90	7663	92.3856	25.2881		Umtra	
152	AP152	SP-71		Single Pole	15°59'36'	49	7712	92.3859	25.2884		Umtra	
153	AP153	SP-72		Single Pole	7°20'10"	50	7762	92.3862	25.2888		Umtra	
154	AP154	SP-73		Single Pole	6°12'53"	49	7811	92.3864	25.2892		Umtra	
155	AP155	SP-74		Single Pole	0°26'77"	49	7860	92.3866	25.2895		Umtra	
156	AP156	DP-75		Double Pole	2°71'02"	47	7907	92.3868	25.2899		Umtra	
157	AP157	SP-75		Single Pole	2°71'28"	49	7956	92.3870	25.2903		Umtra	
158	AP158	SP-76		Single Pole	6°81'22"	49	8005	92.3872	25.2907		Umtra	
159	AP159	SP-77		Single Pole	2°27'23"	49	8054	92.3875	25.2911		Umtra	
160	AP160	SP-78		Single Pole	5°33'41"	50	8104	92.3877	25.2915		Umtra	
161	AP161	DP-76		Double Pole	0°51'43"	50	8154	92.3880	25.2919		Umtra	
162	AP162	SP-79		Single Pole	0°65'35"	48	8202	92.3882	25.2923		Umtra	
163	AP163	SP-80		Single Pole	0°05'02"	47	8249	92.3884	25.2927		Umtra	
164	AP164	SP-81		Single Pole	8°87'40"	47	8296	92.3886	25.2930		Umtra	
165	AP165	SP-82		Single Pole	9°15'64"	46	8342	92.3887	25.2934		Umtra	
166	AP166	FP-8		Four Pole	68°82'64"	48	8390	92.3888	25.2939		Umtra	
167	AP167	DP-77		Double Pole	6°36'02"	50	8440	92.3893	25.2940		Byndihati	
168	AP168	SP-83		Single Pole	13°44'51"	50	8490	92.3898	25.2941		Byndihati	
169	AP169	SP-84		Single Pole	11°73'16"	49	8539	92.3902	25.2944		Byndihati	
170	AP170	SP-85		Single Pole	16°25'92"	50	8589	92.3906	25.2947		Byndihati	
171	AP171	DP-78		Double Pole	49°93'29"	50	8639	92.3908	25.2951		Byndihati	
172	AP172	SP-86		Single Pole	25°70'11"	48	8687	92.3906	25.2954		Byndihati	
173	AP173	SP-87		Single Pole	13°61'36"	50	8737	92.3902	25.2957		Byndihati	
174	AP174	DP-79		Double Pole	4°87'58"	50	8787	92.3899	25.2960		Byndihati	132kv line crossing
175	AP175	DP-80		Double Pole	17°99'37"	50	8837	92.3895	25.2963		Byndihati	
176	AP176	SP-88		Single Pole	13°82'93"	73	8910	92.3892	25.2969		Byndihati	
177	AP177	SP-89		Single Pole	3°31'61"	63	8973	92.3890	25.2975		Byndihati	
178	AP178	DP-81		Double Pole	26°82'04"	50	9023	92.3888	25.2979		Byndihati	
179	AP179	SP-90		Single Pole	8°28'93"	50	9073	92.3885	25.2982		Byndihati	
180	AP180	SP-91		Single Pole	2°01'29"	50	9123	92.3882	25.2986		Byndihati	
181	AP181	SP-92		Single Pole	10°48'38"	50	9173	92.3879	25.2990		Byndihati	
182	AP182	SP-93		Single Pole	9°52'72"	45	9218	92.3876	25.2992		Byndihati	
183	AP183	DP-82		Double Pole	6°84'58"	48	9266	92.3873	25.2996		Byndihati	
184	AP184	SP-94		Single Pole	5°56'38"	48	9314	92.3871	25.3000		Byndihati	
185	AP185	SP-95		Single Pole	12°57'71"	46	9360	92.3869	25.3004		Byndihati	
186	AP186	SP-96		Single Pole	4°75'15"	49	9409	92.3868	25.3008		Byndihati	
187	AP187	SP-97		Single Pole	3°13'38"	49	9458	92.3867	25.3012		Byndihati	
188	AP188	DP-83		Double Pole	0°51'62"	47	9505	92.3866	25.3016		Byndihati	
189	AP189	SP-98		Single Pole	9°41'72"	48	9553	92.3865	25.3020		Byndihati	
190	AP190	SP-99		Single Pole	5°67'12"	49	9602	92.3865	25.3024		Byndihati	
191	AP191	SP-100		Single Pole	8°26'00"	42	9644	92.3865	25.3028		Byndihati	

Detail Survey Report

SL. No.	Loc. No	Pole	Extn	Pole Type	Angle of Deviation	Span (M)	Cumulative Length (M)	Co-Ordinates		Crossing Details	Village Name	Line Crossing
								Longitude	Latitude			
192	AP192	DP-84		Double Pole	27°30'81"	50	9694	92.3863	25.3032		Byndihati	
193	AP193	SP-101		Single Pole	10°29'37"	49	9743	92.3860	25.3036		Byndihati	
194	AP194	SP-102		Single Pole	1°63'05"	46	9789	92.3856	25.3038		Byndihati	
195	AP195	SP-103		Single Pole	2°20'02"	46	9835	92.3853	25.3041		Byndihati	
196	AP196	DP-85		Double Pole	18°60'97"	50	9885	92.3849	25.3044		Byndihati	
197	AP197	SP-104		Single Pole	8°33'43"	48	9933	92.3847	25.3047		Byndihati	
198	AP198	SP-105		Single Pole	10.43'92"	40	9973	92.3845	25.3051		Byndihati	
199	AP199	SP-106		Single Pole	7°07'64"	49	10022	92.3842	25.3054		Byndihati	
200	AP200	DP-86		Double Pole	16°48'94"	48	10070	92.3840	25.3057		Byndihati	
201	AP201	FP-9		Four Pole	64°95'58"	50	10120	92.3835	25.3060		Byndihati	132kv line crossing
202	AP202	FP-10		Four Pole		37	10157	92.3832	25.3058	Nala	Byndihati	

Total Poles	
SP	106
DP	86
FP	10
TOTAL	318

For Power Grid Corporation Of India Ltd.

Checked By

(Mr. A. Bhattacharjee)
Sr. Engr

Recommended By

23/02/18

बि मेधि / B. MEDHI
प्रबन्धक / Manager
एनईआरपीएसआईपी / NERPSIP
पावरग्रिड खिलेरियाट / POWERGRID Khliehriat

Approved By MePDCL

Executive Engineer
Khliehriat Distribution Division
ME. PDCL Khliehriat

(RAKESH KAUR)
NECCO Power & Infra Limited
East Jaintia Hills District
Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED

CONTRACTOR: NECCON POWER & INFRA LIMITED

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

SL. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
1		1	Four Pole					25.234154	92.368848	Along the substation Boundary		Umrasong	
						46							
2	AP-1	AP-1	Four Pole		77°69'58"		46	25.233921	92.369220	Along the substation Boundary		Umrasong	
						66	0						
3		Loc-1/1	Double Pole		1°28'65"		112	25.234325	92.369699	Along the substation Boundary		Umrasong	
						58	0						
4	AP-2	AP-2	Four Pole		94°02'39"		170	25.234692	92.370115	Along the substation Boundary		Umrasong	
						80	0						
5		AP-3	Four Pole		100°63'79"		250	25.235169	92.369523	Vacant Land-Pvt.		Umrasong	
						31	0				Metal Road-(Width-4m), 11kv		Guard Require
6	AP-3	Loc-3/1	Double Pole		0°13'17"		281	25.235338	92.369765	Vacant Land-Pvt.		Umrasong	
						36	0						
7		Loc-3/2	Single Pole		9°70'21"		317	25.235534	92.370047	Vacant Land-Pvt.		Umrasong	
						48	0						
8		Loc-3/3	Single Pole		9°47'40"		365	25.235848	92.370368	Vacant Land-Pvt.		Umrasong	
						49	0						
9	AP-4	AP-4	Double Pole		11°01'65"		414	25.236220	92.370638	Vacant Land-Pvt.		Umrasong	
						42	0						
10		Loc-4/1	Single Pole		9°60'02"		456	25.236569	92.370796	Vacant Land-Pvt.		Umrasong	
						39	0						
11	AP-5	AP-5	Double Pole		32°94'86"		495	25.236907	92.370880	Vacant Land-Pvt.		Umrasong	
						26	0				Nala (Width-3m)		Guard Require
12		AP-6	Double Pole		11°88'67"		521	25.237069	92.371063	Vacant Land-Pvt.		Umrasong	
						36	0						
13	AP-6	Loc-6/1	Single Pole		7°86'38"		557	25.237243	92.371365	Paddy Field-Pvt.		Umrasong	
						43	0						
14		Loc-6/2	Single Pole		6°57'17"		600	25.237404	92.371750	Paddy Field-Pvt.		Umrasong	
						50	0						
15		AP-7	Double Pole		43°99'05"		650	25.237545	92.372223	Paddy Field-Pvt.		Umrasong	
	AP-7					41	0						
16		Loc-7/1	Single Pole		1°43'61"		691	25.237384	92.372592	Along the road-Pvt		Umrasong	
						51	0						
17	AP-8	AP-8	Double Pole		17°64'52"		742	25.237196	92.373052	Along the road-Pvt		Umrasong	
						53	0						
18		AP-9	Four Pole		60°25'34"		795	25.237141	92.373572	Along the road-Pvt		Umrasong	
	AP-9					43	0				Kachha Road (3m)		
19		Loc-9/1	Double Pole		9°11'40"		838	25.237450	92.373824	Paddy Field-Pvt.		Nogsning	
						69	0						
20		AP-10	Double Pole		30°60'27"		907	25.238010	92.374130	Paddy Field-Pvt.		Nogsning	
	AP-10					69	0						
21		Loc-10/1	Double Pole		9°01'84"		976	25.238349	92.374705	Paddy Field-Pvt.		Nogsning	
						62	0				Nala (Width-3m)		Guard Require

