

Loan No. 2454-BAN-OCR

Public-Private Infrastructure Development Facility

ANNUAL ENVIRONMENTAL AND SOCIAL COMPLIANCE AUDIT REPORT

108 MW Power Project at Palash, Narsingdhi, Bangladesh

Regent Energy and Power Limited

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List of Abbreviations

ADB	Asian Development Bank
DOE	Department of Environment
ECR	Environment Conservation Rules
REPL	Regent Energy and Power Limited
EHS	Environment and Health Safety
EMP	Environmental Management Plan
ERP	Emergency Response Plan
FGD	Focus Group Discussion
IDCOL	Infrastructure Development Company Limited
IEE	Initial Environmental Examination
PPE	Personal Protective Equipment
SPS	Safeguards Policy Statement

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EXECUTIVE SUMMARY

Background

Regent Energy and Power Limited (REPL) has been awarded through a competitive bidding process to develop and operate an independent power plant project with capacity of 108 MW at Garpara Village, Palash Upazila, Narsingdhi District. For financial assistance REPL has approached Infrastructure Development Company Limited (IDCOL), along with other lenders. Considering the importance of the project, IDCOL has provided a term loan facility of USD 30 million in favour of the project. IDCOL has sourced the required financing from the fund allocated as ordinary capital resources (OCR) for large infrastructure projects under Public-Private Infrastructure Development Facility (PPIDF) of Asian Development Bank (ADB).

According to the Environment Conservation Rules (ECR), 1997 of Bangladesh Government, industrial projects have been categorized into four classes—Green, Orange A, Orange B and Red. Considering the magnitude of environmental impacts, power plant project has been classified as Red Category. Hence, REPL project has fallen into the Red category. Given the environmental impacts of the REPL project are mostly site specific, ADB has categorized the project as **B** as per ADB guidelines. Due to the absence of any indigenous habitat in the project area, the project has been categorised as **C** from indigenous peoples (IP) perspective. But as there were impact on livelihood of seven share croppers, temporary inconvenience of adjacent locality during installation of gas transmission line and erection of transmission line, the project has been categorised as **B** from involuntary resettlement (IR) perspective. In addition, IDCOL has adopted an Environmental and Social Safeguards Framework (ESSF). According to this ESSF, the proposed project of REPL seems to be a **High Risk** project requiring detail environmental impact assessment.

Adroit Environment Consultants Limited (AECL) being engaged by REPL as Environmental Consultant, has conducted the detail environmental impact assessment and prepared the Initial Environmental Examination (IEE) Report based on the guidelines of Department of Environment (DOE), Government of Bangladesh (GOB) and Asian Development Bank's (ADB's) Safeguard Policy Statement (SPS), 2009. In addition, as there was a plan to seek investment of International Finance Corporation (IFC), REPL has also complied with the respective IFC EHS guidelines (general and sector specific).

To assess the actual implementation of environmental management plan and social safeguards, respective IDCOL official visited the project site during construction and operation phases. According to the IEE, there is requirement of IDCOL to submit annual Environmental and Social Compliance Audit Report of this project to ADB. Accordingly, this audit report has been prepared by IDCOL.

Audit overview and findings

The respective IDCOL official has visited the project during the audit period (*January 2018 to December 2018*). He has also reviewed the available relevant documents and clearances. In addition, there was consultation with representatives of adjacent neighborhood. The audit deals with the implementation of environmental and social safeguards during operation phase in light of ADB approved Initial environmental Examination (IEE) report. During audit, the commitment of REPL to comply with environmental and social safeguards have been found as satisfactory.

1.0 INTRODUCTION

1.1 PROJECT PROPONENT

The project involves development and operation of a 108 MW gas based power plant at Garpara, Palash, Narsingdhi by Regent Energy and Power Limited (REPL). REPL is a special purpose vehicle of well-known entrepreneur named Habib Group. The generated electricity from the project will be sold to Bangladesh Power Development Board (BPDB) under a 15-year Power Purchase Agreement. Table 1.1 shows key project information.

