

Abbreviated Resettlement Action Plan (ARAP) of Sirajganj 68 MW Solar Park Project Volume-1



**Bangladesh-China Renewable Energy
Company (Pvt.) Ltd (BCRECL)**

Level 4, UTC Tower, 8 Panthapath, Dhaka 1215

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Abbreviation

AH	Affected Households
AiIB	Asian Infrastructure Investment Bank
APs	Affected Persons
ARIPA	Acquisition and Requisition of Immovable Property Act (2017)
BCRECL	Bangladesh-China Renewable Energy Company (Pvt.) Limited
BDT	Bangladesh Taka
DC	Deputy Commissioner
ESF	Environmental and Social Framework
ESS	Environmental and Social Standard
FGD	Focus Group Discussion
GoB	Government of Bangladesh
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IA	Implementing Agency
IoL	Inventory of Losses
KII	Key Informant Interview
MPEMR	Ministry of Power, Energy and Mineral Resources
PAP	Project Affected People
PGCB	Power Grid of Company Bangladesh
PMU	Project Management Unit
PV	Photovoltaic
PVS	Property Valuation Survey
R&R	Rehabilitation and Restoration
RAP	Resettlement Action Plan
RoW	right-of-way
WB	World Bank

Glossary

- Affected Person (AP) : Any person, affected households (AHs), firms or private institutions who, on account of changes that result from the Project will have their (i) standard of living adversely affected; (ii) right, title, or interest in any house, land (including residential, commercial, agricultural, forest, and/or grazing land), water resources, or any other moveable or fixed assets acquired, possessed, restricted, or otherwise adversely affected, in full or in part, permanently or temporarily; and/or (iii) business, occupation, place of work or residence, or habitat adversely affected, with or without displacement.
- Census : Census is a complete count of the population affected by a project activity including collation of demographic and property information. This will identify and determine the number of Project Affected Persons (PAP) and the nature and levels of impact.
- Compensation : It includes payments in cash for assets acquired or affected by a Project at replacement cost or current market value.
- Cut-off date : It refers to the date by which PAPs and their affected assets, as relevant, have been identified and new entrants to the site cannot make claims to compensation or resettlement assistance. Persons whose ownership, use of occupancy prior to the cut-off date can be demonstrated remain eligible for assistance, regardless of their identification in the census.
- Entitlements : It includes the range of measures comprising cash compensation, which are due to AHs, depending on the type and degree/nature of their losses, to restore their social and economic base.
- Household : A household includes all persons living and eating together (sharing the same kitchen and cooking food together as a single-family unit).
- Implementing Agency (IA) : Implementing Agency for this project is BCRECL
- Livelihood : Livelihood refers to the full range of means that individuals, families and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource- based livelihoods, petty trade and bartering.
- Non-titled : It refers to persons who have no recognizable rights or claims to the land that they are occupying and includes people using private or public land without permission, permit or grant i.e., those people without legal title to land and/or structures occupied or used by them.
- Project affected persons (PAPs) : It means persons who are impacted.
- Vulnerable groups : Vulnerable groups or individuals refers to people who are women headed families, living under the poverty line, and elderly/disabled people in the project.

WEIGHTS AND MEASURES

1 ha = 2.47 acre

1 ha = 10,000 sqm

1 acre = 100 decimals

Executive Summary

Electricity is an inevitable part for diversified development of our country. Understanding the importance of electricity, the Government sets a vision to make electricity available for all, aiming to alleviate poverty and improve socio-economic condition by 2021. In order to fulfill the vision, “the power system master plan (PSMP) 2016 was adopted in 2016 to formulate an extensive energy and power development plan up to the year of 2041. The PSMP has set five viewpoints. One of the major viewpoints of PSMP is the efficient development and utilization of domestic natural resources (gas and coal). Another important viewpoint is maximization of green energy and promotion of its introduction, construction of a robust and high-quality power network. The PSMP will help to achieve sustainable Development Goals. In line with these viewpoints, Bangladesh-China Renewable Energy Company (Pvt.) Limited (BCRECL), based in Dhaka, intends to develop and operate a 68 MW Solar Photovoltaics Power Plant Project.

The proposed site for the solar project is located north of the western end of the Jamuna Multipurpose Bridge, adjacent to the river course on the floodplain of the Jamuna River to the east. The solar power plant will be set up on 214 acres of land owned by the government institution, Bangladesh Bridge Authority (BBA). No agricultural activities have been practiced at the proposed project site due to its barren nature. To facilitate power evacuation, a 132kV transmission line will be installed, connecting the solar power plant to the Sheyalkol substation, which is approximately 10.3 km away. Therefore, an additional 1.53 acres of private land will be required for the tower footings necessary for the power evacuation infrastructure. The private land required for tower footings will be acquired in accordance with the national law, the Electricity Act 2018, and the Electricity Rules 2020. Land acquisition for tower footings allows landowners to reclaim and reuse the land after the transmission line tower footing construction, as long as no damage is caused to the tower or related infrastructure. The project, Sirajganj 68 MW Solar Park Project was initiated by BCRECL in late 2018, progressed steadily with a feasibility study completed by June 2019. By August 2019, a proposal to lease 214 acres from the Bangladesh Bridge Authority (BBA) was made, and the 30-year Land Lease Agreement was finalized in January 2021. An Initial Environmental Examination (IEE) was cleared by the Department of Environment (DoE) in July 2022, following a consultant appointment in March 2021. The EPC Contractor was engaged in July 2021, with the contract becoming effective in July 2022 and project design completed including the tower footing by November 2022. Thereafter, construction commenced shortly in the project area.

After the design but before the construction of the transmission line tower footings, BCRECL approached the Deputy Commissioner (DC) of Sirajganj for the acquisition of land for tower footings in accordance with the requirements of the Electricity Act 2020 and Rules 2020. Accordingly, under Section 6, Subsection 2 of the Electricity Act 2018 and Section 3, Subsection 7 of the Electricity Rules 2020, the DC office circulated a public notice in August 2022 mentioning the span of the right-of-way (RoW). Through this public notice, all people around the RoW vicinity were informed that the loss due to the tower footings would be compensated according to the prescribed amount determined by law and were requested to assist with such initiatives for the sake of public interest. The public notice is attached in Annex-K.

Later on, it was identified that 33 tower footings would need to be placed on private land. According to the Electricity Rules 2020, under Section 10, Subsection 4 (Cha), all individual private landowners or title landowners (concerned persons) were notified by the DC in May 2023. According to the Electricity Act 2018, Section 6, Subsection 3, the concerned persons or local authorities can appeal to the government if they are unhappy with the decision. No appeal has been made as of now after serving the notice in May 2023, signifying the consent of the affected private landowners. The notice is attached in Annex-I. For the title holders, the notice issued in May 2023 is considered as the cut-off date, since a census was conducted from December 27, 2023, to January 4, 2024, based on the list of that notice receivers.

Discussions for project financing with IDCOL and other potential lenders began in early 2023. IDCOL officially engaged in October 2023, at which point they outlined their requirements. Although the project area is barren with no assumed livelihood impacts, the construction of the tower footings will impact private land, causing the loss of assets such as damage to crops and trees, and temporary livelihood impacts, as the land can be reclaimed and reused after construction. Considering the overall potential impacts of the proposed project, the consultant team was tasked with preparing an abbreviated resettlement action plan (ARAP) in accordance with World Bank OP 4.12 guidelines.

The proposed solar project site requires 214 acres of leased government land north of the western end of the Jamuna Multipurpose Bridge, secured through an agreement with the Bangladesh Bridge Authority for a 30-year tenure. Prior to leasing, the land was barren with no agricultural activity, ensuring no impact on existing agricultural livelihoods and thus no involuntary land acquisition or resettlement issues under WB's OP 4.12.

Adjacent to the project's northern boundary lies Jogtola village, covering approximately 5 acres and housing 50 to 60 families primarily engaged in fishing along nearby canals and rivers. The project design deliberately excluded the village to mitigate potential resettlement and livelihood impacts, given their independence from the project land. Additionally, a 520-meter road was constructed to connect the solar park directly to the main road, significantly reducing travel distances for villagers who previously faced longer routes. A protective boundary was erected to ensure the safety and security of villagers against any disruptions caused by project construction and operational activities.