Executive Engineer
Khriat Distribution Division
ME. PDCL Khriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

CONTRACTOR: NECCON POWER & INFRA LIMITED

PACKAGE:MEG-DMS-01

Sl. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
22	AP-11	AP-11	Double Pole		26°81'71"		1038	25.238734	92.375144	Forest Land-Pvt.		Nogsning	
						51	0						
23		AP-12	Double Pole		24°29'61"		1089	25.239171	92.375311	Vacant Land-Pvt.		Nogsning	
						59	0						
24		Loc-12/1	Double Pole		4°61'61"		1148	25.239695	92.375258	Vacant Land-Pvt.		Nogsning	
						72	0						
25	AP-12	Loc-12/2	Double Pole		3°91'87"		1220	25.240331	92.375136	Forest Land-Pvt.		Nogsning	
						72	0						
26		Loc-12/3	Double Pole		2°20'53"		1292	25.240976	92.375062	Forest Land-Pvt.		Nogsning	
						54	0						
27		Loc-12/4	Single Pole		8°93'99"		1346	25.241463	92.375027	Vacant Land-Pvt.		Nogsning	
						51	0						
28	AP-13	AP-13	Double Pole		25°91'79"		1397	25.241910	92.374916	Vacant Land-Pvt.		Nogsning	
						54	0						
29		AP-14	Double Pole		19°07'08"		1451	25.242386	92.375040	Vacant Land-Pvt.		Nogsning	
						45	0						
30		Loc-14/1	Double Pole		1°38'47"		1496	25.242729	92.375280	Vacant Land-Pvt.		Nogsning	
	AP-14					57	0						
31		Loc-14/2	Double Pole		3°01'74"		1553	25.243165	92.375569	Vacant Land-Pvt.		Nogsning	
						54	0						
32		Loc-14/3	Double Pole		0°13'77"		1607	25.243595	92.375821	Vacant Land-Pvt.		Nogsning	
						67	0						
33	AP-15	AP-15	Four Pole		75°79'67"		1674	25.244126	92.376134	Forest Land-Pvt.		Nogsning	
						47	0						
34		AP-16	Four Pole		94°31'16"		1721	25.244024	92.376591	Forest Land-Pvt.	1Nos.11KV & 1Nos.33KV ,Nala (Width-4m)		Guard Require
						56	0					Nogsning	
35		Loc-16/1	Double Pole		2°15'24"		1777	25.244524	92.376684	Vacant Land-Pvt.		Nogsning	
						47	0						
36		Loc-16/2	Double Pole		0°17'92"		1824	25.244941	92.376744	Vacant Land-Pvt.	11KV		Guard Require
						50	0					Nogsning	
37		Loc-16/3	Single Pole		6°51'27"		1874	25.245384	92.376809	Vacant Land-Pvt.		Nogsning	
						44	0						
38		Loc-16/4	Single Pole		5°80'06"		1918	25.245766	92.376915	Vacant Land-Pvt.		Nogsning	
						46	0						
39		Loc-16/5	Single Pole		0°36'23"		1964	25.246151	92.377069	Vacant Land-Pvt.		Nogsning	
						51	0						
40	AP-16	Loc-16/6	Double Pole		3°59'98"		2015	25.246580	92.377244	Vacant Land-Pvt.		Nogsning	
						44	0						
41		Loc-16/7	Double Pole		2°59'12"		2059	25.246938	92.377419	Forest Land-Pvt.	Kachha Road (4m)		
						46	0					Nogsning	
42		Loc-16/8	Single Pole		5°57'92"		2105	25.247309	92.377623	Forest Land-Pvt.		Nogsning	
						48	0						

Executive Engineer
Khliehriat Distribution Division
DoE Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED

CONTRACTOR: NECCON POWER & INFRA LIMITED

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

Sl. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
43		Loc-16/9	Single Pole		2°44'48"		2153	25.247672	92.377874	Vacant Land-Pvt.		Nogsning	
						51	0						
44		Loc-16/10	Single Pole		3°38'75"		2204	25.248072	92.378125	Vacant Land-Pvt.		Nogsning	
						48	0						
45		Loc-16/11	Single Pole		0°11'56"		2252	25.248436	92.378386	Scrub Land-Pvt.		Nogsning	
						51	0						
46		Loc-16/12	Single Pole		7°38'00"		2303	25.248822	92.378664	Scrub Land-Pvt.		Nogsning	
						54	0						
47		AP-17	Double Pole		16°81'99"		2357	25.249258	92.378896	Scrub Land-Pvt.		Nogsning	
						46	0						
48		Loc-17/1	Double Pole		3°32'10"		2403	25.249669	92.378967	Vacant Land-Pvt.	1Nos.11 KV& 1Nos.33KV.		Guard Require
						44	0					Nogsning	
49	AP-17	Loc-17/2	Double Pole		2°87'16"		2447	25.250058	92.379060	Vacant Land-Pvt.			
						59	0					Nogsning	
50		Loc-17/3	Double Pole		1°43'34"		2506	25.250581	92.379155	Vacant Land-Pvt.			
						52	0					Nogsning	
51		Loc-17/4	Single Pole		7°42'30"		2558	25.251044	92.379226	Vacant Land-Pvt.			
						49	0					Nogsning	
52		AP-18	Double Pole		10°38'01"		2607	25.251482	92.379230	Orange Garden-Pvt			
						49	0					Umtyra	
53		Loc-18/1	Single Pole		8°65'56"		2656	25.251917	92.379146	Orange Garden-Pvt			
						47	0					Umtyra	
54		Loc-18/2	Single Pole		6°12'25"		2703	25.252321	92.378996	Vacant Land-Pvt.			
	AP-18					47	0					Umtyra	
55		Loc-18/3	Single Pole		9°02'07"		2750	25.252731	92.378896	Vacant Land-Pvt.			
						49	0					Umtyra	
56		Loc-18/4	Single Pole		3°07'60"		2799	25.253170	92.378867	Along the road-Pvt			
						50	0					Umtyra	
57		Loc-18/5	Double Pole		1°69'99"		2849	25.253623	92.378864	Along the road-Pvt			
						48	0					Umtyra	
58		AP-19	Double Pole		27°29'26"		2897	25.254054	92.378847	Along the road-Pvt	132KV		
						57	0					Umtyra	
59		Loc-19/1	Double Pole		8°57'64"		2954	25.254520	92.379090	Forest Land-Pvt.	132KV		
						59	0					Umtyra	
60		Loc-19/2	Double Pole		9°94'54"		3013	25.254960	92.379416	Forest Land-Pvt.	Kachha Road (4m)		
						65	0					Umtyra	
61	AP-19	Loc-19/3	Double Pole		2°65'22"		3078	25.255382	92.379863	Scrub Land-Pvt.			
						47	0					Umtyra	
62		Loc-19/4	Double Pole		1°77'69"		3125	25.255698	92.380168	Forest Land-Pvt.	11KV		Guard Require
						48	0					Umtyra	
63		Loc-19/5	Double Pole		8°52'24"		3173	25.256033	92.380446	Forest Land-Pvt.	11KV		Guard Require
						49	0					Umtyra	

Executive Engineer
Khliehriat Distribution Division
PDCL Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED

CONTRACTOR: NECCON POWER & INFRA LIMITED

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

SL. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
64		Loc-19/6	Single Pole		3°77'91"		3222	25.256408	92.380718	Forest Land-Pvt.		Umtyra	
						50	0						
65		AP-20	Double Pole		36°93'85"		3272	25.256812	92.380946	Forest Land-Pvt.		Umtyra	
						47	0						
66		Loc-20/1	Single Pole		9°40'92"		3319	25.256997	92.381365	Forest Land-Pvt.		Umtyra	
						48	0						
67		Loc-20/2	Single Pole		9°18'89"		3367	25.257113	92.381824	Forest Land-Pvt.		Umtyra	
						52	0						
68		Loc-20/3	Single Pole		1°65'28"		3419	25.257315	92.382286	Forest Land-Pvt.		Umtyra	
						47	0						
69		Loc-20/4	Single Pole		3°42'47"		3466	25.257510	92.382701	Vacant Land-Pvt.		Umtyra	
	AP-20					46	0						
70		Loc-20/5	Single Pole		4°60'92"		3512	25.257722	92.383093	Vacant Land-Pvt.		Umtyra	
						45	0						
71		Loc-20/6	Single Pole		0°83'17"		3557	25.257901	92.383494	Vacant Land-Pvt.		Umtyra	
						47	0						
72		Loc-20/7	Single Pole		7°84'40"		3604	25.258094	92.383911	Forest Land-Pvt.		Umtyra	
						48	0						
73		Loc-20/8	Single Pole		9°65'52"		3652	25.258343	92.384305	Forest Land-Pvt.		Umtyra	
						49	0						
74		Loc-20/9	Double Pole		8°45'56"		3701	25.258523	92.384746	Forest Land-Pvt.		Umtyra	
						47	0						
75		AP-21	Double Pole		36°54'15"		3748	25.258751	92.385138	Forest Land-Pvt.	132KV	Umtyra	
						49	0						
76		Loc-21/1	Single Pole		9°16'18"		3797	25.259160	92.385309	Forest Land-Pvt.		Umtyra	
	AP-21					50	0						
77		Loc-21/2	Single Pole		8°68'39"		3847	25.259601	92.385391	Forest Land-Pvt.		Umtyra	
						53	0						
78		Loc-21/3	Single Pole		9°11'88"		3900	25.260082	92.385399	Forest Land-Pvt.		Umtyra	
						51	0						
79		AP-22	Double Pole		18°61'50"		3951	25.260537	92.385317	Forest Land-Pvt.		Umtyra	
						51	0						
80		Loc-22/1	Single Pole		1°62'83"		4002	25.260944	92.385079	Forest Land-Pvt.		Umtyra	
						53	0						
81		Loc-22/2	Double Pole		6°77'30"		4055	25.261358	92.384820	Forest Land-Pvt.		Umtyra	
	AP-22					46	0						
82		Loc-22/3	Double Pole		0°67'69"		4101	25.261738	92.384644	Forest Land-Pvt.	132KV	Umtyra	
						48	0						
83		Loc-22/4	Single Pole		6°37'98"		4149	25.262136	92.384454	Forest Land-Pvt.		Umtyra	
						53	0						
84		Loc-22/5	Single Pole		8°45'49"		4202	25.262549	92.384192	Forest Land-Pvt.		Umtyra	
						48	0						

