

**NEPAL ELECTRICITY AUTHORITY**  
**(GOVERNMENT OF NEPAL UNDERTAKING)**  
**DISTRIBUTION AND CONSUMER SERVICES DIRECTORATE**  
**GRID SOLAR AND ENERGY EFFICIENCY PROJECT**



Nepal Electricity Authority  
Nepal

**Environmental and Social screenings Report of 11kV distribution system expansion  
in Five Districts**

(Sindhupalchowk, Rasuwa, Makwanpur, Chitwan and Sindhuli)

**Project:** GSEEP/W/ICB-11: Design, Supply, Installation/Erection, Testing and Commissioning of 11/0.4 KV Distribution System.

**Submitted by:** Grid Solar Energy Efficiency Project (GSEEP/W/ICB-11 )

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# Table of Contents

<b>1. Background</b>	<b>1</b>
<b>2. Objectives</b>	<b>1</b>
<b>3. Methodology</b>	<b>2</b>
<b>4. Site Description</b>	<b>2</b>
<b>5. Screening Results</b>	<b>4</b>
<b>5.1 Key Environmental Issues</b>	<b>4</b>
<b>5.2 Key Social Issues</b>	<b>6</b>
<b>6. Conclusion</b>	<b>7</b>
<b>7. Recommendations:</b>	<b>7</b>
<b>7.1 Environmental recommendations</b>	<b>8</b>
<b>7.2 Social Recommendations</b>	<b>8</b>
<b>Annex1 : Google Map Showing the Alignment</b>	<b>11</b>
<b>Annex 2: List of Names and Contact number of the chairman of Community forests</b>	<b>18</b>
<b>Annex 3: Environmental Safeguard Checklist for substation distribution line 11kV</b>	<b>20</b>
<b>Annex 4: Assurance letter for No tree felling</b>	<b>22</b>

## 1. Background

This Project, Design, Supply, Installation/Erection, Testing and Commissioning of 11/0.4 kV Distribution System is a Project under the Grid Solar Energy Efficiency Project (GSEEP) implemented through Nepal Electricity Authority (NEA). This Project is expanding the distribution system in five districts, i.e. Melamchi of Sindhupalchowk district, Rasuwa district, Palung & Hetauda of Makwanpur district, Bharatpur & Chanauli of Chitwan district and Sindhuli district. Initially Dolakha and Ramechhap districts were also included for the electrification but as these districts are now fully electrified, the volume of work proposed for these two districts has been transferred to un-electrified area of Sindhuli District and Makwanpur district. This report covers the study of the revised electrification scope area. In total there will be 271.1468 km (running km) High tension (HT 11 kV) line and 447.472 km Low Tension (LT 230/400 V) line shall be constructed. The scope also includes installation of 361 distribution transformers. This Project plans to partially electrify and upgrade 1 rural municipality (RM) in Chanauli area and Bharatpur Metro of Chitwan District, 3 rural municipalities of Sindhuli District, 4 rural municipalities of Rasuwa District, 8 rural municipalities and 2 Municipality of Makwanpur District and 4 rural municipalities of Melamchi area of Sindhupalchowk district. The Project will use Covered All Aluminum Alloy Conductor (AAAC) the conductor for 11 kV lines and Aerial Bundled Cable (ABC) for 0.4 kV lines. Since, both conductors to be used at different voltage levels are of covered type, which means conductors are covered with electricity insulating materials; it has high value of safety. Use of such type of conductor will have negligible effect on environment as the electricity carrying part remains inside the insulating cover making the electricity carrying part not exposed to the environment. So, these conductors are very much popular for their significance in forest areas and in a dense locality where ROW (Right of Way) is less than usual standards.

This report consists of site-specific environment and social screening of the areas, including revision, under the contract number GSEEP/W/ICB-11.

## 2. Objectives

**Environment and Social Screening and its objectives:** The site screening report has been prepared in line with the procedures for risks screening as outlined in the ESMF of the GSEEP. Based on preliminary field assessments, the 11 and 0.4 kV distribution lines have no significant impacts to human settlements, people, and natural environment as these are utilization voltages which serve the people. The environment and social screening process will help and lead to identify risk and impacts if any. The major objective of environment and social screening is to assess the suitability of the project as per the applicable acts/policies and guidelines of the Government of Nepal and those of the World Bank.