The transmission line installation affects land in various categories: 8 towers on government land (barren), and 33 towers on private land. Of the private land affected, 28 towers are used for agricultural cultivation (1.37 acres), 3 towers are on homesteads, and 2 are on non-cultivated viti land (totaling 0.154 acres). According to the Electricity Act 2018 and Rules 2020, compensation for transmission line tower footings is paid through the DC office as prescribed by law. BCRECL has deposited a total of BDT 11,412,416 into the DC's account in two installments, one in July 2023 and the other in December 2023. However, compensation for the tower footing land is yet to be completed. The DC office will process the payment to the affected landowners for the tower footing land accordingly. Crops and trees will be lost due to the clearance of the transmission line and the tower footing. According to the Electricity Rules 2020, the 132kV transmission line requires a clearance width of 28 meters. This clearance involves drawing 14 meters from each side of the transmission line centerline. As a result, a total of 11278kg crops and 3,021¹ trees of various sizes were impacted or removed. According to the Electricity Act 2018 and Rules 2020, licensee, here BCRECL, can directly pay the compensation for the lost crops and trees during the clearance and construction of the tower footing. The BCRECL has started compensation for the lost crops and trees from January 2024. As of May 2024, all affected persons losing crops and trees have been compensated amounting BDT 436,470 for crop losses and BDT 1,591,630 for tree cutting and trimming. As prescribed by the law, compensation for the lost crops and trees was assessed according to market values provided by the Department of Agricultural Marketing and the Department of Forest, respectively. Details of the impacts is provided in chapter 3 and Annex-E, F, & G

In preparing the Abbreviated Resettlement Action Plan (ARAP) a participatory approach was followed for collecting data and information. For the landowners who received DC's notice in May 2023 under Section 10, Subsection 4 (Cha), census and socioeconomic surveys were conducted. A total of 86 landowners were identified among whom 74 landowners were located and surveyed successfully. The remaining 12 landowners were not found during the census, and their residential locations could not be traced. The census took place from December 27, 2023, to January 4, 2024, utilizing a structured questionnaire to gather necessary data. Therefore, the social cut-off date for non-titled affected HHs

¹ 1,094 large trees, 46 medium trees, 1,807 small trees, and 74 bamboo trees

and persons will be 27 December 2023. However, no non-titleholder households were identified during the census.

A total of two (2) Key Informant Interview (KII) and three (3) Focus Group Discussions (FGD) were conducted at different locations of the project areas with consist of 25 peoples including Union members, landowners, female group, and the local communities.

Summary of the Impacts for Solar Power Park and Transmission Line

Sl. No.	Category	Unit	Total
Solar Power Park			
A1	Land Required (government owned)	Acres	214
A2	Losses of Crop Production	Kg	0
A3	Losses of Trees	No.	0
A4	Affected Households	No.	0
Transmission Line and Tower Footing			
B1	Land Required (Privately owned)	Acres	1.53
B2	Losses of Crop Production during the construction of the Towers	Kg	11278
B3	Losses of Trees	No.	3021
B4	Affected Households	No.	86

During the census, consultant team found that title-holders' payment for tower footing was not started, crop and tree compensation for tower footing was just started. To verify the updated status of the compensation payment the study team audited the project in May 2024. Audit found that DC's payment for tower footing was still not started due to some awaiting procedures of DC office. On the other hand, for crop and tree lost, the BCRECL has paid the amount of BDT 436,470 and BDT 1,591,630 respectively. Summary of the audit report is in Chapter 1 and details is provided in Annex- J.

The regulatory and policy framework governing land use for the project's transmission line and tower footing includes: (i) the Electricity Act of 2018 and its 2020 Rules, amended in 2022; (iii) World Bank OP 4.12.

The socio-economic baseline scenario describes the socio-economic characteristics of the proposed project area based on primary data which was collected through Survey during the period of 27th December 2023 to 04th January 2024. Details of socio-economic survey results in Chapter- 4 and analysis of results is included Annex-B.

The socio-economic characteristics include demography, household size, education, occupation, housing, employment opportunity, access to water and sanitation status, etc. A comprehensive analysis of the socio-economic survey for the 74 out of 86 landowners reveals the following key findings:

- Out of the 74 affected households, only 2 (2.7%) are headed by females, while the majority, 72 (97.3%), are headed by male members.
- Among the 365 individuals surveyed, 215 are married, 144 are unmarried, 3 are widows, 2 are divorced, and 1 is separated.
- No individuals belonging to any ethnic community were found during the survey.
- Primary and secondary level enrollment rates are relatively high, at 39.7% and 25.8% respectively. However, illiteracy is prevalent among the male population.
- The primary source of drinking water in the area is tube wells, with 74.32% of the population relying on them, while 18.92% have access to tap water. All households (100%) in the study area have access to grid electricity. The majority of households (55.41%) use water-sealed sanitary latrines, followed by non-water-sealed sanitary latrines (35.14%), with a small percentage (9.46%) using non-sanitary facilities.

- In terms of occupation, 9.32% of the total population is involved in farming, 7.95% are in service, and another 7.95% are engaged in commercial businesses. Additionally, 25.75% of individuals are engaged in unpaid work at home, while 27.67% are students, and 2.74% are seeking new opportunities.
- A significant portion of the population falls below the income threshold of BDT 360,001, classified as the vulnerable group, with 48.65% of households identified as such.

During the study period, the BCRECL consultant team conducted three FGDs, engaging approximately 25 affected persons. Additionally, interviews were conducted with the union members and the affected landowner. These FGDs included sessions with the affected landowners of the transmission line, the female groups, and the community members. Most of the respondents express positive perceptions towards the project. It has been revealed by FGD that community people believe this proposed project will enhance their quality of life by creating employment opportunities, business generation, medical services etc. The consultant team of BCRECL also notified participants that the DC office will pay the compensation for land use related to tower footing, whereas compensation for tree loss and crop damage will be paid by BCRECL. Compensation will be paid following the rules of electricity 2020, subsequently amendment 2022. The findings of the FGDs are in chapter-5 and attendance of the participants and pictures is attached to the Annex-C.

An entitlement matrix has been established to ensure compensation and other social benefits for affected individuals based on the type and extent of their losses, the impact of these losses, and their ownership status regarding affected assets. This includes temporary land use for the project and the trees, and crops affected by changes in land use during the construction of transmission towers. Landowners will retain usage under beneath the towers. There will be no acquisition of land for the transmission tower footing, allowing affected individuals to maintain ownership for residential and cultivation purposes, provided they adhere to vertical clearance requirements. Details of the entitlement matrix is provided in chapter-6.

Type of Loss	Entitlements
Loss of Agricultural Land for tower footings	<ul style="list-style-type: none"> • One-time cash compensation to the legal landowners. • Mouza rate of land determined by Sub-registry Office. • Compensation will be paid before starting of construction work. • Landowner will gain his ownership of the land underneath the tower and can cultivate.
Loss of Crops	<ul style="list-style-type: none"> • One time cash compensation for crops of the cultivated land and the number of seasons lost to the farmer • Estimated market value at harvest, to be determined by Department of Agricultural Marketing at district level • Cultivator will retain the crops and plants.
Loss of Trees	<ul style="list-style-type: none"> • Cash compensation at the rate of Department of Forest (DoF) based on the type, size etc.
Additional Assistance to Female-Headed Households, Vulnerable Households and below the poverty line	One-time grant in addition to other compensations.
Temporary impact during construction	<ul style="list-style-type: none"> • The temporary Impacts will be identified through special survey by BCRECL as per request from impacted population.

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- | | |
|--|---|
| | <ul style="list-style-type: none">• The entitlements will be approved by BCRECL as per the entitlement matrix policy. |
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The Grievance Redress Mechanism (GRM) for the solar power plant and transmission line project operates on a two-tier system to ensure swift and thorough resolution of grievances. This structure is designed to efficiently handle concerns from stakeholders impacted by the project. Grievance boxes have been established both within the project office, project site and at the community level. This allows for convenient and confidential submission of grievances, ensuring that individuals can voice their concerns without any barriers. A list of committees is provided in Annex-D

The total estimated budget for ARAP implementation is fifteen million six hundred seven thousand five hundred ninety-eight point ninety-five Bangladeshi Taka (15,607,598.95BDT). This budget includes compensation for use of land, crops and trees along with other benefits. The detail budget for this ARAP is in chapter-8 and the relevant calculation is provided in Annex-E, F & G.

The RAP implementation schedule is prepared which requires 2 years (i.e., 24 months) excluding a margin of 6 months to redress any unforeseen situations or circumstances. The schedule will be finalized considering possible changes of events of the project.

The Monitoring and Evaluation (M&E) will assist the BCRECL to take remedial measures of any implementation problems to ensure the achievement of targets within scheduled time. Besides, an evaluation process will also enable BCRECL to identify lapses, procedural weaknesses, policy inadequacies and institutional problems, and take remedial measures to achieve the desired goals and objectives of RAP. Monitoring will be carried out both internally and externally.