Executive Engineer
Khliehriat Distribution Division
M.E. PDCL Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED | **CONTRACTOR: NECCON POWER & INFRA LIMITED**

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

SL. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
85		AP-23	Double Pole		12°50'25"		4250	25.262891	92.383894	Forest Land-Pvt.		Umtyra	
						51	0						
86		Loc-23/1	Single Pole		0°08'70"		4301	25.263180	92.383503	Forest Land-Pvt.		Umtyra	
						49	0						
87		Loc-23/2	Single Pole		7°36'04"		4350	25.263461	92.383124	Forest Land-Pvt.		Umtyra	
						48	0						
88		Loc-23/3	Single Pole		6°95'90"		4398	25.263692	92.382715	Forest Land-Pvt.		Umtyra	
						50	0						
89		Loc-23/4	Single Pole		4°53'76"		4448	25.263882	92.382265	Forest Land-Pvt.		Umtyra	
						49	0						
90		Loc-23/5	Single Pole		6°39'89"		4497	25.264099	92.381842	Forest Land-Pvt.		Umtyra	
						47	0						
91		Loc-23/6	Single Pole		1°58'11"		4544	25.264349	92.381461	Forest Land-Pvt.		Umtyra	
						49	0						
92		Loc-23/7	Single Pole		6°48'19"		4593	25.264599	92.381057	Forest Land-Pvt.		Umtyra	
						51	0						
93		Loc-23/8	Single Pole		4°78'48"		4644	25.264901	92.380671	Forest Land-Pvt.		Umtyra	
	AP-23					50	0						
94		Loc-23/9	Single Pole		9°99'65"		4694	25.265222	92.380324	Forest Land-Pvt.		Umtyra	
						52	0						
95		Loc-23/10	Double Pole		5°06'21"		4746	25.265607	92.380033	Forest Land-Pvt.		Umtyra	
						49	0						
96		Loc-23/11	Double Pole		2°50'75"		4795	25.265947	92.379724	Forest Land-Pvt.	132KV	Umtyra	
						49	0						
97		Loc-23/12	Single Pole		0°67'68"		4844	25.266301	92.379430	Forest Land-Pvt.		Umtyra	
						54	0						
98		Loc-23/13	Single Pole		3°95'03"		4898	25.266691	92.379114	Forest Land-Pvt.		Umtyra	
						45	0						
99		Loc-23/14	Single Pole		0°80'51"		4943	25.267036	92.378873	Forest Land-Pvt.		Umtyra	
						50	0						
100		Loc-23/15	Single Pole		5°95'42"		4993	25.267423	92.378611	Forest Land-Pvt.		Umtyra	
						48	0						
101		Loc-23/16	Single Pole		1°66'68"		5041	25.267768	92.378319	Forest Land-Pvt.		Umtyra	
						46	0						
102		Loc-23/17	Single Pole		3°93'20"		5087	25.268107	92.378049	Forest Land-Pvt.		Umtyra	
						40	0						
103		AP-24	Double Pole		20°57'39"		5127	25.268410	92.377841	Forest Land-Pvt.		Umtyra	
	AP-24					42	0						
104		Loc-24/1	Double Pole		3°97'78"		5169	25.268778	92.377760	Scrub Land-Pvt.		Umtyra	
						80	0						
105	AP-25	AP-25	Double Pole		13°07'02"		5249	25.269493	92.377659	Scrub Land-Pvt.		Umtyra	
						56	0						

Executive Engineer
Khliehriat Distribution Division
MeECL Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED | **CONTRACTOR: NECCON POWER & INFRA LIMITED**

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

SL. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
106		AP-26	Double Pole		14°86'24"		5305	25.269966	92.377465	Vacant Land-Pvt.		Umtyra	
						51	0						
107		Loc-26/1	Single Pole		4°40'56"		5356	25.270344	92.377170	Vacant Land-Pvt.		Umtyra	
						41	0						
108		Loc-26/2	Single Pole		2°53'99"		5397	25.270664	92.376959	Forest Land-Pvt.		Umtyra	
						47	0						
109	AP-26	Loc-26/3	Single Pole		2°22'50"		5444	25.271034	92.376739	Vacant Land-Pvt.		Umtyra	
						51	0						
110		Loc-26/4	Single Pole		4°16'72"		5495	25.271443	92.376518	Forest Land-Pvt.		Umtyra	
						47	0						
111		Loc-26/5	Single Pole		5°99'51"		5542	25.271808	92.376283	Along the road-Pvt		Umtyra	
						45	0						
112		Loc-26/6	Single Pole		9°40'77"		5587	25.272178	92.376099	Along the road-Pvt		Umtyra	
						42	0						
113		AP-27	Double Pole		29°37'99"		5629	25.272546	92.375999	Along the road-Pvt		Umtyra	
						51	0						
114		Loc-27/1	Double Pole		3°05'24"		5680	25.272984	92.376134	Scrub Land-Pvt.		Umtyra	
						52	0						
115		Loc-27/2	Single Pole		2°93'93"		5732	25.273424	92.376298	Forest Land-Pvt.		Umtyra	
						52	0						
116		Loc-27/3	Single Pole		1°54'42"		5784	25.273878	92.376439	Forest Land-Pvt.		Umtyra	
						51	0						
117	AP-27	Loc-27/4	Double Pole		1°35'52"		5835	25.274323	92.376563	Forest Land-Pvt.		Umtyra	
						59	0						
118		Loc-27/5	Double Pole		3°43'33"		5894	25.274835	92.376720	Forest Land-Pvt.		Umtyra	
						50	0						
119		Loc-27/6	Single Pole		1°17'47"		5944	25.275275	92.376824	Forest Land-Pvt.		Umtyra	
						50	0						
120		Loc-27/7	Double Pole		3°55'70"		5994	25.275717	92.376939	Forest Land-Pvt.		Umtyra	
						42	0						
121		Loc-27/8	Double Pole		2°81'57"		6036	25.276088	92.377009	Forest Land-Pvt.	11KV		Guard Require
						46	0					Umtyra	
122		AP-28	Double Pole		14°77'27"		6082	25.276501	92.377064	Forest Land-Pvt.	11KV		Guard Require
	AP-28					49	0					Umtyra	
123		Loc-28/1	Single Pole		3°39'63"		6131	25.276909	92.377243	Forest Land-Pvt.		Umtyra	
						41	0						
124		AP-29	Double Pole		33°03'43"		6172	25.277242	92.377415	Forest Land-Pvt.		Umtyra	
						51	0						
125	AP-29	Loc-29/1	Double Pole		3°83'05"		6223	25.277486	92.377848	Forest Land-Pvt.	11KV		Guard Require
						45	0					Umtyra	
126		Loc-29/2	Single Pole		0°19'92"		6268	25.277725	92.378215	Forest Land-Pvt.		Umtyra	
						37	0						

Executive Engineer
Khliehriat Distribution Division
M.E. PDCL Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED

CONTRACTOR: NECCON POWER & INFRA LIMITED

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

SL. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
127	AP-30	AP-30	Double Pole		13°87'76"		6305	25.277917	92.378512	Vacant Land-Pvt.		Umtyra	
						66	0				NH		Guard Require
128		AP-31	Double Pole		14°33'24"		6371	25.278366	92.378937	Vacant Land-Pvt.		Byndhihati	
						55	0						
129	AP-31	Loc-31/1	Single Pole		3°73'81"		6426	25.278812	92.379180	Vacant Land-Pvt.		Byndhihati	
						93	0						
130		Loc-31/2	Double Pole		1°94'64"		6519	25.279535	92.379641	Scrub Land-Pvt.		Byndhihati	
						61	0						
131	AP-32	AP-32	Double Pole		18°41'40"		6580	25.280004	92.379964	Forest Land-Pvt.		Byndhihati	
						70	0						
132		AP-33	Double Pole		11°16'01"		6650	25.280617	92.380127	Scrub Land-Pvt.		Byndhihati	
						40	0						
133		Loc-33/1	Single Pole		9°43'36"		6690	25.280943	92.380292	Scrub Land-Pvt.		Byndhihati	
						46	0						
134		Loc-33/2	Double Pole		19°17'51"		6736	25.281285	92.380548	Scrub Land-Pvt.		Byndhihati	
	AP-33					77	0						
135		Loc-33/3	Double Pole		0°00'20"		6813	25.281700	92.381163	Scrub Land-Pvt.		Byndhihati	
						62	0				132KV		
136		Loc-33/4	Double Pole		13°96'47"		6875	25.282034	92.381658	Scrub Land-Pvt.		Byndhihati	
						49	0						
137		Loc-33/5	Single Pole		3°22'23"		6924	25.282372	92.381964	Scrub Land-Pvt.		Byndhihati	
						42	0						
138		AP-34	Double Pole		11°20'45"		6966	25.282651	92.382247	Forest Land-Pvt.		Byndhihati	
						39	0						
139	AP-34	Loc-34/1	Single Pole				7005	25.282858	92.382559	Forest Land-Pvt.		Byndhihati	
							0						
140		Loc-34/2	Single Pole				7005	25.299070	92.387940			Byndhihati	
						50	0						
141		Loc-34/3	Single Pole		2°58'23"		7055	25.299430	92.387640	Vacant Land-Pvt.		Byndhihati	
						50	0						
142		AP-35	Double Pole		16°33'62"		7105	25.299780	92.387320	Vacant Land-Pvt.		Byndhihati	
						48	0						
143		Loc-35/1	Single Pole		0°50'86"		7153	25.300180	92.387130	Vacant Land-Pvt.		Byndhihati	
						49	0						
144		Loc-35/2	Single Pole		6°41'16"		7202	25.300604	92.386985	Vacant Land-Pvt.		Byndhihati	
						48	0						
145	AP-35	Loc-35/3	Single Pole		1°11'47"		7250	25.301010	92.386847	Vacant Land-Pvt.		Byndhihati	
						50	0						
146		Loc-35/4	Single Pole		2°03'88"		7300	25.301449	92.386737	Vacant Land-Pvt.		Byndhihati	
						52	0						
147		Loc-35/5	Single Pole		7°26'06"		7352	25.301912	92.386640	Vacant Land-Pvt.		Byndhihati	
						50	0						

Executive Engineer
Khliehriat Distribution Division
...PDCL Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED | **CONTRACTOR: NECCON POWER & INFRA LIMITED**

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

SL. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
148		Loc-35/6	Single Pole		6°56'64"		7402	25.302360	92.386610	Vacant Land-Pvt.		Byndhihati	
						52	0						
149		Loc-35/7	Single Pole		6°01'74"		7454	25.302820	92.386520	Vacant Land-Pvt.		Byndhihati	
						51	0						
150		AP-36	Double Pole		20°66'92"		7505	25.303260	92.386380	Vacant Land-Pvt.		Byndhihati	
						55	0						
151	AP-36	Loc-36/1	Single Pole		5°39'81"		7560	25.303660	92.386050	Vacant Land-Pvt.		Byndhihati	
						52	0				Nala (Width-10m)		Guard Require
152		Loc-36/2	Single Pole		2°39'71"		7612	25.304010	92.385700	Vacant Land-Pvt.		Byndhihati	
						53	0				Nala (Width-10m)		Guard Require
153		AP-37	Double Pole		35°31'84"		7665	25.304380	92.385360	Vacant Land-Pvt.		Byndhihati	
						52	0						
154		Loc-37/1	Single Pole		9°45'08"		7717	25.304850	92.385320	Vacant Land-Pvt.		Byndhihati	
						50	0						
155		Loc-37/2	Single Pole		4°02'90"		7767	25.305290	92.385200	Vacant Land-Pvt.		Byndhihati	
	AP-37					53	0						
156		Loc-37/3	Single Pole		0°88'62"		7820	25.305760	92.385110	Vacant Land-Pvt.		Byndhihati	
						52	0						
157		Loc-37/4	Single Pole		6°77'79"		7872	25.306220	92.385030	Vacant Land-Pvt.		Byndhihati	
						53	0						
158		Loc-37/5	Single Pole		2°24'24"		7925	25.306700	92.385010	Vacant Land-Pvt.		Byndhihati	
						52	0						
159	AP-38	AP-38	Double Pole		16°77'88"		7977	25.307170	92.384970	Vacant Land-Pvt.		Byndhihati	
						50	0						
160		AP-39	Double Pole		17°56'94"		8027	25.307590	92.384790	Vacant Land-Pvt.		Byndhihati	
						48	0						
161	AP-39	Loc-39/1	Single Pole		2°28'11"		8075	25.308020	92.384760	Vacant Land-Pvt.		Byndhihati	
						43	0						
162		Loc-39/2	Single Pole		4°57'08"		8118	25.308410	92.384750	Vacant Land-Pvt.		Byndhihati	
						39	0						
163	AP-40	AP-40	Double Pole		15°60'41"		8157	25.308760	92.384710	Vacant Land-Pvt.		Byndhihati	
						42	0						
164		AP-41	Double Pole		14°15'87"		8199	25.309130	92.384780	Vacant Land-Pvt.		Byndhihati	
						57	0						
165		Loc-41/1	Double Pole		3°45'58"		8256	25.309600	92.385010	Vacant Land-Pvt.		Byndhihati	
						53	0						
166	AP-41	Loc-41/2	Double Pole		5°00'61"		8309	25.310020	92.385250	Vacant Land-Pvt.		Byndhihati	
						53	0				Nala (Width-3m)		Guard Require
167		Loc-41/3	Double Pole		7°56'53"		8362	25.310420	92.385530	Vacant Land-Pvt.		Byndhihati	
						60	0						
168		Loc-41/4	Double Pole		0°43'73"		8422	25.310910	92.385780	Vacant Land-Pvt.		Byndhihati	
						61	0						

Executive Engineer
Khliehriat Distribution Division
M.E. PDCL Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED

CONTRACTOR: NECCON POWER & INFRA LIMITED

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

Sl. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
169		AP-42	Double Pole		26°48'00"		8483	25.311410	92.386030	Vacant Land-Pvt.		Byndhihati	
						53	0						
170		Loc-42/1	Single Pole		9°78'90"		8536	25.311890	92.386010	Vacant Land-Pvt.		Byndhihati	
						53	0						
171		Loc-42/2	Single Pole		1°69'78"		8589	25.312360	92.385900	Vacant Land-Pvt.		Byndhihati	
						51	0						
172		Loc-42/3	Single Pole		3°30'51"		8640	25.312810	92.385810	Vacant Land-Pvt.		Byndhihati	
	AP-42					51	0						
173		Loc-42/4	Single Pole		0°53'24"		8691	25.313260	92.385690	Vacant Land-Pvt.		Byndhihati	
						49	0						
174		Loc-42/5	Single Pole		3°02'60"		8740	25.313690	92.385580	Vacant Land-Pvt.		Byndhihati	
						51	0						
175		Loc-42/6	Double Pole		0°72'21"		8791	25.314130	92.385440	Vacant Land-Pvt.		Byndhihati	
						56	0						
176		Loc-42/7	Double Pole		2°89'73"		8847	25.314610	92.385280	Vacant Land-Pvt.		Byndhihati	
						51	0						
177	AP-43	AP-43	Double Pole		18°56'42"		8898	25.315040	92.385110	Vacant Land-Pvt.		Byndhihati	
						52	0						
178	AP-44	AP-44	Double Pole		25°78'79"		8950	25.315510	92.385100	Vacant Land-Pvt.		Byndhihati	
						51	0						
179	AP-45	AP-45	Double Pole		48°06'67"		9001	25.315920	92.384870	Vacant Land-Pvt.		Byndhihati	
						50	0						
180		AP-46	Double Pole		11°53'52"		9051	25.316340	92.385050	Vacant Land-Pvt.		Byndhihati	
						50	0				132 KV		
181		Loc-46/1	Double Pole		5°04'42"		9101	25.316720	92.385320	Vacant Land-Pvt.		Byndhihati	
						63	0						
182		Loc-46/2	Double Pole		8°81'30"		9164	25.317220	92.385610	Vacant Land-Pvt.		Byndhihati	
	AP-46					53	0						
183		Loc-46/3	Single Pole		3°94'93"		9217	25.317670	92.385780	Vacant Land-Pvt.		Byndhihati	
						52	0						
184		Loc-46/4	Single Pole		4°60'77"		9269	25.318100	92.385980	Vacant Land-Pvt.		Byndhihati	
						52	0						
185		Loc-46/5	Double Pole		2°98'05"		9321	25.318540	92.386140	Vacant Land-Pvt.		Byndhihati	
						58	0						
186		AP-47	Double Pole		15°56'50"		9379	25.319030	92.386350	Vacant Land-Pvt.		Byndhihati	
	AP-47					51	0						
187		Loc-47/1	Double Pole		1°46'10"		9430	25.319490	92.386400	Vacant Land-Pvt.		Byndhihati	
						57	0						
188	AP-48	AP-48	Double Pole		18°31'99"		9487	25.320000	92.386470	Vacant Land-Pvt.		Byndhihati	
						57	0						
189		AP-49	Double Pole		13°55'00"		9544	25.320500	92.386360	Vacant Land-Pvt.		Byndhihati	
						55	0						

Executive Engineer
Khliehriat Distribution Division
M.E. PDCL Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED | **CONTRACTOR: NECCON POWER & INFRA LIMITED**