The specific objectives of Screenings are:

- To identify and provide scope for potential environmental and social issues/risks caused by the 11 / 0.4 kV lines in the project area and take appropriate mitigation measures for their management,
- To determine the need to carry out further risks/impact assessment prior to formulating plans for managing E&S impacts, e.g. Environment and Social Management Plans (ESMPs), Resettlement Action Plan (RAP), and Vulnerable Community Development Plans (VCDP).

### 3. Methodology

The environment and social screening checklist (see Annex 3) was used for information collection. Contractor engineer, site in charge and NEA Project engineer jointly applied the checklist across the project footprint and prepared the summary report. The team also consulted with respective local officials and community forest user groups (Annex 2).

### 4. Site Description

This Project consists of Installation/Erection of 11kV and 0.4 kV line across different areas of five districts as described in Table 1.

*Table 1: Site Details of five districts*

S.N	Site Description	Districts	HT line (Km)	LT line (Km)	Size and No. of Poles	No of Transformer	Remarks
1.	Madi, Goandrang, Gitanagar etc of Bharatpur Metropolitan city & Chanauli DC Area	Chitwan	46.31445	47.6868	11m:-1186 Nos. 8m:-667 Nos.	85	
2.	Different areas of Melamchi Municipality	Sindhupalchok	NA	26.93565	11m:-44 Nos. 8m:-612 Nos.	22	
3	Different areas of Palung and Hetauda	Makawanpur	114.5466	212.0494	11m:-3204 Nos. 8m:-3642 Nos.	120	
4.	Different area of Hariharpurgadhi rural municipality	Sindhuli	110.2857	160.8002	11m:-2852 Nos. 8m:-2459 Nos.	119	
5.	Kalika, Gosainkunda, Aamachoring, Uttargaya, Naukunda Rural Municipality	Rasuwa	NA	NA	11m: 30 Nos.	15	Only transformers will be inserted
	Total	5 districts	271.1468	447.472	11m – 7316 8m - 7380	361	

#### 4.1 Chitwan District

The Project consists of 46.31 km 11kV line and 47.68 km 0.4kV line in areas of Bharatpur metropolitan city and different areas of Chanauli of Chitwan district. Sites in this area is plane land. The number of poles is estimated to be 1853. A total of 85 transformers will be installed by this Project. The Project consists of new line construction and almost all the lines are designed to pass through the existing right of way of the national/rural roads in order to avoid the forest and private lands. 85 transformers will be installed at new load centers. Brief description of line alignment is at 5.1.1. Sample route map of Bharatpur is shown in Annex 1.

#### 4.2 Sindhupalchowk District

The Project consists Installation/Erection of 26.93 km of 0.4kV line only in Melamchi of Sindhupalchowk district. A total of 656 Nos (approx.) Poles will be erected and 22 transformers will be installed in this Project. The Project consists of new line construction and almost all the lines are designed to pass through the existing right of way of the national/rural roads in order to avoid the forest and private lands. New transformers will be installed at new load centers. Sample route map of Melamchi is shown in Annex 1.

#### 4.3 Makwanpur District

This project consists of installation/Erection of 114.54 km long 11kV and 212.05 km 0.4kV line across the different areas of Makawanpur district. Sites in this district are in Mahabharat range only and hence do not need to obey the rules of Churia conservation program. Approximately 6846 of steel tubular poles will be planted along 8 stretches. Similarly, 120 transformers will be installed. The Project mainly consists of new line alignment. Almost all the lines surveyed pass along the roadside largely avoiding the forest and private lands. But parts of line pass through the forest area and some passes through private land. Transformers shall serve new load centers. Summary of 11kV line coverage and number of poles to be erected is listed in table 1. The google map of all stretches is available. The sample of two stretches is attached in annex 1.

Table 2: Stretches' in Makawanpur district

S.no	Site Location	Area	Length(R-km)	Existing Feeder	Remarks
1	Bakaiya-1	Hetauda	8.22 HT 29.6 LT	Gramin	
2	Bakaiya-2	Hetauda	9.541 HT 20.507 LT		
3	Bakaiya-6	Hetauda	16.775 HT 35.486 LT		
4	Bakaiya-11	Hetauda	13.095 HT 16.557 LT		
5	Gadhi-2	Hetauda	4.36HT 25.56 LT	Chaughada	
6	Raakshirang-6&7	Hetauda	24 HT 24 LT	Lever	
8	Thaha, &Bhimphedi	Kailash Palung	31.5HT 91.5LT	Kulekhani, Bhimphedi	