1 INTRODUCTION

1.1 Project Overview

Electricity is an inevitable part for diversified development of our country. Understanding the importance of electricity, The Government sets a vision to make electricity available for all, which will help to aiming to alleviate poverty and improve socio- economic condition by 2021. In order to fulfill the vision, “the power system master plan (PSMP) 2016 was adopted in 2016, aims to assist Bangladesh into formulating an extensive energy and power development plan up to the year of 2041. The PSMP plan has set five viewpoints of PSMP. One of the major viewpoints of PSMP is the efficient development and utilization of domestic natural resources (gas and coal). Another important viewpoint is maximization of green energy and promotion of its introduction, construction of a robust and high-quality power network. The PSMP will help to achieve sustainable Development Goals.” In line with these viewpoints, Bangladesh-China Renewable Energy Company (Pvt.) Limited (BCRECL), based in Dhaka, intends to develop and operate a 68 MW Solar Photovoltaics Power Plant Project. The proposed site for the solar project is located north of the western end of the Jamuna Multipurpose Bridge, adjacent to the river course on the floodplain of the Jamuna River to the east. The solar power plant will be set up on 214 acres of land owned by the government institution, Bangladesh Bridge Authority (BBA). No agricultural activities have been practiced at the proposed project site due to its barren nature. To facilitate power evacuation, a 132kV transmission line will be installed, connecting the solar power plant to the Sheyalkol substation, which is approximately 10.3 km away. Therefore, an additional 1.53 acres of private land will be required for the tower footings necessary for the power evacuation infrastructure. The private land required for tower footings will be acquired in accordance with the national law, the Electricity Act 2018, and the Electricity Rules 2020. Land acquisition for tower footings allows landowners to reclaim and reuse the land after the transmission line tower footing construction, as long as no damage is caused to the tower or related infrastructure.

The project, Sirajganj 68 MW Solar Park Project was initiated by BCRECL at the end of 2018. The feasibility study report was completed by June 2019, followed by a proposal to lease 214 acres of land from Bangladesh Bridge Authority (BBA) in August 2019. After approval from the Ministry of Land, the Land Lease Agreement for a 30-year tenure was signed on January 2021 for Solar Power Plant.

The Department of Environment (DoE) required an Initial Environmental Examination (IEE) for the project. A consultant team was appointed on March 2021 to prepare the IEE, which was submitted to DoE and subsequently cleared in July 2022.

Simultaneously, EPC Contractor was floated in July 2021. After evaluation, the EPC Contract was signed on February 2022, with the contract becoming effective on 07 July 2022. The EPC Contractor completed the project design in November 2022. Thereafter, construction commenced immediately in the project area.

After the design but before the construction of the transmission line tower footings, BCRECL approached the Deputy Commissioner (DC) of Sirajganj for the acquisition of land for tower footings in accordance with the requirements of the Electricity Act 2020 and Rules 2020. Accordingly, under Section 6, Subsection 2 of the Electricity Act 2018 and Section 3, Subsection 7 of the Electricity Rules 2020, the DC office circulated a public notice in August 2022 mentioning the span of the right-of-way (RoW). Through this public notice, all people around the RoW vicinity were informed that the loss due to the tower footings would be compensated according to the prescribed amount determined by law and were requested to assist with such initiatives for the sake of public interest.

Later on, it was identified that 33 tower footings would need to be placed on private land. According to the Electricity Rules 2020, under Section 10, Subsection 4 (Cha), all individual private landowners or title landowners (concerned persons) were notified by the DC in May 2023. A list of notices to

landowners has given in annex-I. According to the Electricity Act 2018, Section 6, Subsection 3, the concerned persons or local authorities can appeal to the government if they are unhappy with the decision. No appeal has been made as of now after serving the notice in May 2023, signifying the consent of the affected private landowners. For the title holders, the notice issued in May 2023 is considered as the cut-off date, since a census was conducted from December 27, 2023, to January 4, 2024, based on the list of that notice receivers.

Regarding project financing, informal discussions with IDCOL and other potential lenders started in early 2023. IDCOL officially engaged around October 2023 and outlined their requirements. Although the project area is barren with no assumed livelihood impacts, the construction of the tower footings will impact private land, causing the loss of assets such as damage to crops and trees, and temporary livelihood impacts, as the land can be reclaimed and reused after construction. Considering the overall potential impacts of the proposed project, the consultant team was tasked with preparing an abbreviated resettlement action plan (ARAP) in accordance with World Bank OP 4.12 guidelines.

1.2 Solar Power Park

The proposed site for the solar project requires 214 acres of leased land located north of the western end of the Jamuna Multipurpose Bridge. The land is government land (lease from Bangladesh Bridge Authority (BBA) procured for the establishment of solar park through a lease agreement for a tenure of 30 years. This land was previously barren, with no agricultural activities taking place before the lease was acquired. Therefore, there will be no impact on existing agricultural livelihoods. As a result, there will be no involuntary land acquisition and resettlement issues which is not applicable of WB's OP 4.12.

On the northern side of the solar park project boundary, Jogtola village is located. During project design, this village was excluded to avoid potential resettlement and the livelihoods impacts. The total area of the village is approximately 5 acres, where 50 to 60 families reside. Most of them are fishermen who catch fish from the nearest canal and river. None of them were dependent on the project land since the land was barren.

Figure 1-1: Village and Road Conditions



Source: Field Study Team, April 2021

Furthermore, a 520-meter road was constructed to connect the solar park with the main road. Previously, villagers had to travel considerably longer distance to reach the main road. Newly constructed roads will help villagers reduce the distance they used to travel before. A boundary was constructed to safeguard the villagers' safety and security from being disrupted by the construction and operation activities of the project.

1.3 Transmission Line Route

The generated power from this Solar Power Plant will be evacuated to the existing 132kV grid Substation of PGCB located at Sheyalkol, Sirajganj. This 132kV Substation is approximately 10.3 km far from the Solar Power Plant Project. To establish the power evacuation facility, a 132kV transmission line will be installed connecting from the solar power plant to Sheyalkol. The proposed transmission line will pass through three unions: Saidabad, Kalia Haripur, and Sheyalkol in Sirajganj District. There will be a total of 23 angle towers and 18 suspension towers, making the approximate total number of towers around 41.

The installation of 33 towers will lead to a temporary loss of 1.53 acres of private land. Of these, 1.37 acres of 28 towers were used for agricultural cultivation. Additionally, 0.154 acres from 5 towers will be affected, with 3 towers situated on homesteads and 2 towers on viti land where there were no cultivation activities. Rest of 8 towers will be under the government land which is barren.

There is a total of 41 towers involved in the transmission lines, with the following distribution:

- Government land: 8 towers (barren land)
- Private land: 33 towers (Agriculture, Homestead² and Viti land³)

According to the Electricity Act 2018 and Rules 2020, compensation for transmission line tower footings is paid through the DC office as prescribed by law. BCRECL has deposited a total of BDT 11,412,416 into the DC's account in two installments, one in July 2023 and the other in December 2023. However, compensation for the tower footing land is yet to be completed. The DC office will process the payment to the affected landowners for the tower footing land accordingly.

Crops and trees will be lost due to the clearance of the transmission line and the tower footing. According to Schedule-2 of the Electricity Rules 2020, there needs to be a clear area of 14 meters on each side of the centerline of the transmission line. This total cleared width would be 28 meters (14 meters on the left side+14 meters on the right side). As a result, a total of 11278kg crops and 3,021⁴ trees of various sizes were impacted or removed. According to the Electricity Act 2018 and Rules 2020, licensee, here BCRECL, can directly pay the compensation for the lost crops and trees during the clearance and construction of the tower footing. The BCRECL has started compensation for the lost crops and trees from January 2024. As of May 2024, all affected persons losing crops and trees have been compensated amounting BDT 436,470 for crop losses and BDT 1,591,630 for tree cutting and trimming. As prescribed by the law, compensation for the lost crops and trees was assessed according to market values provided by the Department of Agricultural Marketing and the Department of Forest, respectively.