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

SL. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
190	AP-49	Loc-49/1	Single Pole		6°98'01"		9599	25.320950	92.386130	Vacant Land-Pvt.		Byndhihati	
						53	0						
191		Loc-49/2	Double Pole		0°40'54"		9652	25.321400	92.385970	Vacant Land-Pvt.		Byndhihati	
						57	0						
192	AP-50	AP-50	Double Pole		19°93'64"		9709	25.321890	92.385800	Vacant Land-Pvt.		Byndhihati	
						46	0				Kachha Road (5m)		
193	AP-50A	AP-50-A	Double Pole		27°86'13"		9755	25.322300	92.385820	Vacant Land-Pvt.		Byndhihati	
						52	0						
194	AP-51	AP-51	Double Pole		26°35'19"		9807	25.322720	92.385600	Vacant Land-Pvt.		Byndhihati	
						57	0						
195	AP-52	AP-52	Double Pole		24°37'14"		9864	25.323230	92.385610	Vacant Land-Pvt.		Byndhihati	
						49	0						
196	AP-53	AP-53	Double Pole		18°95'25"		9913	25.323630	92.385820	Vacant Land-Pvt.		Byndhihati	
						58	0				Nala (Width-3m)		Guard Require
197	AP-54	AP-54	Double Pole		30°20'06"		9971	25.324000	92.386220	Vacant Land-Pvt.		Byndhihati	
						50	0						
198	AP-55	AP-55	Double Pole		27°51'26"		10021	25.324120	92.386700	Vacant Land-Pvt.		Umlawang	
						52	0						
199	AP-56	AP-56	Double Pole		23°08'90"		10073	25.324440	92.387080	Vacant Land-Pvt.		Umlawang	
						56	0						
200		Loc-56/1	Double Pole		3°52'64"		10129	25.324610	92.387600	Vacant Land-Pvt.		Umlawang	
						51	0						
201	AP-57	AP-57	Double Pole		17°59'91"		10180	25.324740	92.388090	Vacant Land-Pvt.		Umlawang	
						56	0						
202		Loc-57/1	Double Pole		8°58'94"		10236	25.325020	92.388550	Vacant Land-Pvt.		Umlawang	
						55	0						
203		Loc-57/2	Single Pole		7°66'79"		10291	25.325230	92.389040	Vacant Land-Pvt.		Umlawang	
						55	0						
204		Loc-57/3	Single Pole		9°56'08"		10346	25.325380	92.389560	Vacant Land-Pvt.		Umlawang	
						54	0						
205	AP-58	AP-58	Double Pole		17°60'94"		10400	25.325440	92.390090	Vacant Land-Pvt.		Umlawang	
						53	0				Nala (Width-4m)		Guard Require
206		Loc-58/1	Double Pole		4°73'80"		10453	25.325640	92.390570	Vacant Land-Pvt.		Umlawang	
						52	0						
207		Loc-58/2	Single Pole		3°44'11"		10505	25.325870	92.391020	Vacant Land-Pvt.		Umlawang	
						49	0						
208		Loc-58/3	Single Pole		2°31'22"		10554	25.326110	92.391430	Vacant Land-Pvt.		Umlawang	
						50	0						
209	AP-59	AP-59	Double Pole		16°29'32"		10604	25.326340	92.391860	Vacant Land-Pvt.		Umlawang	
						54	0						
210		Loc-59/1	Single Pole		5°92'08"		10658	25.326460	92.392380	Vacant Land-Pvt.		Umlawang	
						55	0						

Executive Engineer
Khliehriat Distribution Division
PDCL Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED

CONTRACTOR: NECCON POWER & INFRA LIMITED

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

Sl. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
211	AP-60	AP-60	Double Pole		17°13'33"		10713	25.326630	92.392890	Vacant Land-Pvt.		Umlawang	
						53	0						
212		Loc-60/1	Single Pole		4°20'18"		10766	25.326920	92.393310	Vacant Land-Pvt.		Umlawang	
						53	0						
213	AP-61	AP-61	Double Pole		18°48'52"		10819	25.327180	92.393750	Vacant Land-Pvt.		Umlawang	
						57	0						
214	AP-62	AP-62	Double Pole		15°49'38"		10876	25.327580	92.394100	Vacant Land-Pvt.		Umlawang	
						70	0						
215		Loc-62/1	Double Pole		1°21'04"		10946	25.327950	92.394660	Vacant Land-Pvt.		Umlawang	
						53	0						
216		Loc-62/2	Single Pole		3°59'57"		10999	25.328240	92.395080	Vacant Land-Pvt.		Umlawang	
						52	0						
217	AP-63	AP-63	Double Pole		13°43'82"		11051	25.328500	92.395510	Vacant Land-Pvt.		Umlawang	
						64	0						
218		Loc-63/1	Double Pole		6°08'39"		11115	25.328920	92.395940	Vacant Land-Pvt.		Umlawang	
						51	0						
219		Loc-63/2	Single Pole		9°08'50"		11166	25.329220	92.396320	Vacant Land-Pvt.		Umlawang	
						51	0						
220		Loc-63/3	Single Pole		4°64'63"		11217	25.329580	92.396640	Vacant Land-Pvt.		Umlawang	
						48	0						
221	AP-64	AP-64	Double Pole		35°25'23"		11265	25.329940	92.396910	Vacant Land-Pvt.		Umlawang	
						54	0						
222		Loc-64/1	Double Pole		2°54'63"		11319	25.330110	92.397410	Vacant Land-Pvt.	Kachha Road (3m)	Umlawang	
						82	0						
223	AP-65	AP-65	Double Pole		15°93'60"		11401	25.330340	92.398190	Vacant Land-Pvt.	Nala (Width-4m)	Umlawang	Guard Require
						50	0						
224	AP-66	AP-66	Double Pole		16°46'22"		11451	25.330590	92.398600	Vacant Land-Pvt.		Umlawang	
						52	0						
225	AP-67	AP-67	Double Pole		13°88'99"		11503	25.330730	92.399090	Vacant Land-Pvt.		Umlawang	
						52	0						
226		Loc-67/1	Single Pole		7°23'57"		11555	25.330760	92.399610	Vacant Land-Pvt.		Umlawang	
						53	0						
227	AP-68	AP-68	Double Pole		17°97'24"		11608	25.330730	92.400140	Vacant Land-Pvt.		Umlawang	
						72	0						
228	AP-69	AP-69	Double Pole		30°93'98"		11680	25.330890	92.400830	Vacant Land-Pvt.		Umlawang	
						50	0						
229	AP-70	AP-70	Double Pole		17°78'44"		11730	25.331210	92.401180	Vacant Land-Pvt.		Umlawang	
						51	0						
230		Loc-70/1	Double Pole		1°93'15"		11781	25.331620	92.401410	Vacant Land-Pvt.		Umlawang	
						58	0						
231		Loc-70/2	Double Pole		4°49'88"		11839	25.332080	92.401690	Vacant Land-Pvt.		Umlawang	
						51	0						

Executive Engineer
Khliehriat Distribution Division
NEEPCO Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED | **CONTRACTOR: NECCON POWER & INFRA LIMITED**

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

SL. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
232		AP-71	Double Pole		22°24'86"		11890	25.332500	92.401900	Vacant Land-Pvt.		Umlawang	
						56	0						
233		Loc-71/1	Double Pole		0°13'20"		11946	25.333000	92.401920	Forest Land-Pvt.		Umlawang	
						52	0						
234		Loc-71/2	Single Pole		3°09'32"		11998	25.333470	92.401940	Forest Land-Pvt.		Umlawang	
						45	0						
235		Loc-71/3	Single Pole		0°89'06"		12043	25.333877	92.401933	Vacant Land-Pvt.		Umlawang	
						48	0						
236		Loc-71/4	Single Pole		3°49'80"		12091	25.334305	92.401933	Vacant Land-Pvt.		Umlawang	
						46	0						
237		Loc-71/5	Single Pole		0°49'82"		12137	25.334719	92.401961	Vacant Land-Pvt.		Umlawang	
						46	0						
238		Loc-71/6	Single Pole		1°17'85"		12183	25.335133	92.401993	Vacant Land-Pvt.		Umlawang	
						45	0						
239	AP-71	Loc-71/7	Single Pole		2°35'33"		12228	25.335537	92.402015	Vacant Land-Pvt.		Umlawang	
						50	0						
240		Loc-71/8	Single Pole		2°17'86"		12278	25.335983	92.402019	Vacant Land-Pvt.		Umlawang	
						50	0						
241		Loc-71/9	Single Pole		0°99'22"		12328	25.336436	92.402004	Vacant Land-Pvt.		Umlawang	
						53	0						
242		Loc-71/10	Single Pole		1°02'87"		12381	25.336914	92.401979	Vacant Land-Pvt.		Umlawang	
						48	0						
243		Loc-71/11	Single Pole		8°27'39"		12429	25.337346	92.401965	Vacant Land-Pvt.		Umlawang	
						50	0						
244		Loc-71/12	Single Pole		3°96'28"		12479	25.337789	92.401879	Vacant Land-Pvt.		Umlawang	
						50	0						
245		Loc-71/13	Single Pole		5°15'79"		12529	25.338237	92.401827	Vacant Land-Pvt.		Umlawang	
						48	0						
246		Loc-71/14	Single Pole		2°10'93"		12577	25.338659	92.401735	Vacant Land-Pvt.		Umlawang	
						46	0						
247		AP-72	Double Pole		18°84'58"		12623	25.339058	92.401631	Vacant Land-Pvt.		Umlawang	
						48	0						
248		Loc-72/1	Single Pole		2°94'61"		12671	25.339492	92.401678	Vacant Land-Pvt.		Umlawang	
						46	0						
249		Loc-72/2	Single Pole		0°29'66"		12717	25.339903	92.401699	Forest Land-Pvt.		Umlawang	
						52	0						
250		Loc-72/3	Single Pole		4°58'15"		12769	25.340366	92.401720	Forest Land-Pvt.		Umlawang	
	AP-72					46	0						
251		Loc-72/4	Single Pole		3°65'90"		12815	25.340783	92.401702	Vacant Land-Pvt.		Umlawang	
						48	0						
252		Loc-72/5	Single Pole		3°58'14"		12863	25.341219	92.401714	Vacant Land-Pvt.		Umlawang	
						47	0						