Table-3: Details of TL passing through Community Forest requiring tree trimming in Makawanpur and Sindhuli district

Location	Ward No.	Community Forest Name	Dominant Treespecies	Line Length(km)	No. of poles

Dadha Tole,kunda,(Hariharpurgadhi Ga.Pa)	Sindhuli/4	Lohasur Community Forest	<i>Shorea Robusta</i>	0.464	10
Marcha Pokal,(Hariharpurgadhi Ga.Pa)	Sindhuli/5	Shipahi Dadha Community Forest	<i>Shorea Robusta</i>	1.362	29
Bhamara,Damaichaur,Tinthumke(Bakaiya)	Makawanpur/2	Kalyan Community Forest User Group	<i>Shorea Robusta</i>	2.3	51
Tinthumke Tongtong(Bakaiya)	to Makawanpur/2	Richyeswori Community Forest Group	<i>Shorea Robusta</i>	4.1	91
Sudha Jyamire,(Bakaiya-2)	to Makawanpur/2	Baghbhairav community Forest user group	<i>Shorea Robusta</i>	2.1	47
Morangdhap-Sanojyamire(Bakaiya-6)	Makawanpur/6	BulbuleCommunity Forest User Group	<i>Shorea Robusta</i>	0.5	11
Raakshirang 6 and 7.	Makawanpur	Mendoli Community Forest User Group	<i>Shorea Robusta</i>	2.5	45
Raakshirang 6 and 7	Makawanpur	Dakshinkali Community Forest User Group	<i>Shorea Robusta</i>	3	50
Raakshirang 6 and 7	Makawanpur	Janaekata Community Forest Group	<i>Shorea Robusta</i>	3.5	56

#### 4.4 Sindhuli District

In the Sindhuli district, the project will construct 11kV (110.28 km) and 0.4 kV (160 km) line across the Hariharpurgadhi rural municipalities, using approximately 5311 poles. A total of 119 transformers will be installed. Works involves new line alignments and largely confined to existing right of way of the public roads to avoid impacts on the forest and private lands. Nevertheless, some sections of the line will pass through the forest area, details has been presented in Table 3. Brief description of line alignment is presented in 5.1.5. Map of Hariharpurgadhi is shown in Annex 1.

Table 4 : Sample of Sindhuli District

SN	Site Location	District	Length(km)	No. of Poles	Feeder
1	Hariharpurgadhi	Sindhuli	115 HT 164 LT	2500	Bagmati

#### 4.5 Rasuwa District

This Project in Rasuwa consists of installation of 15 Transformers at Kalika, Gosainkunda, Aamachoring, Uttargaya, Naukunda Rural Municipality.

### 5. Screening Results

#### 5.1 Key Environmental Issues

The screening exercise reveals that the electrification works in the proposed scope will cause significant adverse environmental impacts in all five districts. As majority of line will be constructed along the flanks of existing presented in Table-2. Insulated cover conductor is being

used which is considered as safety. Cable stringing work will maintain government clearance standards therefore cable stringing alignment would not have impact on nearby houses/residential areas. There would be no need for demolition/rehab of individual or properties in residential areas.

As stringing would be done using Aerial Bundled Cable (ABC) in the 11/0.4 kV distribution line, and the alignment of the distribution line can be adjusted to avoid the need for tree felling at the time of construction. Hence, there will be no tree felling along the 11kV/0.4kV alignment passing through forests. Trimming of branches of trees, if needed, will be done in consultations and coordination with the respective forest authority and community forests groups. Documentation of consultation with forest user group/forest office in all districts will be recorded and maintained by contractor/Project. The key environmental issues identified through screenings are as follows;

#### 5.1.1 Chitwan District

All the line will run through the road site and the residential area, no part of line shall pass through the forest. As expansion of low-tension line passes through the residential area via local road there would be minimal environmental issues, such as the mud flow during the digging hole for poling, trimming the trees, etc. Caution sign will be placed for fall hazard after digging till the duration of the poling. .

#### 5.1.2 Sindhupalchowk District

Since the Project is expanding only low voltage line in Melamchi of Sindhupalchowk district, there will be minimal adverse impact to environment, such as the mud flow during the digging hole for poling, trimming the trees, etc. The areas to be electrified do not fall under Gaurisankhar Conservation Area. All the line will run through the road site and the residential hilly area.