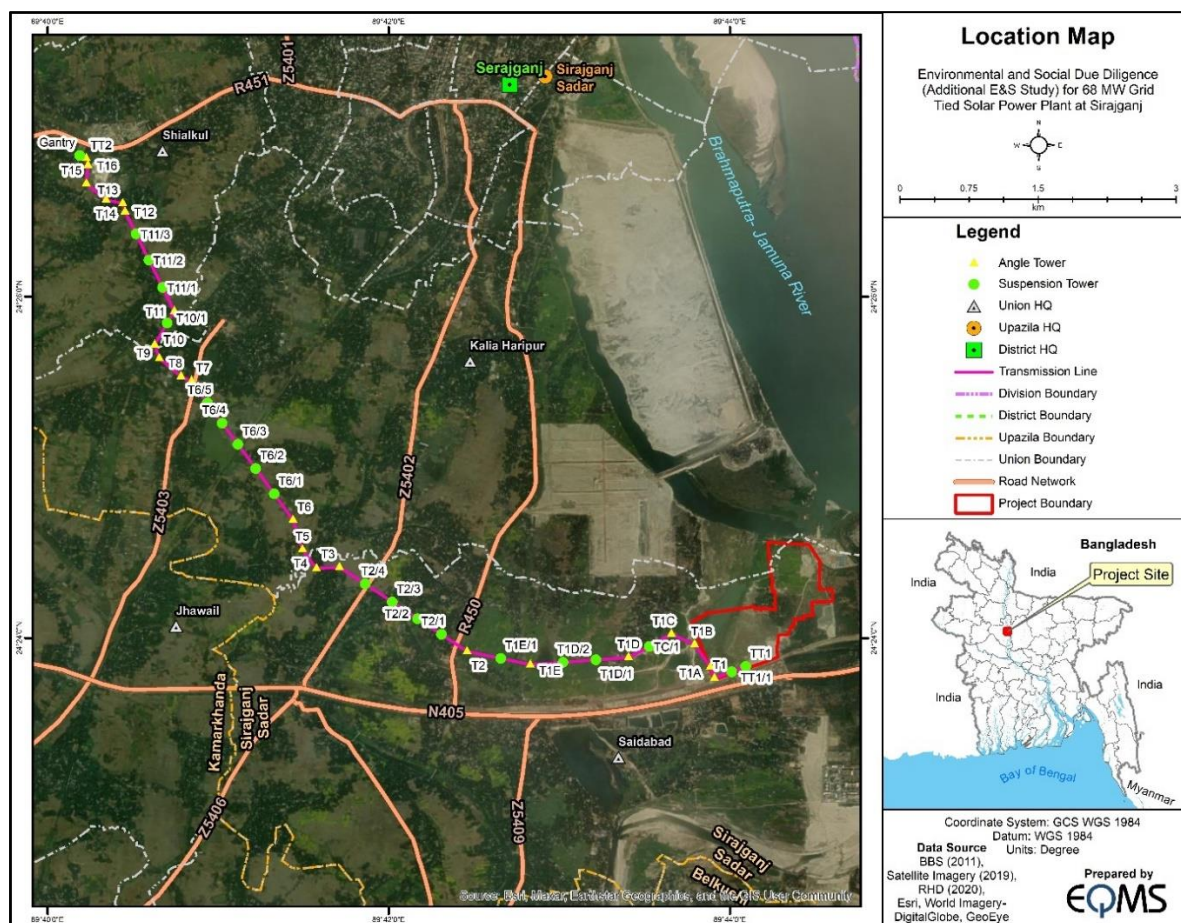
The location map of the transmission line has been presented in **Figure 1-2**.

2 Homestead refers the land where any form of structures found or can be built without any earth filing.

3 Viti land refers that comparatively high land not fully prepared for constructing any form of structures.

4 1,094 large trees, 46 medium trees, 1,807 small trees, and 74 bamboo trees

Figure 1-2: The Location Map Solar Power Project and Transmission Line



1.4 Objectives of the ARAP

This ARAP report has been prepared to (i) identify and mitigate the impacts of the project; (ii) comply with the national laws and safeguard requirements of the World Bank OP 4.12-Involuntary Resettlement (iii) ensure that appropriate measures are in place to make compensation to the households affected by the project intervention and implement other mitigation measures as applicable.

1.5 Approach Methodology

The ARAP was developed using a participatory method to gather data and information. This involved employing tools such as land plot identification and ownership verification, conducting census and socio-economic surveys of affected households, organizing consultation meetings, and facilitating focus group discussions (FGDs). The data collection utilized structured questionnaires and checklists. The process was overseen by a team of skilled professionals supported by field staff who conducted the surveys and consultations.

1.6 Census and Socioeconomic Survey on the Affected Households

Census and socioeconomic survey were conducted for landowners who received DC's notice in May 2023 under Section 10, Subsection 4 (Cha). A total of 86 landowners were identified. The list of landowners is given in Annex-H. However, only 74 of them were located and surveyed successfully. The remaining 12 landowners were not found during the census, and their residential locations could

not be traced. Community sources indicated that some of these landowners resided outside of the project area.

The identification of affected landowners was based on the loss of land for the project as determined by khatian and the census survey. Enumerators visited households individually and collected information directly from the household heads or their senior representatives. The census took place from December 27, 2023, to January 4, 2024, utilizing a structured questionnaire to gather necessary data.

1.6.1 Consultation Meetings

The consultation meeting process was carried out simultaneously during the census and socio-economic survey. In this regard, the consultations were conducted with the local union member, affected persons, local communities, women group and the within the occupation and gender-based groups through interviews and FGDs. A total of two (2) Key Informant Interview and three (3) FGDs were conducted at different locations of the project areas with consist of 25 peoples including Union members, landowners, female group, and the local communities.

1.7 Summary of the Impacts

A total of 86 households will be affected by the project due to the solar power park and construction of the transmission lines. The tower footings for laying transmission lines require land compensation as per Electricity Rules 2020 even if land for tower footings will not be acquired. Compensation has been provided for standing trees under RoW which require felling before laying the transmission lines. During construction, crops are affected, and have been compensated according to the entitlement proposed in this ARAP. The details of the impact have been illustrated in the following chapters. The below **Table 1-1** shows the summary impact by the project.

Table 1-1: Summary of the Impacts for Solar Power Park and Transmission Line

Sl. No.	Category	Unit	Total
Solar Power Park			
A1	Land Required (government owned)	Acres	214
A2	Losses of Crop Production	Kg	0
A3	Losses of Trees	No.	0
A4	Affected Households	No.	0
Transmission Line and Tower Footing			
B1	Land Required (Privately owned)	Acres	1.53
B2	Losses of Crop Production during the construction of the Towers	Kg	11278
B3	Losses of Trees	No.	3021
B4	Affected Households	No.	86

1.8 Audit of Compensation

In May 2024, the consultant team from BCRECL visited both the proposed project site, tower footing locations and the DC offices to inquire about the status of compensation received for the losses. Summary of the audit is given below **Table 1-2**. Details of audit of compensation for the payments made to individuals or entities has been given to the Annex-J.

Table 1-2: Summary of Audit of Compensation for Tower Footing

Sl. No.	Category	Status
1	Land for Solar Park	In January 2021, an MoU was signed with the Bangladesh Bridge Authority (BBA). According to the lease agreement, the land price was set at 500 BDT per decimal, totaling 10,700,000.00 BDT for BBA, with a 10% compounded increment every five years.
2	Land For Tower Footing	BCRECL has deposited a total of BDT 11,412,416 into the DC's account in two installments, one in July 2023 and the other in December 2023. However, compensation for the tower footing land from the DC office has not yet been completed.
3	Losses of Crops and Trees	The BCRECL has paid the amount of BDT 436,470 for crop losses and BDT 1,591,630 for tree cutting and trimming in May 2024.

2 LEGISLATIVE REGULATION AND POLICY CONSIDERATION

The legal and policy framework of land use for the transmission line and tower footing for the project will be based on: (i) the Electricity Act of 2018 and Electricity Rules 2020, amendment 2022; (ii) World Bank’s OP 4.12 - Involuntary Resettlement.

2.1 The Electricity Act, 2018 and Electricity Rules, 2020

The Electricity Act enacted on 12th February 2018 repealed the former Electricity Act of 1910 with amendments to develop and reform the sectors of power generation, transmission, supply and distribution and for better service delivery to consumers and to meet the increasing demand for electricity. The Act specifies the role of licensees⁵ in the supply of energy and construction of lines for energy transmission. The Government has also published the Electricity Rules 2020 on November 4, 2020, amendment February 10, 2022. The key features of the Act and rules are given below:

Table 2-1: Key Features of the Electricity Act, 2018 and Electricity Rules 2020

Key Features	Descriptions
The Electricity Act 2018	
Informed Consent	Section 6 (1) states “If a licensee is allowed to install transmission line within or beyond their designated area, they can carry out the necessary civil works. They must inform the concerned person or local authority before starting the work to supply electricity to the area.” Section 13 states “For laying transmission lines or doing civil works, the licensee has the right of way over the land and the space above or below it. However, the licensee must inform the landowner in writing within a reasonable time before starting the work.”
Appeal against the Civil Works of the Transmission line	6 (3) the concerned person or local authority can appeal to the Government if they are unhappy with the decision. The licensee can proceed with the civil works only after the appeal is resolved.
Compensation	Section 13 (1) states “If any damage, harm, or inconvenience is caused during civil works under this Act, the licensee must pay compensation to the affected person or landowner, as prescribed by the rules.”
Acquisition of Land	Section 14 (2) states “If a licensed private company needs land to build a transmission line to a power station, sub-station, or grid sub-station, it can purchase from the owner or acquire the land following existing land acquisition laws and regulations.”
The Electricity Rules 2020	
Avoid, Minimize or Compensate	Section 10 (1), “The licensee shall cause as little damage as possible to crops, plants, land, or infrastructure during the execution of works or construction of transmission tower and shall compensate for any such damage.”