Executive Engineer
Khliehriat Distribution Division
M.E. PDCL Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED | **CONTRACTOR: NECCON POWER & INFRA LIMITED**

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

SL. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
253		Loc-72/6	Single Pole		1°45'32"		12910	25.341642	92.401755	Vacant Land-Pvt.		Umlawang	
						51	0						
254		Loc-72/7	Single Pole		3°77'84"		12961	25.342097	92.401812	Vacant Land-Pvt.		Umlawang	
						43	0						
255		AP-73	Double Pole		20°25'72"		13004	25.342483	92.401832	Vacant Land-Pvt.		Umlawang	
						70	0				Nala (Width-5m)		Guard Require
256	AP-73	Loc-73/1	Double Pole		8°13'11"		13074	25.343066	92.402105	Vacant Land-Pvt.		Umlawang	
						46	0						
257		Loc-73/2	Single Pole		1°68'81"		13120	25.343423	92.402343	Vacant Land-Pvt.		Umlawang	
						48	0						
258		AP-74	Double Pole		18°75'98"		13168	25.343797	92.402576	Vacant Land-Pvt.		Umlawang	
						45	0						
259		Loc-74/1	Single Pole		6°64'45"		13213	25.344197	92.402659	Vacant Land-Pvt.		Umlawang	
	AP-74					49	0						
260		Loc-74/2	Single Pole		0°09'03"		13262	25.344639	92.402693	Vacant Land-Pvt.		Umlawang	
						54	0						
261		Loc-74/3	Single Pole		7°82'92"		13316	25.345122	92.402731	Vacant Land-Pvt.		Umlawang	
						49	0						
262		AP-75	Double Pole		19°55'27"		13365	25.345551	92.402831	Vacant Land-Pvt.		Umlawang	
						48	0						
263		Loc-75/1	Single Pole		4°10'93"		13413	25.345916	92.403078	Vacant Land-Pvt.		Umlawang	
						48	0						
264		Loc-75/2	Single Pole		9°56'94"		13461	25.346270	92.403358	Vacant Land-Pvt.		Umlawang	
						52	0						
265		Loc-75/3	Single Pole		0°65'08"		13513	25.346602	92.403727	Vacant Land-Pvt.		Umlawang	
						47	0						
266		Loc-75/4	Single Pole		2°37'41"		13560	25.346894	92.404059	Vacant Land-Pvt.		Umlawang	
						49	0						
267		Loc-75/5	Double Pole		7°61'75"		13609	25.347187	92.404421	Vacant Land-Pvt.		Umlawang	
						56	0						
268		Loc-75/6	Double Pole		1°20'22"		13665	25.347468	92.404878	Vacant Land-Pvt.		Umlawang	
						52	0						
269		Loc-75/7	Single Pole		0°89'69"		13717	25.347740	92.405301	Vacant Land-Pvt.		Umlawang	
						50	0						
270		Loc-75/8	Single Pole		1°25'09"		13767	25.347995	92.405711	Vacant Land-Pvt.		Umlawang	
						46	0						
271		Loc-75/9	Single Pole		5°49'96"		13813	25.348238	92.406084	Vacant Land-Pvt.		Umlawang	
						50	0						
272		Loc-75/10	Single Pole		2°36'41"		13863	25.348534	92.406457	Vacant Land-Pvt.		Umlawang	
						51	0						
273	AP-75	Loc-75/11	Single Pole		2°64'14"		13914	25.348823	92.406853	Vacant Land-Pvt.		Umlawang	

Executive Engineer
Khliehriat Distribution Division
NEEPCO Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED | **CONTRACTOR: NECCON POWER & INFRA LIMITED**

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-1/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

Sl. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
						51	0						
274		Loc-75/12	Single Pole		6°43'16"		13965	25.349093	92.407260	Vacant Land-Pvt.		Umlawang	
						50	0						
275		Loc-75/13	Single Pole		1°46'34"		14015	25.349316	92.407690	Vacant Land-Pvt.		Umlawang	
						47	0						
276		Loc-75/14	Single Pole		1°34'18"		14062	25.349537	92.408092	Vacant Land-Pvt.		Umlawang	
						52	0						
277		Loc-75/15	Double Pole		1°11'61"		14114	25.349771	92.408541	Vacant Land-Pvt.		Umlawang	
						56	0						
278		Loc-75/16	Double Pole		2°39'54"		14170	25.350032	92.409020	Vacant Land-Pvt.		Umlawang	
						74	0				Nala (Width-10m)		Guard Require
279		Loc-75/17	Double Pole		1°18'49"		14244	25.350353	92.409669	Vacant Land-Pvt.		Sutanga	
						48	0						
280		Loc-75/18	Single Pole		3°27'20"		14292	25.350553	92.410094	Vacant Land-Pvt.		Sutanga	
						49	0				Kachha Road (5m)		
281		Loc-75/19	Single Pole		2°17'53"		14341	25.350778	92.410512	Vacant Land-Pvt.		Sutanga	
						47	0						
282		Loc-75/20	Single Pole		3°94'47"		14388	25.351010	92.410908	Vacant Land-Pvt.		Sutaga	
						50	0						
283		Loc-75/21	Single Pole		6°25'31"		14438	25.351230	92.411347	Vacant Land-Pvt.		Sutanga	
						50	0						
284		Loc-75/22	Single Pole		9°41'22"		14488	25.351404	92.411806	Vacant Land-Pvt.		Sutanga	
						46	0						
285	AP-76	AP-76	Double Pole		15°90'01"		14534	25.351632	92.412192	Vacant Land-Pvt.		Sutanga	
						55	0						
286		AP-77	Double Pole		13°38'77"		14589	25.352003	92.412548	Vacant Land-Pvt.		Sutanga	
						47	0						
287	AP-77	Loc-77/1	Single Pole		7°59'88"		14636	25.352247	92.412924	Vacant Land-Pvt.		Sutanga	
						48	0						
288		Loc-77/2	Single Pole		4°90'70"		14684	25.352450	92.413345	Vacant Land-Pvt.		Sutanga	
						48	0						
289		AP-78	Double Pole		13°46'75"		14732	25.352621	92.413787	Vacant Land-Pvt.		Sutanga	
	AP-78					53	0						
290		Loc-78/1	Single Pole		9°51'51"		14785	25.352904	92.414208	Vacant Land-Pvt.		Sutanga	
						49	0						
291		AP-79	Double Pole		13°94'72"		14834	25.353231	92.414532	Vacant Land-Pvt.		Sutanga	
						48	0				11KV		Guard Require
292		Loc-79/1	Double Pole		3°63'09"		14882	25.353610	92.414754	Vacant Land-Pvt.		Sutanga	
						47	0						
293		Loc-79/2	Single Pole		0°49'18"		14929	25.353968	92.414997	Vacant Land-Pvt.		Sutanga	
						48	0						

Executive Engineer
Khliehriat Distribution Division
...E. PDCL Khliehriat

(A Poothuri)
Sr. Engr

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED | **CONTRACTOR: NECCON POWER & INFRA LIMITED**

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

Sl. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
294	AP-79	Loc-79/3	Single Pole		1°86'58"		14977	25.354339	92.415244	Vacant Land-Pvt.		Sutanga	
						48	0						
295		Loc-79/4	Double Pole		7°11'29"		15025	25.354705	92.415506	Vacant Land-Pvt.		Sutanga	
						52	0				11KV		Guard Require
296		Loc-79/5	Double Pole		1°98'42"		15077	25.355124	92.415730	Vacant Land-Pvt.		Sutanga	
						49	0						
297		Loc-79/6	Single Pole		7°27'50"		15126	25.355517	92.415959	Vacant Land-Pvt.		Sutanga	
						49	0						
298		Loc-79/7	Single Pole		8°13'12"		15175	25.355928	92.416129	Vacant Land-Pvt.		Sutanga	
						50	0						
299	AP-80	AP-80	Double Pole		17°91'58"		15225	25.356365	92.416235	Vacant Land-Pvt.		Sutanga	
						48	0						
300	AP-81	AP-81	Double Pole		24°05'55"		15273	25.356738	92.416476	Vacant Land-Pvt.		Sutanga	
						50	0				Nala (Width-5m)		Guard Require
301		AP-82	Double Pole		27°78'98"		15323	25.357000	92.416880	Vacant Land-Pvt.		Sutanga	
						49	0						
302	AP-82	Loc-82/1	Single Pole		4°29'13"		15372	25.357060	92.417360	Vacant Land-Pvt.		Sutanga	
						53	0						
303		Loc-82/2	Single Pole		9°14'85"		15425	25.357090	92.417890	Vacant Land-Pvt.		Sutanga	
						51	0						
304		Loc-82/3	Double Pole		9°82'75"		15476	25.357030	92.418390	Vacant Land-Pvt.		Sutanga	
						56	0						
305	AP-83	AP-83	Double Pole		44°16'89"		15532	25.357050	92.418950	Vacant Land-Pvt.		Sutanga	
						58	0						
306		AP-84	Double Pole		16°68'60"		15590	25.357430	92.419350	Vacant Land-Pvt.		Sutanga	
						51	0						
307	AP-84	Loc-84/1	Double Pole		3°50'86"		15641	25.357840	92.419580	Vacant Land-Pvt.		Sutanga	
						56	0						
308		Loc-84/2	Double Pole		11°17'95"		15697	25.358300	92.419800	Vacant Land-Pvt.		Sutanga	
						52	0						
309		Loc-84/3	Double Pole		8°69'89"		15749	25.358760	92.419910	Vacant Land-Pvt.		Sutanga	
						69	0						
310		AP-85	Double Pole		22°64'69"		15818	25.359340	92.420155	Vacant Land-Pvt.		Sutanga	
						59	0						
311	AP-85	Loc-85/1	Double Pole		9°19'73"		15877	25.359871	92.420137	Vacant Land-Pvt.		Sutanga	
						57	0						
312		Loc-85/2	Double Pole		10°89'53"		15934	25.360370	92.420010	Vacant Land-Pvt.		Sutanga	
						54	0						
313		Loc-85/3	Double Pole		10°13'41"		15988	25.360860	92.420000	Vacant Land-Pvt.		Sutanga	
						68	0						
314	AP-86	AP-86	Double Pole		28°23'68"		16056	25.361460	92.420130	Vacant Land-Pvt.		Sutanga	
						46	0						