#### 5.1.3 Makawanpur District

There are no significant impacts to environment. However, some stretches passing through the community forest area, might have some concern regarding trees.

- In Bakaiya-2, from Bhamarato Tinthumke about 1km HT line from Tinthumke to Damaichaur about 1.3km HT and from Tinthumke to Tontong about 4.1 km HT line passes through Community Forest. There are nine community forest areas within this stretch (*See table 3*). In order to avoid tree felling alternative alignment will be assessed and followed during the TL poling activities and tree felling will be strictly avoided (Refer letter Annex-4). However the tree trimming is required to clear the right of way for the TL line. There would be no need of felling down the trees as insulated covered conductor is being used.
- In Bakaiya-6, about 2.1 km HT line passes through community forest from Sudha to Jyamire and about 0.5 km of HT from Morangdhap to Sano Jyamire, As settlement is at the other end of the forest it is inevitable to avoid the penetration of the forest. Informal Meeting was held with local ward officer Mr. Damodar Parajuli and local community forest officers about the route alignment and discussed about the possibility for trimming down tree in case of any harsh condition for line stringing. Local people are willing to help the Project team. The line also passes through small accessible road. Besides the Community Forests, other stretches Environmental Screenings show that no any poles will be erected in religious area and playgrounds. There is no religious temple or heritages site lying in line alignment, if found any such structures, the line will be shifted. All the survey and design of distribution line maintains minimum GON/NEA Clearance standards (*Annex 3*).

- In Raakshirang 6&7, about 9km HT line passes through community forest along the right of way of the road built inside the forest. Alignment of the line and stringing of the conductor shall be done in such a way that there will be minimum impact to the environment.

The Project will use Aerial Bundled Cable (ABC) in the 11/0.4 kV distribution line, and the poles of the distribution line will be adjusted to avoid the need for tree felling. Trimming of branches of trees and cutting, if needed, will be done in consultations and coordination with the respective forest authority and community forests groups. (*Annex 2*)

#### 5.1.4 Rasuwa District

The Scope in this district consists of insertion of only 15 transformers in the existing line which will have minimal impact to Environment. However, the sound produced by transformers cannot be avoided.

#### 5.1.5 Sindhuli District

- I. In Rural Municipality, Hariharpurgadhi ward no 4 and 5 the line passes through 1.5km of forest along the right of way of road built inside the forest. There will be minimal trimming of trees if needed and line alignment can be deviated easily in order to avoid falling down of trees.
- II. In Rural Municipality, Hariharpurgadhi ward no. 3 the line will align the newly constructed highway connecting Sindhuli and Hetauda using its right of way.
- III. In Rural Municipality, Hariharpurgadhi ward 6 and 7, the line will be passing through the hilly and forest area along the right of way of newly constructed road through these areas. The Project will use Aerial Bundled Cable (ABC) in the 11/0.4 kV distribution line, and the poles of the distribution line will be adjusted to avoid the need for tree felling. Trimming of branches of trees as well cutting, if needed, will be done in consultations and coordination with the respective forest authority and community forests groups. (*Annex 2*)

## 5.2 Key Social Issues

The social screening reveals that the installation of the 11 kV and 0.4 kV poles and lines in the area does not cause major adverse impact to the households. On the positive side, the distribution lines in the vicinity provides reliable and limitless source of electrical power for communities and will encourage the starting of small industries. Based on consultations, beneficiary communities are excited about the opportunity to get connected to reliable power supply. Reliable power supply is expected to benefit not only the consumers but also to small and medium entrepreneurs in operating micro enterprises.

Key issues identified through social screenings are as follows;

#### 5.2.1 Chitwan District

In Bharatpur metropolitan city of Chitwan District, most of the poles and distribution lines are designed to pass along the flanks of the road. There is likelihood that some poles may be planted on private/agricultural lands and result in concerns of decrease in land values. In all such cases, the owners of private properties will be consulted in advance and the poles will be installed along the edges/ bonds and borders of the parcels to avoid or minimize potential loss of land value.



### 5.2.2 Sindhupalchowk District

In Melamchi of Sindhupalchowk District, most of the poles and distribution lines are designed to pass through the roadsides. In case of the private /agricultural land, the owners will be consulted ahead of the work and the poles will be installed along the edges/ bonds and borders of the parcels to avoid the potential loss of land value.