⁵ According to the Electricity Act 2018, “any person to whom a license is issued under the Commission Act for power generation, transmission, distribution or supply.”

Key Features	Descriptions
	Section 10 (5), “In the case of transmission lines, markets, densely populated areas, educational institutions, and religious institutions should be avoided unless absolutely necessary.”
Compensation	<p>Section 10 (2), if any immovable property is damaged by the licensee during the execution of the work or the construction of a transmission tower, the licensee will compensate the affected person or organization. Furthermore, as per Section 10 (3), if there is pucca infrastructure, the licensee will obtain a price assessment report from the Public Works Department. In the case of crops, the report will be obtained from the Agriculture Department, and for damage to trees, the report will be obtained from the Forest Department. Based on these reports, the licensee will determine the reasonable compensation with the approval of the appropriate authority.</p> <p>Section 10 (4), “If any immovable property is damaged by the licensee during the execution of the work or the construction of an transmission tower, the affected person or organization must be compensated according to the DC’s assessed value (Section 10 (4) of amendment 2022).”</p>
Landowner Rights After Transmission Tower Construction	Section 10 (6), “After the construction of the transmission tower, the landowner can use the land as long as no damage is caused to the transmission tower or related infrastructure.”
Notice	<p>Sectoin 6 (2) of Electricity Act 2018 and the Section 3 (7) of Electricity Rules 2020, “In case of doing civil works on, below, along or across road or any part thereof, railway, canal or waterway or underground, the licensee shall have to give written notice to the person concerned or the local authority.”</p> <p>Section 4 (Cha) of 10, “A notice will be served to the landowners according to the Annexure- (Ka-2) following electricity rule 2020, amendment 2022 by DC office after finalization of licensee has been formally approved for tower construction. Additionally, an award book will be prepared to address the claims of all individuals with a known interest in the property.”</p> <p>According to the award book prepared under clause (cha) of the District Commissioner, the interests concerned Immediately on payment of compensation to the person or persons, as the case may be give notice as per Annexure- (Ka-3) (Section 10 4 (cha) of amendment 2022)</p>

2.2 World Bank Environmental and Social Standards

2.2.1 OP 4.12 - Involuntary Resettlement

The requirements for World Bank OP 4.12 are as follows:

Displaced persons

Measures should ensure that the displaced persons are:

- Informed about their options and rights pertaining to resettlement
- Consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives
- Provided prompt and effective compensation at full replacement cost for loss of assets attributable directly to the project.

Remedial actions/measures

If the impacts include physical relocation, the World Bank requires that the displaced persons are:

- Provided assistance (such as moving allowances) during relocation
- Provided with residential housing, or housing sites, or as required, agricultural sites for which a combination of productive potential, locational advantages, and other factors is at least equivalent to the advantages of the old site
- Offered support after displacement, for a transition period, based on a reasonable estimate of the time likely to be needed to restore their livelihood and standards of living
- Provided with development assistance (such as land preparation, credit facilities, training, or job opportunities) in addition to compensation measures

Replacement costs

- For agricultural land – it is the pre-project or pre-displacement, whichever is higher, market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of any registration and transfer taxes.
- For land in urban areas – it is the pre-displacement market value of land of equal size and use, with similar or improved public infrastructure facilities and services and located in the vicinity of the affected land, plus the cost of any registration and transfer taxes.
- For houses and other structures – it is the market cost of the materials to build a replacement structure with an area and quality similar to or better than those of the affected structure, plus the cost of transporting building materials to the construction site, plus the cost of any labour and contractors' fees, plus the cost of registration and transfer taxes.

Valuation

- Valuation does not take into account depreciation of structures and assets
- For losses that cannot easily be valued or compensated for in monetary terms e.g. access to public services, customers, and suppliers or to fishing, grazing or forest areas, attempts are made to establish access to equivalent and culturally acceptable resources and earning opportunities.
- Where domestic law does not meet the standard of compensation at full replacement cost, compensation under domestic law is supplemented by additional measures necessary to meet the replacement cost standard.

Vulnerable groups

- Special attention should be paid to vulnerable groups i.e.
 - Below poverty datum line
 - The landless
 - The elderly
 - Women and children
 - Indigenous people
 - Ethnic minorities.

2.3 Eligibility and Cut-Off-Date

Eligibility to receive compensation will be limited by “cut-off” date. As there is no non-title holder in this project, there will be one cut-off date in this Project. The cut-off date for legal landowners only to be the date when the Deputy Commissioner served notice under section 10, subsection 4 (Cha) of the Electricity Rules 2020. With this notice individual landowners were informed describing his/her amount of affected land.

3 SCOPE OF IMPACTS FOR THE PROJECT

3.1 Solar Power Park

The proposed site for the solar project requires 214 acres. The land is government land (lease from Bangladesh Bridge Authority (BBA) procured for the establishment of solar park through a lease agreement for a tenure of 30 years. Since the land was barren, there was no impact found.

3.2 Impact on Tower Footing Land

The planned installation of towers spans different types of land: 8 will be established on government land categorized as barren, while 33 will be located on private land which is 1.53 acres. The private land types are agricultural, homestead, and viti. Detailed information about these impacts is provided in Annex-A.

According to the Electricity Act 2018 and Rules 2020, compensation for transmission line tower footings is paid through the DC office as prescribed by law. BCRECL has deposited a total of BDT 11,412,416 into the DC's account in two installments, one in July 2023 and the other in December 2023. However, compensation for the tower footing land is yet to be completed. The DC office will process the payment to the affected landowners for the tower footing land accordingly.

3.3 Impact on Crops and Trees

The project intervention will affect 1.37 acres of privately owned land to cultivate paddy, mustard, and jute crops in the affected area. These crops collectively yielded a total harvest of 11,278 Kg. In total, 3021 trees across various sizes will be cut down to clear the right-of-way (ROW) for the transmission line installation.

The BCRECL has started compensation for the lost crops and trees from January 2024. As of May 2024, all affected persons losing crops and trees have been compensated amounting BDT 436,470 for crop losses and BDT 1,591,630 for tree cutting and trimming. As prescribed by the law, compensation for the lost crops and trees was assessed according to market values provided by the Department of Agricultural Marketing and the Department of Forest, respectively. Detailed information about this compensation is provided in Annex-F & G.

4 SOCIO-ECONOMIC OF THE AFFECTED HOUSEHOLD

The socio-economic condition for the AHs will provide sound reference and assess the probable socio-economic impact of the proposed interventions for tower footing. The socio-economic baseline scenario describes the socio-economic characteristics of the proposed project area based on primary data which was collected through survey during the period of 27th December 2023 to 04th January 2024. The socio-economic characteristics include demography, household size, education, occupation, housing, employment opportunity, access to water and sanitation status, etc. Details of the analysis have been given in Annex-B.

4.1 Demography of Affected Household

In the study area, 74 affected households were found with a total population of 365 that might be influenced by the implementation of the proposed project. The average household size is 4.8 which is higher than the national average size⁶ (4.26) according to the HIES 2022, Bangladesh. The demography of the affected households is shown in the following **Table 4-1**.

Table 4-1: Demography of the AHs

Category	Total
Number of total Affected Households (AHs)	74
Number of Projects Affected Populations (PAPs)	365
Average HHs Size	4.8

Source: SES, 2023-24

4.2 Households Head of AHs

According to the socioeconomic survey, it was found that only 2 (2.7%) of the AHs are headed by females, whereas 72 (97.3%) are headed by male members. This scenario represents that most of the families are male dominated, which is the as usual panorama of our country.

4.3 Age Distribution of the PAPs

Age-sex distribution of the PAPs was measured during the survey. It was found that population density increases respectively from the age group of 1-59. According to the age band, the most prominent group is 30-59. The number of PAPs steadily decreases with increasing age limit above 60.

4.4 Sex Profile of PAPs

According to the socioeconomic survey, it was found that the percentage of male populations are greater than female in the project area. At project area total of 365 population will be affected where 52.9% (193) are male and 47.1% (172) are female.