Executive Engineer
Khliehriat Distribution Division
M.E. PDCL Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED

CONTRACTOR: NECCON POWER & INFRA LIMITED

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

PACKAGE:MEG-DMS-01

Sl. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates		Descriptionof Land	Crossing Details	Village Name	Remarks
								Latitude	Longitude				
315		AP-87	Double Pole		16°81'42"		16102	25.361780	92.420420	Vacant Land-Pvt.		Sutanga	
						74	0						
316		Loc-87/1	Double Pole		6°36'86"		16176	25.362150	92.421030	Vacant Land-Pvt.		Sutanga	
						67	0						
317	AP-87	Loc-87/2	Double Pole		9°35'77"		16243	25.362540	92.421540	Vacant Land-Pvt.		Sutanga	
						81	0						
318		Loc-87/3	Double Pole		6°18'73"		16324	25.363110	92.422040	Vacant Land-Pvt.		Sutanga	
						69	0						
319		Loc-87/4	Double Pole		5°49'00"		16393	25.363550	92.422520	Vacant Land-Pvt.		Sutanga	
						54	0						
320		AP-88	Double Pole		16°95'03"		16447	25.363860	92.422930	Vacant Land-Pvt.		Sutanga	
						72	0						
321		Loc-88/1	Double Pole		8°35'93"		16519	25.364400	92.423320	Vacant Land-Pvt.		Sutanga	
	AP-88					58	0						
322		Loc-88/2	Double Pole		4°70'75"		16577	25.364870	92.423493	Vacant Land-Pvt.		Sutanga	
						67	0						
323		Loc-88/3	Double Pole		4°91'12"		16644	25.365457	92.423687	Vacant Land-Pvt.		Sutanga	
						56	0						
324		AP-89	Double Pole		20°21'19"		16700	25.365940	92.423840	Vacant Land-Pvt.		Sutanga	
						58	0						
325		Loc-89/1	Double Pole		5°91'60"		16758	25.366360	92.424180	Vacant Land-Pvt.		Sutanga	
	AP-89					63	0						
326		Loc-89/2	Double Pole		7°97'54"		16821	25.366780	92.424600	Vacant Land-Pvt.		Sutanga	
						59	0						
327		Loc-89/3	Double Pole		1°06'79"		16880	25.367220	92.424930	Vacant Land-Pvt.		Sutanga	
						56	0						
328	AP-90	AP-90	Double Pole		14°66'94"		16936	25.367630	92.425250	Vacant Land-Pvt.		Sutanga	
						55	0						
329	AP-91	AP-91	Double Pole		24°06'72"		16991	25.367950	92.425670	Vacant Land-Pvt.		Sutanga	
						53	0						
330	AP-92	AP-92	Double Pole		24°66'94"		17044	25.368380	92.425900	Vacant Land-Pvt.		Sutanga	
						51	0						
331		AP-93	Double Pole		17°14'53"		17095	25.368840	92.425910	Vacant Land-Pvt.		Sutanga	
	AP-93					61	0						
332		Loc-93/1	Double Pole		5°00'73"		17156	25.369360	92.426100	Forest Land-Pvt.		Sutanga	
						53	0						
333		AP-94	Double Pole		53°48'50"		17209	25.369820	92.426220	Forest Land-Pvt.		Sutanga	
	AP-94					65	0						
334		Loc-94/1	Double Pole		2°51'69"		17274	25.370051	92.426815	Forest Land-Pvt.		Sutanga	
						59	0						
335	AP-95	AP-95	Double Pole		40°37'78"		17333	25.370280	92.427340	Vacant Land-Pvt.		Sutanga	

Executive Engineer
Khliehriat Distribution Division
M.E. PDCL Khliehriat

POLE SCHEDULE

33kV S/C Line Mynkre to Sutanga

CLIENT: POWR GRID CORPORATION OF INDIA LIMITED

LOA Ref.No: 1.CC-CS/474-NER/REW-2449/1/G5/NOA-I/6849;dated:13.07.2016(Supply)
2.CC-CS/474-NER/REW-2449/1/G5/NOA-II/6850;dated:13.07.2016(Services)

CONTRACTOR: NECCON POWER & INFRA LIMITED

PACKAGE:MEG-DMS-01

SL. No.	Angle Point	Loc. No	Pole Type	Extn.	Angle of Deviation	Span Length	Cumm. Span (m)	Co-Ordinates Latitude	Co-Ordinates Longitude	Descriptionof Land	Crossing Details	Village Name	Remarks
						57	0						
336	AP-96	AP-96	Double Pole		22°67'69"		17390	25.370750	92.427570	Vacant Land-Pvt.	33KV	Sutanga	Guard Require
						49	0						
337		Loc-96/1	Single Pole		9°52'21"		17439	25.371190	92.427580	Forest Land-Pvt.		Sutanga	
						55	0						
338		Loc-96/2	Double Pole		6°24'93"		17494	25.371670	92.427690	Forest Land-Pvt.		Sutanga	
						62	0						
339	AP-97	AP-97	Double Pole		26°51'16"		17556	25.372200	92.427880	Vacant Land-Pvt.	Nala (Width-3m)	Sutanga	Guard Require
						54	0						
340		Loc-97/1	Single Pole		6°45'18"		17610	25.372680	92.427800	Vacant Land-Pvt.		Sutanga	
						55	0						
341		Loc-97/2	Single Pole		9°98'25"		17665	25.373170	92.427780	Vacant Land-Pvt.		Sutanga	
						51	0						
342	AP-98	AP-98	Double Pole		10°48'46"		17716	25.373621	92.427849	Vacant Land-Pvt.		Sutanga	
						51	0						
343		Loc-98/1	Double Pole		9°89'76"		17767	25.374054	92.428008	Vacant Land-Pvt.		Sutanga	
						65	0						
344	AP-99	AP-99	Double Pole		59°59'68"		17832	25.374567	92.428326	Vacant Land-Pvt.		Sutanga	
						61	0						
345	AP-100	AP-100	Double Pole		41°27'42"		17893	25.374578	92.428932	Vacant Land-Pvt.	Sutanga Road -(10m)	Sutanga	Guard Require
						54	0						
346	AP-101	AP-101	Double Pole		34°26'93"		17947	25.374905	92.429328	Vacant Land-Pvt.		Sutanga	
						34	0						
347	AP-102	AP-102	Double Pole		29°54'64"		17981	25.375203	92.429406	Vacant Land-Pvt.	11KV	Sutanga	Guard Require
						45	0						
348	AP-103	AP-103	Double Pole		10°97'58"		18026	25.375502	92.429713	Vacant Land-Pvt.		Sutanga	
						62	0						
349	AP-104	AP-104	Double Pole		35°25'12"		18088	25.375829	92.430208	Vacant Land-Pvt.		Sutanga	
						44	0						
350	AP-105	AP-105	Four Pole		72°89'58"		18132	25.376200	92.430346	Vacant Land-Pvt.		Sutanga	
						65	0						
351	AP-106	AP-106	Four Pole		68°36'17"		18197	25.376185	92.430992	Vacant Land-Pvt.		Sutanga	
						33	0						
352		Loc-106/1	Single Pole		1°99'92"		18230	25.376456	92.431120	Vacant Land-Pvt.		Sutanga	
						41	0						
353	AP-107	AP-107	Double Pole		13°89'38"		18271	25.376800	92.431267	Vacant Land-Pvt.		Sutanga	
						42	0						
354	AP-108	AP-108	Double Pole		17°28'81"		18313	25.377171	92.431319	Vacant Land-Pvt.		Sutanga	
						54	0						
355	AP-109	AP-109	Double Pole		30°08'66"		18367	25.377613	92.431542	Vacant Land-Pvt.		Sutanga	
						30	0						
356	AP-110	AP-110	Four Pole				18397	25.377771	92.431788	Vacant Land-Pvt.		Sutanga	

Executive Engineer
Khliehriat Distribution Division
MeECL Khliehriat

NECCON Power & Infra Limited
East Jaintia Hills District
Khliehriat

अ. कु. कुलश्रेष्ठ / A. K. Kulshrestha
वरिष्ठ अभियन्ता / SR. ENGINEER
पावरग्रिड / POWERGRID Khliehriat

17OF17

टी मार्विन / T. Marwein 10/8/18
कनिष्ठ अभियन्ता / Jr. Engineer
एनईआरपीएसआईपी / NERPSIP

POWERGRID
बि मेधि / B. MEDHI
प्रबन्धक / Manager
एनईआरपीएसआईपी / NERPSIP 10/08/18

CA Pohthmi
Sr. Engr

ANNEXURE – 4

NoC FROM LAND OWNERS/VILLAGE COUNCILS

OFFICE OF THE DORBAR SHNONG OF RYMBAI VILLAGE

P.O. LAD-RYMBAI, PIN. NO. 793160

East Jaintia Hills District, Meghalaya

Ref. No. DSRV/Genl/2016-2017/18-31

Date: 8/9/17

To,

The Manager NERPSIP
POWERGRID, Khliehriat

Sub: - NOC for Construction of 132 KV Transmission Line

Sir,

This is in reference to your request letter no NERPSIP/Khliehriat/2017/180 dated 10.07.2017 construction of two 132 KV Double Circuit transmission line (132 KV D/C MLHEP-Khliehriat Loop in, Loop Out) emnationg from Rymbai village to Mynkre associated wi5th NERPSIP project. The Dorbar shnong of Rymbai Village, East Jaintia Hills District, Meghalaya is pleased to intimate you that it has no Objection for whatsoever to the construction of 132 KV D/C line under the jurisdiction of Rymbai Village.