### 5.2.3 Makawanpur District

At Hetauda and Palung of Makwanpur District, most of the 11 kV poles are designed to pass through the government/non-private land, mostly along the existing road right of way (RoW). Nevertheless, some poles will be installed in the agriculture land/private land. In order to avoid crop damage, the poles will be erected either before crop plantation or immediately after crop harvesting if possible. In case of storage of poles and other materials, the landowners shall be consulted.

### 5.2.4 Sindhuli District

In the areas to be electrified, most of the 11 kV poles are designed to pass through the government land, mostly along the existing road right of way (RoW). Nevertheless, some poles will be installed in the agriculture land/private land. The damage to the crops shall be minimized while planting the poles as the plantation area of the poles does not need much area. Regular consultation will be done with the Community Forest Users Group for the trimming of the branches if needed.

## 6. Conclusion

The screening results show that 11/0.4 kV poles and lines alignment will cause minimal environmental issues and impacts to the Project sites. However, it is crucial for the route alignment passing through community forest area, where some part of the line may be blocked by trees. Little deviation of the line alignment should be carried to avoid this sort of problem in the forest. Tree trimming is required to clear the right of way for the line. There would be no need to cutting down the trees because of conductor to be used by the project are leakage proof. Project needs to consult with the Community Forest User group for trimming the trees and make proper agreement with user group committee for periodic trimming and compensatory plantation management if required in the sites.

The Project will have no major social impacts as there lies no public/private land, the line route/poles are not proposed to close to any touristic viewpoints, wetlands, and sites of cultural / religious / archeological / historic significance and locations of poles falling in any landslide & erosion prone/ risk spot. All the survey and design of distribution line maintains minimum GON/NEA Clearance standards. The nature of Project is of covered conductor and Aerial Bundled Cable (ABC). It has high value of safety to people benefitted by 11kV lines.

The screening results show no major safeguards issues resulting in major impacts to the people/communities. Due to the execution of Project, many people will be getting electricity for the first time. With the construction of these lines, the beneficiaries will benefit from reliable power supply. There will be no harm to private land/assets by the construction works and no adverse effect to the people and the environment.

## 7. Recommendations:

## 7.1 Environmental recommendations

The ongoing construction of 11 kV/0.4kV lines is an important distribution expansion activity benefiting the local people directly. To carry out the erection of poles and stringing of cables smoothly, the Project needs to implement the works with proper planning and due diligence as follows.

- Proper Survey and high attention for the stretches passing through Community Forest which require tree trimming activities.
- Avoid stretches and pole erections in religious area/playgrounds/close to any touristic viewpoints, wetlands, and sites of cultural / religious / archeological / historic significance if any apply alternative route selection. No tree felling is necessary. Alignments and poles in the section (stretches) will be adjusted/shifted to ensure that tree felling is avoided.
- Avoid locations of poles falling in any landslide & erosion prone/ risk spot.
- Maintain minimum GON/NEA clearance standards during the survey and design of distribution line. (*Annex 3*)
- Project should ensure that there is no adverse impact to environment during construction.
- All the workers will be provided personal safety equipment like boots, belts, helmets, gloves etc. to work in the sites. The workers will be facilitated with hygienic labor camps and sanitation. Construction activities will fully comply with the health and safety norms/standards issues by the government in the context of COVID-19 Pandemic.
- The Project is recommended to make joint planning in consultations with the local communities and leaders to avoid any potential adverse impacts during the erection of poles and cable stringing in private land.
- The contractors are required to work in close coordination with the local people/ beneficiaries and carry out the construction works as per agreed schedule/norms. Any kind of losses viz crop/tree/orchard etc. should be avoided to the extent possible. In case of such losses, the Project/contractors should provide due compensation.
- Any consultations/agreed actions with the locals will be documented properly.

## 7.2 Social Recommendations

Significant adverse social impacts are not expected. However, the Project is recommended to take following measures to avoid and minimize any adverse impacts to the community:

- The design and installation of distribution lines will be done as to avoid/minimize potential for displacement of people. Where poles have to be planted in the private /agricultural land, the owners will be consulted, and to the extend feasible, the poles will be installed along the edges/ bonds and borders of the parcels to avoid the potential loss of land value.
- The affected family will be consulted and given advance notice to harvest crops. In case of any damage to crops, the affected family will be compensated as per the Resettlement Policy Framework prepared by the Project.
- In case of the presence of indigenous communities, the Project will carry out free, prior and informed consultations with the concerned communities. Information to the concerned community and other stakeholders of the Project activities will be provided in local language through different media – public hearing, notice, etc.
- The Project team and the contractors will work closely in consultation with respective Municipality staff and local people so that any issues/disputes raised in the sites will be resolved locally.