4.5 Marital Status of PAPs

The marital status of the people from surveyed households are distributed by married, unmarried and widow/widower, separated person during the survey. Among 365 people a total 215 people were found married, 144 people unmarried, 3 widow, 2 Divorced and 1 separated person.

4.6 Religion of AHs

According to the socioeconomic survey, the study area is dominated by the Muslim community constituting seventy-three (73) households. The only one (1) household found as Hindu religion beliefs.

⁶ Household Income and Expenditure Survey 2022

4.7 Education of PAPs

The figure demonstrates that primary and secondary level enrolment is high in the area which is 39.7% and 25.8%. Furthermore, illiteracy is high among male population. HH members whose are not going to school are counted in this analysis.

4.8 Economy and Employment

4.8.1 Employment of PAPs

Agriculture, crop cultivation, fisheries, direct farming, sharecropping, agricultural laborers, and so on, are the most common sources of employment in the study area. According to the survey, about 9.32% of the total population is involved in farming, 7.95% is in service, 7.95% is in commercial business, 25.75% is doing unpaid work at house. Among the total population, about 27.67% of the population is students and 2.74% are looking for new opportunities. On the other hand, 13.97% are dependent on the other income earners of the households.

4.8.2 Income of AHs

The total affected households have been divided into 7 sections based on income of the all-household members. The level below from BDT 360,001 which is classified as vulnerable group⁷ in terms of their yearly income. A total of 48.65% HHs have been located to be in the vulnerable group.

4.9 Vulnerability

Vulnerable households have been defined as (i) headed by woman or woman with dependents; (ii) headed by elderly/disabled people; (iii) households that are below poverty line and iv) households of indigenous population or ethnic minority.

4.9.1 Women Headed Household

Based on the census and socioeconomic survey, it was found that there are two (02) households headed by women, which are categorized as vulnerable households.

4.9.2 Headed by elderly/disabled people

The census and socioeconomic survey indicate that there are nine (09) households in the study area where the head of the household is over 65 years old, classifying them as elderly members of their families.

4.9.3 Households belonging Below Poverty Line

Based on the census and socioeconomic survey it was found that 36 households (48.65%) of them are found economically belonging to the below poverty line.

⁷ According to World Bank, 2022 international poverty line is \$2.15 which is BDT 237.57 (BDT 110.5 per USD during the study) per person per day. Considering national average family size 4.5 the annual income ranges any HH having below BDT 384,871.5 will consider as vulnerable HH.

5 CONSULTATION, PARTICIPATION AND DISCLOSURE

5.1 Stakeholder Consultations

Interviews and Focus group discussions (FGD) were the main methods for the consultations with different stakeholders. The BCRECL consultant conducted interviews and FGDs in the field to get the information and insights about the projects' positive and negative impacts. Most of the respondents express positive perceptions towards the project. It has been revealed by FGD that community people believe this proposed project will enhance their quality of life by creating employment opportunities, business generation, medical services etc. The consultant team of BCRECL also notified participants that the DC office will pay the compensation for land use related to tower footing, whereas compensation for tree loss and crop damage will be paid by BCRECL. Compensation will be paid following the rules of electricity 2020, subsequently amendment 2022. Attendance sheet and photographs has been provided as Annex C. Details of key Informant Interview is given below **Table 5-1**.

Table 5-1: Consultation with Local Peoples and Ward Member

Stakeholder Details	Comments
1. Mithu Landowner Kandapara 2. Mst. Shahana Landowner Soydabad Union	<ul style="list-style-type: none"> Land was obtained on a Temporary basis. Approximate 0.05 acres were acquired by the project authority. Prior to commencing construction of the tower footing work, the contractor informed them. Expecting the proper loss of compensation. There will be job opportunities for the local community, leading to increased local development.
1. Md. Jahangir Alam Ward No. 1 Soydabad Union	<ul style="list-style-type: none"> Aware that a project is implemented in this union. It is a highly commendable effort that contributes to the progress and advancement of both the local community and the nation as a whole. For large-scale development, the impact is expected to be minor, believe there will be negligible social consequences at any stage of its implementation. Environmental problems such as air and noise pollution may become accepted by the local community. Though solar power plants have no air or noise pollution except during the construction phase. There is no potential for conflict as local people maintain extremely amicable relations with each other. Local residents seeking opportunities, with both men and women open to any employment opportunities.

5.1.1 Focus Group Discussion (FGD)

Consultant team of BCRECL held focus group discussions with landowners, community people and women group. The focus group discussions were conducted as part of the consultation. The discussions were designed to gather information from the participants in regard to the following outcomes:

- To understand about their general perception and the status of their awareness about the proposed project
- To know about their expectations from the project proponent
- To understand the potential threats and benefits associated with this project.

5.1.1.1 Summary of Special Concerns of FGD

FGD No.	Date	Location	Type of Participants	Number of Participants
1.	28/12/2023	Soydabad, Sirajganj	Landowner in Tower Footing Area	7
2.	06/12/2023	Purbo Mohonpur	Female Group	8
3.	07/12/2023	Soydabad, Sirajganj	Local Community	8

Landowners

- Landowners and the community people know about the project at the initial level that a solar power plant is going to be set up. They welcome the proposed project and agree to support the project.
- The major land use in the area is under agriculture followed by homestead land and some of fellow land.
- The major livelihood activity of the community is agriculture. They generally practice paddy, jute, and Robi crops.
- The major livestock reared by the community are cows, goats, ducks, and poultry.
- Land price in the project area varies according to location, size and area.
- They were informed before the use of the land for the construction of the tower footing.
- Expecting to receive the proper compensation of losses.
- Employment opportunities will be created according to their skills and experiences.

Women Group

- Women reported assisting in farming. They were also involved in livestock rearing.
- The daily activities start from early morning in cooking, cleaning, taking care of children, etc.
- The men are the household head. They always discuss with the other family members the decisions. Women can participate in the discussion meeting.
- In the case of finance and access to banking, the women have a bank account in their name and operating by them.
- There was no Gender Based Violence (GBV) reported.
- There will be reduced instances of power outages during peak hours.

Local Community

- Community people in the project areas were adequately sensitized on matters relating to the project background.
- People highly appreciated and welcomed the proposed projects.
- Almost everybody said that they will support the project as this project will create employment opportunities and infrastructural development.
- All advised the consultants to take precautions in the environmental and social mitigations to avoid the various impacts anticipated during the construction and operation stages of the project.
- Most of the participants believed that infrastructural development would be accelerated. Secondly, the majority also believed that basic services and business opportunity will also be increased.

6 ENTITLEMENT MATRIX

This section presents an entitlement matrix that provides for compensation and other R&R assistance for different losses of the affected persons depending on the type and scope of the losses, its impact, and status of ownership to the affected assets and the social and economic vulnerability of the affected persons. The land use for the project as well as trees, and crops that would be affected by impacts imposed on land use during the construction of the transmission towers and lines will be compensated. Furthermore, the landowners will be allowed to continue to use the land falling within the RoW of the transmission lines and under the transmission towers (except for planting of tall trees) after the completion of construction work. In addition, since there are no land acquisitions for transmission lines, people can still retain their ownership of the land, and use it for residential and cultivation purposes provided the vertical clearance requirement is maintained.

Compensation for loss of agricultural land for tower footings will be paid as per Electricity Rules 2020, amendment 2022. The Entitlement Matrix identifies the categories of impact and shows the entitlements for each type of loss. The following **Table 6-1** matrix describes the units of entitlements for compensating the loss of land and crops.