Therefore, you are hereby allowed to start the construction activities of the said transmission line within the jurisdiction of RYMBAI Village. However necessary compensation will be made as per prevailing norms.

8/9/17
(Shri. Sunshine Lyngdoh)
Waheh Shnong
Rymbai
East Jaintia Hills Dist.

8/9/17
(Shri. Blastused Rymbai)
Secretary
Rymbai Village
East Jaintia Hills District

UMSATAI VILLAGE
P.O. LAD RYMBAI, EAST JAINTIA HILLS DISTRICT, MEGHALAYA - 793160

To

The Manager, NERPSIP
POWERGRID, Khliehriat

Subject: - "NOC for Construction of 132 KV Transmission Line".

Sir,

This is in reference to your request letter no. **NERPSIP/KHLT/2017/248 dated 2/11/17** regarding construction of two **132 KV** Double Circuit transmission line (132 KV D/C MLHEP-Khliehriat Loop in Loop Out) emanating from Rymbai village to Mynkre associated with NERPSIP project. The Dorbar Shnong of Umsatai Village, East Jaintia Hills District, Meghalaya is pleased to intimate you that it has No Objection for whatsoever to the construction of 132 KV D/C line under the jurisdiction of Rymbai Village.

Therefore, you are hereby allowed to start the construction activities of the said transmission line within the jurisdiction of Umsatai village. However necessary compensation will be made as per prevailing norms.

L. Shylla

Dated-Umsatai
The 16th December, 2017

(Shri. Lowel Shylla)
Waheh Shnong
Umsatai Village
East Jaintia Hills District

Waheh Shnong
Umsatai
Elaka Rymbai
East Jaintia Hills

OFFICE OF THE ELAKA RYMBAI DOLLOISHIP

Head Quarter,Rymbai P.O. Ladrymbai
East Jaintia Hills District, Meghalaya - 793 160

Reference No. OERD/EJHD/2016-17 No - 01

Dated Date 13/12/17

To,

The Manager, NERPSIP
POWERGRID, Khliehriat

Sub – NOC for Construction of 132KV Transmission Line

Sir,

This is in reference to your request letter no NERPSIP/KHLT/2017/301 dated 9th December 2017 regarding construction of two 132 KV Double Circuit Transmission line (132 KV D/C MLHEP – Khliehriat Loop In Loop Out) emanating from Rymbai village to Mynkre associated with NERPSIP project. The Dorbar Elaka of Elaka Rymbai, East Jaintia Hills District, Meghalaya is pleased to intimate you that it has No Objection for whatsoever to the construction of 132 KV D/C line at Umlaper Village which is under the jurisdiction of Elaka Rymbai.

Therefore, you are hereby allowed to start the construction activities of the said transmission line within the jurisdiction of Rymbai Elaka. However necessary compensation will be made as per prevailing norms.

(Shri Elios Swer)
Dolloi Elaka Rymbai
East Jaintia Hills
District

E. Swer 13/12/17
Dolloi Elaka Rymbai
East Jaintia Hills District

ANNEXURE – 5

DETAILS OF PUBLIC CONSULTATIONS

Details of Consultations

Public Consultation Meeting			
Date of meeting	**Venue of Meeting**	**No. of Persons attended**	**Persons Attended**
10.11.2014	Village- Mynkre, East Jaintia Hills	21	Members of Jaintia Hill Council, Senior members & General Public

MEGHALAYA POWER TRANSMISSION CORPORATION LIMITED
OFFICE OF THE SUPERINTENDING ENGINEER (T & T) CIRCLE
LUM JINGSHAI : : Shillong : 793001.

Minutes of Public Hearing held on 10th Nov 2014 at Hotel Lyngwiar, Mynkre, E. Jaintia Hills.

Subject - Construction of LILO of existing 132 KV D/C MLHEP – Khliehriat line at MYNKRE (under WORLD BANK assistance) and associated 33 KV distribution networks under NERPSIP in Meghalaya.

Annexure – Signatures of members of the public/village council and officials of Meghalaya Power Transmission Corporation Limited (MePTCL) and Power Grid Corporation of India Limited (PGCIL) who attended the meeting.

The public and officials of MePTCL and PGCIL who attended the meeting is enclosed in Annexure.

The Superintending Engineer, T&T of MePTCL, Shillong chair the hearing and welcomes all the public and officials who had spare there valuable time to attend the hearing. The Superintending Engineer gave a brief description about the project and he also inform that the project will be funded by the World Bank and the Central Government of India. He apprised the public that the project is He urged the public to co-operate and inform that the officials of PGCIL will brief them about the project.

Shri Dipjyoti Baruah of PGCIL also brief the public about the necessity of the project and inform the public that the corridor of the line is 27 mts for each line. He sought the co-operation of all the public to make this project successful. He lnform that this line (132 KV) will be loop in loop out from the existing 132 KV D/C MLHEP – Khliehriat line. He also inform that care will be taken to construct the line in such way as to avoid human habitat, but in case it is unavoidable, sufficient compensation will be paid by PGCIL.

The public enquired whether the compensation will be paid in the same manner as was done during the construction of 400 KV pallatana line and the PGCIL replied in the affirmative and they also inform that rate will be fix by the Deputy Commissioner.

The SE T&T, Shillong explain the tentative route of the line in the topo sheet to the public. The public want that during the final i.e check survey, the PGCIL should consult the respective headmen so that minimum damage to the properties is achieved. Some public also want to know, whether any contract work will be given to them, but it was explain that the contract will be awarded through the tender and it is upto the contractor to decide. They also want that before the work started, NOC from the villages and land owner should be obtained.The SE T&T, Shillong explain to the public about the benefit which will derived from the construction of this line and Sub station at Mynkre.

In conclusion, the public agreed that the construction of the transmission line and sub-stations is for the benefit of the State and the public, but care should be taken to inflict minimum damage to crops, forests and any structure during construction.

The hearing concluded with the vote of thanks from the Superintending Engineer and also assured that all stake holder will be taken into confident during the construction.

Shri M.Marbaniang
Superintending Engineer (T & T)
MePTCL, Lumjingshai, Shillong.

MEMBERS PRESENT DURING THE PUBLIC HEARING HELD ON 10TH Nov 2014 FOR DRAWING OF 132Kv LILO LINE AT PROPOSED 132/33Kv MYNKRE SUBSTATION.

Venue:Mynkre

Sl.No	Name & designation	Signature
1.	Shri Preshos Synmpli (Headman)	P. Synmpli
2.	Shri Karlbor Pala (member)	K. Pala
3.	Shri Pynlung Nongtdu	[illegible]
4.	Shri Treibor Lapasam (Nongthymmai)	T. Lapasam
5.	Shri Cosiphin Mukhsor.	K. Mukhsor
6.	Shri Lasting Mukhsor.	L. Mukhsor
7.	Mattbiang Ki Bakeh	[illegible]
8.	S. Kharkongor.	[illegible]
9.	S. Tlang	[illegible]
10.	S. Suting	[illegible]
11.	Saljean M. Sungoh	[illegible]
12.	R. Dkhar	[illegible]
13.	M. Marbaniang	[illegible]
14.	K. Lyngwa	[illegible]
15.	L. Syngkon	[illegible]
16.	D. Pakyntein.	[illegible]

17.	DIPJYOTI BARUAH (PGCIL)	
18.	SULAGNA SARMA (PGCIL)	Sulagna Sarma.
19.	S K PAL (POWERGRID)	
20.	Shri Pil [illegible]	
21.	Shri [illegible]	
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Photographs of Public Consultation held at Mynkre on 10.09.2014

Public Consultation held at Mynkre on 10.09.2014

Informal Group Meeting			
Date of meeting	**Venue of Meeting**	**No. of Persons attended**	**Persons Attended**
23.11.2017	Sutnga village, East Jaintia Hills	32	Project affected families, Village headman & general public
26.03.2018	Mynkre village, East Jaintia Hills	16	Project affected families, Village headman & general public
28.05.2018	Village- Mynkre, East Jaintia Hills	27	Members of Jaintia Hill Council, Senior members & General Public


26 Mar 2018 18:49:39
Mynkre Village


26 Mar 2018 18:49:25
Mynkre Village


28 May 2018 4:09:39 pm
Mynkre Village


28 May 2018 4:53:23 pm
Mynkre Village