- The Project will establish grievance redress mechanism for the Project and inform the local communities and other stakeholders about the mechanism. The Project will ensure timely response to any complaints received. The Project team/contractors will work closely in consultation with respective Municipality staff and local people so that any issues/disputes raised in the sites will be resolved locally. In case of issues/disputes occurred during pole installation in private land, the contractor will not work in the field until the resolution of issues through joint consensus. The Project staff/construction workers will pay due attention to shift/reroute lines to avoid the losses. The Project will also inform the locals and communities and other stakeholders about the GRC committee formed for the Project.
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- In case of issues/disputes occurred during pole installation/stringing in private land or village and markets, the contractor will halt field activities until the resolution of issues through consensus. Such problems should be resolved in consultation with the affected persons groups and local government representative.
- Discussions and decision taken in consultation with the affected family and local community decision should be documented along with photographs.
- Project will pay full attention to ensure that the lines do not pass through the cultural and religious sites (temples/gumbas and heritages).
- All the workers will be provided with adequate PPEs viz safety belts, helmets, gloves etc. while working on sites.
- All the poles will be installed in proper points if they happened to fall along the cultural and religious sites (temples/gumbas and heritages). This will be done in consultation and full consensus of the locals.
- The Project staff will make close supervision of the works and ensure that the workers get fair wage as per the contract.

# ANNEXES







Map showing portion of HT line going through community forest from Sudha to Jyamire (Bakaiya-6)



Map showing portion of HT line going through community forest from Tinthumke to Tongtong (Bakaiya-2)



Map showing portion of HT line going through community forest (Raakshirang-6&7))



Map of Banchara, Sindhuli.





Map of Jhakuli , Sindhuli



Map of forest area from Deurali to Ramitya Gau



Map of forest from Gurji to Marcha Gau



Map of Dadha Tole, kunda, (Hariharpurgadhi RM 4) Lohasur Community Forest



Map of Marcha Pokal,(Hariharpurgadhi RM)

**Annex 2: List of Names and Contact number of the chairman of Community forests**

<b>District</b>	<b>Location</b>	<b>Ward No.</b>	<b>Forest Name</b>	<b>Types of Trees</b>	<b>Line Length(Km)</b>	<b>No. Of Poles</b>	<b>Head Name</b>	<b>Contact No.</b>
<b>Sindhuli</b>	Dadha Tole,kunda,(Hariharpurgadhi Ga.Pa)	4	Lohasur Samudaik Baan	Saal	0.464	10	Jay Lal Rai	9863501419
	Marcha Pokal,(Hariharpurgadhi Ga.Pa)	5	Shipahi Dadha Samudaik Baan	Saal	1.362	29	Babu Lal Luitel	9845729032
<b>Makwanpur</b>	Bhamara,Damaichaur,tinthumke(Bakaiya)	2	Kalyan Community Forest User Group	saal	2.3	51	Laxmi maya jinba	9840662827
	Tinthumke to Tongtong(Bakaiya)	2	Richyeswori Communityt Forest Group	saal	4.1	91	Aitaman Jinba	9615779456
	between Sudha and Jyamire,(Bakaiya)	2	Baghbhairav community forest user group	saal	2.1	47	Sudarsan Lamichane	9855044381
	Morangdhap-Sanojyamire(Bakaiya)	6	BulbuleCommunity Forest User Group	saal	0.5	11	Tanka bahadur Gole	9845907764
	Raakshirang 6 and 7.	6-7	Mendoli Community Forest User Group	Saal	2.5	45	Prem Lal Moktam	9845533535

	Raakshirang 6 and 7.	6-7	Dakshinkali Community Forest User Group	Saal	3	50	Binod Praja	9855013071
	Raakshirang 6 and 7.	6-7	Janaeekta Community Forest User Group	Saal	3.5	56	Lokman Parkrin	9845569414