Table 6-1: Entitlement Matrix

Person Entitled	Entitlements	Details	Responsibility
Loss Item 1: Loss of Agricultural Land for tower footings			
Legal owner(s), as determined by DC	Cash compensation for use of land	<ul style="list-style-type: none"> • Prior notice to the affected persons. • One-time cash compensation to the legal landowners. • Mouza rate of land determined by Sub-registry Office. • Compensation will be paid before starting of construction work. • Landowner will gain his ownership of the land underneath the tower and can cultivate. 	<ul style="list-style-type: none"> • DC will pay all legal owners. • PMU is responsible for overall execution and coordination • PMU/Contractor to inform PAPs of ARAP policies, assist in updating records.
Loss Item 2: Loss of Crops			
Cultivator (person who planted the crop) whether owner, lease holder, tenant, sharecropper, etc.	<ul style="list-style-type: none"> • Cash compensation for the damage of crops • Assistance for restoration of the land to its previous state or better level. 	<ul style="list-style-type: none"> • Advance notice to the affected person to cultivated crops. • One time cash compensation for crops of the cultivated land and the number of seasons lost to the farmer • Estimated market value at harvest, to be determined by Department of Agricultural Marketing at district level • Cultivators will retain the crops and plants. • 	<ul style="list-style-type: none"> • BCRECL • PMU • Contractor
Loss Item 3: Loss of Trees			

Abbreviated Resettlement Action Plan (ARAP) of Sirajganj 68 MW Solar Park Project

Person Entitled	Entitlements	Details	Responsibility
<ul style="list-style-type: none"> • Legal owner/title holders • Socially recognized owners of trees grown on public or other land, as identified by census 	Cash compensation at replacement cost and R&R assistance	<ul style="list-style-type: none"> • Cash compensation at the rate of Department of Forest (DoF) according to type, and size. • Prior advance notice to the affected persons to cut down standing trees and the right to possess the timber and any other produce. • Tree owners allow to take away salvageable tree free of cost and will clear the ROW of transmission line within one week of receiving the compensation. • Linkages with relevant agencies which can support tree planting programs. • Applicable to all trees and plants located on transmission route at cut-off dates. 	<ul style="list-style-type: none"> • BCRECL • PMU • Contractor
Loss Item 4: Assistance to Vulnerable Households			
Households headed by women, elderly/disabled and below poverty line	BDT 10,000 as one-time grant in addition to other compensations.	The EPs will be identified as per the census and income and livelihood support will be provided by BCRECL	<ul style="list-style-type: none"> • BCRECL • PMU • Contractor
Loss Item 6: Temporary Impact during Construction			
Households/persons and/ or community affected by construction impacts	<ul style="list-style-type: none"> • The contractor shall bear the cost of any impact on structure or land or crops due to movement of machinery and in connection with collection and transportation of borrowed materials. 	<ul style="list-style-type: none"> • The temporary Impacts will be identified through special survey by BCRECL as per request from impacted population. • The entitlements will be approved by BCRECL as per the entitlement matrix policy. 	<ul style="list-style-type: none"> • BCRECL • PMU • Contractor

Abbreviated Resettlement Action Plan (ARAP) of Sirajganj 68 MW Solar Park Project

Person Entitled	Entitlements	Details	Responsibility
	<ul style="list-style-type: none"> • All temporary use of lands outside during tower construction to be through written approval of the landowner • Land will be returned to owner rehabilitated to original preferably better standard. 		

7 GRIEVANCE MECHANISM

7.1 Scope and Applicability

This procedure is applicable to the pre-construction, construction, operation, and maintenance and decommissioning activities during the solar project. This Grievance Mechanism deals with grievances from communities and local stakeholders at site level and in neighboring areas.

- The Grievance Mechanism is open to grievances from individuals as well as from collective groups and stakeholders. Collective grievances shall be handled as fairly and effectively as the individuals' grievances, prioritizing processes that seek consensus and reconciliation through engagement and dialogue and which will respect local context.
- The Grievance Mechanism is applicable from the pre-construction phase, construction phase, operations phase and maintenance phase. It should be fit for purpose and scaled to the impacts and the associated risk arising. This mechanism can always be expanded or updated as an operation grows to consider complaint profile variation over time.

7.2 Principles

Participation in the grievance mechanism is voluntary and free. When required it allows for anonymous grievances. The main principles on which the grievance mechanism is based are:

- **Proportionality:** a mechanism scaled to the potential risks and adverse impacts that the Project may impose on affected communities.
- **Cultural appropriateness:** a mechanism designed in a culturally appropriate manner.
- **Accessibility:** a clear and understandable mechanism that is accessible to all segments of the affected communities at no cost to them. Grievances may be received face-to-face, via telephone, email or post.
- **Transparency and accountability:** a mechanism that operates in a transparent way and that is accountable to all stakeholders.
- **Appropriate protection:** a mechanism that prevents retribution and does not impede access to other remedies, including public judicial or non-judicial mechanisms.

The grievance mechanism shall not impede access to the country's judicial or administrative remedies. Complainants and affected persons are free to approach a court of law at any time, independently of the project level grievance mechanism.

7.3 Level of Grievance Redress Mechanism

The Grievance Redress Mechanism (GRM) for the solar power plant and transmission line project operates on a two-tier system to ensure swift and thorough resolution of grievances. This structure is designed to efficiently handle concerns from stakeholders impacted by the project.

Level of GRM	Roles of the Level
Site Level	At the forefront, the Site-Level GRM focuses on addressing grievances originating within the project's immediate vicinity. Staffed by dedicated personnel, this tier serves as the primary point of contact for stakeholders such as local communities, employees, and contractors. Grievances can be submitted through various channels, including dedicated hotlines and physical grievance boxes strategically placed within the project area.

<p>PMU (Project Management Unit)</p>	<p>The PMU Level GRM serves as the secondary tier, overseeing grievance resolution processes that extend beyond the scope of the site level. This level collaborates with higher management and regulatory bodies to address more complex grievances or those requiring broader coordination. It ensures that all stakeholder concerns are appropriately reviewed and resolved, contributing to the project's overall success and community satisfaction.</p>
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7.4 Grievance Redress Committee

A site and PMU level GRC has developed and approved for redressing all cases of grievances initially. All grievances at site level are to be redressed at this stage. The representatives for the grievance committee are provided in the Annex-D.

If it's determined that a grievance is not valid or falls outside the scope of the site level, the individual responsible for grievance resolution will inform the complainant within 14 days of receiving the grievance. If the complainant remains unsatisfied with the resolution, they have the option to escalate the complaint to the PMU level for further consideration and decision-making.

The functions of GRC are as follows:

- To provide support to affected communities on problems arising from environmental or social impacts.
- To provide support in resolving issues related to the tower footing land.
- To record grievances of the affected community by categorizing and prioritizing them, and provide solutions within a stipulated time period; and
- To report to the aggrieved parties, developments regarding their grievances and decisions of the GRC.

7.5 Grievance Box

Grievance boxes have been established both within the project office, project site and at the community level. This allows for convenient and confidential submission of grievances, ensuring that individuals can voice their concerns without any barriers.





7.6 Grievance Complaint Information

To register the any grievances from the site and the stakeholders, the site engineer was assigned to receive the complaint. The assigned person can be reached at the following address as well as mobile phone and email address.

- **Name: Md. Shakirul Islam**
- **Designation: Assistant Engineer & Member Secretary of Site Level GRC**
- **Address: Sirajganj 68 MW Solar Park Project site, Sirajganj**
- **Contact Number: +8801712027147**
- **Email: shakirul.islam519@gmail.com**

The acknowledgement form includes:

- Formal confirmation, date and a complaint number.
- Name of the complainant.
- Name of the person who received the complaint.
- Signature of the complainant whenever possible.
- Contact details including phone number in case the complainant has any question.
- Expected timeline for response.

The complaint received from the female will be handled with utmost confidentiality. Additionally, if necessary, other individuals can submit their grievances anonymously to ensure their privacy and comfort in addressing any concerns.

8 RESETTLEMENT COST & BUDGET

This budget includes compensation for land use as well as trees, crops along with other benefits i.e., one-time grants and special assistance to women-headed and vulnerable households. The provision of contingency costs (10%) has also been calculated and incorporated in this budget. The fund will be provided by the BCRECL.

8.1 Summary of the Budget

Table 8-1: Budget Summary

Sl. No.	Particulars	Affected Amount/Unit	Estimated Cost	Total Cost	Remarks
A: Compensation and Vulnerability Cost					
1	Cash Compensation for Land use of tower footing area	1.53 Acre	11,412,416	11,412,416	The amount is already deposited to the DC office. DC office yet to pay to the landowners.
2	Cash Compensation of Standing Crops for Tower Footing	11278 Kg	436,470	436,470	Paid to the affected persons.
3	Cash Compensation for loss of trees	3021 Nos.	1,591,630	1,591,630	Paid to the affected persons
4	Onetime grant of for vulnerable household	47 HH	470,000	470,000	To be paid during the RAP implementation
Sub total cost (A)				13,910,516	
B: Administrative Cost					
5	Administrative cost 2% for compensation of Tower Footings	-	278210.32	278210.32	
Sub total Cost (B)				278210.32	
Total Cost (A+B)				14,188,726.32	
	Contingency 10% of the Total Cost			1418872.632	
Grand Total Cost				15,607,598.95	

8.2 Cost estimation of land use

Price of land in Bangladesh varies substantially depending on productivity, commercial utility, and proximity to urban centers and access to communications. Therefore, land price also varies within a given geographical boundary like the smallest land administration unit called "Mouza". For determining the land price for this project, the average selling price of land over the past 12 months in the sub-registry was taken into account. The estimated amount for land use has been assessed based on mouza rate which is BDT 11,412,416. A detail of the land value calculation has been given in the Annexure-E. BCRECL has deposited the amount to DC's account as per the rule 2020 amendment 2022.