**Annex 3: Environmental Safeguard Checklist for substation/distribution line 11kV**

*Project: Grid Solar and Energy efficiency Project (GSEEP) Comp-11*

*All Districts under the scope of this Contract (GSEEP/W/ICB-11)*

**1. General Information:**

SN	Particulars	Yes/No	Total km and number of poles covering areas if response is “Yes”	Remarks (Please specify relevant information to supplement the response)
D1.	Does the distribution line pass through Forest area , protected area or area already proposed for protection?	NO	-	All the poles are alongside road.
D2.	Does the distribution route as well as locations of poles (supports) and transformers cross diagonally playground/ common property?	NO	-	All the poles are alongside road.
D3.	Does distribution line rout/poles are proposed to close to any touristic viewpoints, wetlands, and sites of cultural / religious / archeological / historic significance.	NO	-	All the poles are alongside road.
D4.	Does the distribution line/ route and locations of poles are falling in any landslide & erosion prone/ risk spot where geological avoidance is not feasible?	NO	-	Area being fully hilly but solid land. No steep hills to cause landslide& erosion
D5.	Does the distribution line passing through areas specially known for herbs and non-forest timber products (NTPF) and/or known habitat or migration / movement route of protected rare and endangered species	NO	-	Site consists of very few trees along side road. No any herbs are known.
D6.	Has the survey and design of distribution line maintained minimum Clearance (11KV) : (check as per government/NEA standard if applicable)			
D6.1	Normal ground and trails for pedestrian only	5 m	5.9 m	All the poles are erected according to the NEA standard. If some house or road falls in the route of line, the route can be slightly modified (shifted) to maintain the minimum clearance.
D6.2	Residential area	8 m	5.9 m	
D6.3	Highway, Road and streets	8 m	5.9 m	
D6.4	Horizontal distance from building or structure upon which human may stand	25 m	1.5m	
D6.5	Power lines or telephone lines (above or below)	2 m	1.5m	

7.	Other if any			
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2. **Mitigation measures:**

	<b>Particulars</b>	<b>Mitigation measures</b>	<b>Responsibility</b>	<b>Remarks</b>
E1.	If route passes through forest area and tree cutting is required.	NA		No any forest or trees falls under the line alignment.
E2.	If the distribution line/ route and locations of poles are falling in any landslide & erosion prone/ risk spot where geological avoidance is not feasible.	NA		Line passes through roadside. No such problems seen.
E3.	To maintain minimum clearance as per government/NEA standard.	NA		All poles are within standard
E4.	If existing transformers are replaced with new one. How to manage those replaced one	NA		New Line Alignment.
E5.	Occupational health and safety measures of the works during the erection/installation of poles/cables	Helmets, gloves and Safety belts are used. Proper Shelter and sanitation facilities are also provided	Contractor	Workers are facilitated with proper house within the site along with safety instruments.
E6.	Issues related to influx of labor/labor camp and sanitation	NA		No any such issues are encountered
E7.	Other if any			

Annex 4: Assurance letter for No tree felling



**NEPAL ELECTRICITY AUTHORITY**

(A Government of Nepal Undertaking)

**Distribution & Consumer Service Directorate**

**Grid Solar and Energy Efficiency Project**



Ref: 207677- 830

Date: January 16, 2020


To,  
World Bank Office  
Yak and Yeti Hotel Complex  
Kathmandu

Reference: Contract No.: GSEEP/W/CB-11: Design, Supply, Installation/Erection, Testing and Commissioning of 11/0.4 kV Distribution System (Melanchi, Dolakha, Ramechhap, Rasuwa, Palung, Bharatpur and Sindhuli Districts)

Subject: Avoiding Tree Felling Along 11 kV Line

Dear Sir,  
During the Environment and Social Screening process, we have discussed environmental and social aspects of 11 kV Distribution Lines (DLs). Planning and Design of 11 kV DLs have been revisited in reconnaissance of the potential impacts on the forests and loss of trees. As a result, it has been decided that All Aluminum Alloy Covered (AAAC) Conductor will be used in the 11 kV DLs and poles of the DLs will be adjusted/routed to avoid the need of tree felling. Trimming of branches of trees, if needed, will be done in consultation and coordination with the respective forest authority and community forest users groups. This will be strictly enforced. The bimonthly compliance report will be shared with the World Bank.

Thanking you,  
Yours faithfully,

  
.....  
Sandeep Shrestha  
Deputy Manager

CC:  
1. The Project Coordinator, GSEEP, Durbar Marg