Table 8-2: Cost of land use

Particular	Total Amount (in BDT)	Remarks
Use of Land for Tower Footing	11,412,416	DC is yet to pay the amount to the landowners

8.3 Cost for estimation of crops

The cost for compensation of damaged crops for land has been estimated based on a fixed rate for total cropped land. Compensation for crops for tower footing during the construction of the tower has been estimated for one time crop for three seasons. Compensation for crops to be damaged during rates for the cost estimation for the crops has collected from the Department of Agricultural Marketing Office at district level. The estimated cost for the standing crops has been assessed based on the DAE rate schedule which is BDT 436,470. Amount has been paid by BCRECL A details of the crop's compensation has been given in Annexure-F.

Table 8-3: Cost for crops

Particular	Total Land Area (Acres)	Total Amount (in BDT)	Remarks
Cost for Damage Crops	1.37	436,470	Amount has been paid by BCRECL to the affected persons

8.4 Cost for estimation of trees

For the transmission line project, a total of 3021 trees of various sizes have been cut down to clear the right-of-way (ROW). The tree species affected include Aam, Amra, Ata, Bash, Bel, Boroi, Chalta, Eucalyptus, Gab, Jam, Jambura, Jiga, Kala Koroi, Kathal, Kodom, Mehegoni, Narikel, Neem, Pithraj, Sada Koroi, Shimul, Sishu, and Supari, totaling 24 different species. Among the trees removed, 1807 were small, 1094 were big, 46 were medium-sized, and 74 were from Bash Bagan. Compensation for trees calculation has been collected from department of forest at district level. The project proponent has provided compensation amounting to BDT 15,91,630 for the cutting and trimming of these trees. Details of the compensation have been given in Annexure- G.

Table 8-4: Cost for trees

Particular	Total Amount (in BDT)	Remarks
Cost for trees	1,591,630	Amount has been paid by BCRECL to the affected persons

8.5 Other Benefits

In accordance with the other social assistance plan all affected households and people will be compensated with different compensation packages. The estimated budget amounting to BDT 470,000 for the additional assistance to the vulnerable group.

Table 8-5: Cost for other benefits

Particular	No.	Unit rate	Total Amount (in BDT)	Remarks
Onetime grant of Tk. 10000 per female headed household	02	10,000	20,000	BCRECL is yet to pay the amount

Abbreviated Resettlement Action Plan (ARAP) of Sirajganj 68 MW Solar Park Project

Onetime grant of Tk. 10000 per household headed by elderly over 65 years	09	10,000	90,000	
One time grant of Tk 10,000 per household belonging poverty line	36	10,000	360,000	
Total			470,000	

9 INSTITUTIONAL ARRANGEMENTS

9.1 Institutional Arrangement

BCRECL as the IA of the Project will establish a Project Management Unit (PMU) within the BCRECL head office for overall implementation of the Project. The PMU will be headed by a Project Director (PD) level. An 'Environment and Social Unit' (ESU) will be established under the PMU. The ESU will be responsible for implementation of the proposed EMP and ARAP of the Project.

9.1.1 Roles and Responsibilities of the Project Director

The Project Director (PD) is responsible for planning and executing necessary entitlement policy, administrative and financial decisions, and actions for effective and timely implementation of the Project as per the GoB and co-financier's guidelines and approved implementation arrangements. The PD may delegate his/her power through the head of ESU for overall management and implementation of the EMP and ARAP.

9.1.2 Roles of Environment & Social Unit (ESU)

ESU will consist of a Manager and Assistant Manager. The ESU will be responsible for:

- Ensuring proper implementation of ARAP;
- Ensuring ARAP implementation activities including compensation payments;
- Preparation of social safeguard requirements for the Project as per agreed framework/guidelines and policies/acts of GoB and WB;
- Identifying critical social issues, if any, in the Project;
- Checking the adequacy and effectiveness of safeguard measures taken, if any; and
- Monitoring and evaluation of monthly/quarterly report.

10 IMPLEMENTATION SCHEDULE

Activities related to social safeguards management will go through different phases which include preparation of resettlement action plan, public consultations and information disclosure, and disclosure of resettlement action plans, payment of compensation and other assistance, grievance redress etc. Compensation will be provided before any physical and/or economic displacement.

The PMU will provide adequate advance notification to the APs and will pay their due resettlement benefits, after payment by DC Office, including income restoration/assistance prior to start of construction work. As per the proposal, efforts will be made to complete the ARAP implementation process in around two (2) years (24 months) after the approval of Final ARAP excluding a margin of 6 months to redress any unforeseen situations or circumstances that may arise during the implementation. The activities are presented in the implementation schedule. A tentative Implementation Schedule has been included in the **Table 10-1**

Table 10-1: Implementation Schedule for Compensation for Tower Footing Land

Sl. No.	Activity	1st year				2nd year			
		Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8
1.	Preparation of Documents and Submission to DCs	■	■						
2.	Notice to landowners		■						
3.	Preparation of Award Book by DC		■	■					
4.	Cost Estimate and Fund Placement with DCs		■	■					
5.	Determination of Entitlements			■	■				
6.	Assist APs in the process of CCL collection				■	■	■	■	
7.	Prepare application for CCL collection for APs				■	■	■	■	
8.	APs apply and receive CCL				■	■	■	■	
9.	APs approach and receive other benefits				■	■	■	■	
10.	Complaints from aggrieved APs		■	■	■	■	■	■	■
11.	Review, Approval and Actions		■	■	■	■	■	■	■
12.	Internal Monitoring	■	■	■	■	■	■	■	■
13.	External Monitoring	■	■	■	■	■	■	■	■

11 MONITORING, EVALUATION & REPORTING

Monitoring and Evaluation (M&E) is a process that helps to improve performance and establish ARAP implementation procedures and achieved results. The goal of Monitoring and Evaluation is to improve current and future management of outputs, outcomes and impact. It is an embedded concept and constitutive part of every project or program design. For Abbreviated Resettlement Action Plan (ARAP), Monitoring and Evaluation (M&E) is a tool that helps for ensuring timely and fair delivery of entitlements, and smooth implementation of the full process. The M&E will enable the PMU to get feedback from the field operatives to work out remedial measures to ensure achievement of targets within schedule. The progress of all aspects will be monitored through the PMU. As it is important to ensure the ARAP implementation, the affected people can regain their pre-Project socio-economic condition. In this respect, monitoring process of ARAP implementation is designed as an important part for overall functioning and project management and provided inputs procedures and outputs will be monitored as per the approved plan and schedule of actions. The objectives of the M&E will enhance the delivery capacity of the PMU and maximize the benefits for the affected people and the host communities. In addition, the evaluation of the process and outcomes will enable IA to identify lapses, procedural weaknesses, policy inadequacies and institutional problem to work out and implement remedial measures to achieve the desired goals and objectives of the Abbreviated Resettlement Action Plan (ARAP).

11.1 Monitoring Task and Activities

Both internal and external monitoring will be conducted to provide feedback for the IA and to assess the effectiveness of the ARAP policy and implementation.

11.1.1 Preparatory Task

Following issues will be considered:

- Consultation with APs their participation in the implementation process
- Budget and fund management
- Information dissemination on payments of entitlement
- Conducting baseline survey

11.1.2 Implementation Stage

- Monitoring during implementation stage covers such issues as assistance to APs.
- The attitude of the host population towards the newcomers and development of community life are the issues considered at this stage.

The key issue for monitoring will be:

- Payment of compensation
- Delivery of entitlement
- Redressed of complaints
- Consultation
- Payment of resettlement benefit; and
- Income and livelihood restoration assistance.

11.2 Monitoring Arrangements

11.2.1 Internal Monitoring

Information will be gathered through their field level officers from the Project sites and incorporate them in the form of monthly progress report assessing the progress of ARAP implementation and the

adjustment of the work plan, where necessary, in case of delays or difficulties. The specific activities under ARAP implementation will be monitored internally by PMU in the following ways:

- Discussion with the affected persons (with land APs, Non-land APs) on individual entitlements and compensation packages
- Status of payment of land use compensation, crops, trees
- Payment for others benefits

11.2.2 External Monitoring

The external monitoring will be carried out on a quarterly basis. Mid-term and final evaluations will also be completed to assess the achievement of the ARAP objectives based on the impact indicators. External monitoring will be conducted by IA with the help of an individual monitoring consultant PMU.

In addition to this, at least once a year, an annual impact evaluation assesses the effectiveness of the work being undertaken and the level of results achieved. The Consultant will submit a report on a quarterly basis to the PMU and the donor (co-financier). The Consultant will be selected by the BCREC.