Table 1.1: Key project information

Project Company	Regent Energy and Power Limited
Date of Incorporation	12 December 2011
Registration Number	CH-9197/11
Registered Address	1182 Jubilee Road, Chittagong
Trade License Number & Issuer	No: 112342; Chittagong City Corporation
TIN Number	341-200-7333/CO-6
Type of Business	Power Generation
Capacity	108 MW
Fuel Type	Gas
Project Location	Ghorashal, Polash, Narsingdi
Land Area	4.9 acres
Project Tenure	15 Years
Project Type	Independent Power Producer
LOI Issuance Date	23 November 2011
Project Agreements	Power Purchase Agreement (PPA) Implementation Agreement (IA) Gas Supply Agreement (GSA)
GenSet Supplier	GE Jenbacher GmbH & Co. OG, Austria

1.2 AREA AND LOCATION OF THE PROJECT

It is already said that the project site of REPL 108 MW Project is located at a village named Garpara of Palash Upazila, Narsingdhi District. It is a purchased land from private land owners. The area is about 5 acres. The geographical location of the site is 23°58'18" N and 90°38'27" E. The project site is about 0.5 km away from Ghorashal 1,160 MW power plant. The Ghorashal-Palash Bypass Road is adjacent to the project site. The Shitalakhya River is at the western side of the site with a distance of about 1.5 km. Ghorashal Fertilizer Industry and Pran Group of Industries have been found to be about 2 km away from the site. There is vacant high land lying on the northern side. Some scattered homesteads are found on the western side of the project site. There are trees on the southern side including few tin-shed houses. The estate of Bangladesh Railway is on the eastern side of the site. The schematic location of the project in respect of local context and satellite image of the project area has been presented in respect of 500 m radius air shed are presented in Annex-2.

Table 1.2: Distance of project site from major infrastructures

Major Infrastructure	Areal distance from site (km)
Ghorashal power plant	1.75
Ghorashal 132KV sub-Station	1.75
Ghorashal Fertilizer Industry	3.75
Janata Jute Mill	3.0
Pran Factory	4.0
Upazila Parishad Office	1.0
Gas source	1.75
Bus stand	1.25
Shitalakkhya River	4.25

Source: Google Earth

1.3 BRIEF DESCRIPTION OF THE PROJECT

The technology involves for power generation of REPL108 MW project is mainly based on reciprocating engines. The primary fuel is natural gas. There are 34 (thirty four) reciprocating engines with a cumulative capacity of 108 MW, which are coupled with alternator to generate electricity. Table 1.3 shows list of major equipment as have been used in this power plant.

Table 1.3: List of major equipment

Major Equipment	Manufacturer	Country of Origin	Unit
Engine (JMS 620 F101)	GE Jenbacher	Austria	34
Generator (DIG 142)	Cummins (AVK)	Germany	34
Main Transformer (11/230 kV,75 MVA)	Siemens	India	2
Aux. Transformer (11/0.415 kV,2.5 MVA)	CharoENCHAI	Thailand	2
230 kV SF6 Circuit Breaker	Siemens	Germany	3
11 kV vacuum Circuit breaker	Siemens	India	38

The GE JMS 620 F101 GS-N.L is a four-stroke gas engine, in which the cylinders are in V60° configuration. The following Table 1.4 shows technical specifications of the engines.

Table 1.4: Engine specifications

Particulars	Specification
Number of cylinders	20
Engine speed	1,500 rpm
Cylinder bore	190 mm
Piston stroke	220 mm
Mean Piston Speed	11 m/s
Moment of inertia	69.21 kgm ²
Exhaust gas temperature at full load	390°C
Combustion air volume	14,111 Nm ³ /h
Length X width X Height	5.542x1.90x2.54m ³
Weight	12,000kg

The generators are designed to operate together with JMS 620 F101 GS-N.L engines. The following Table 1.5 shows technical specifications of the generators.

Table 1.5: Generator specifications

Particulars	Specification
Manufacturer	AVK
Rating at p.f.=1.0	3.354 MW
Rating at p.f.=0.8	3.338 MW
Rated current at p.f.=0.8	219 A
Nominal Voltage	11 kV
Frequency	50Hz
Speed	1,500 rpm
Permissible over speed	2,250 rpm
Power Factor lagging	0.8-1.0
Efficiency at p.f.=0.8	97.3%
Maximum ambient temperature	40°C
Mass	12,700 kg

1.4 OBJECTIVES OF THE ENVIRONMENTAL AND SOCIAL COMPLIANCE AUDIT

The audit has been conducted with the aim to assess the project's compliance with-

- (i) Environment Conservation Rules (ECR)1997 of GOB;
- (ii) Environmental and social safeguards according to the Environmental and Social Safeguards Framework (ESSF) of IDCOL;
- (iii) Environmental and social safeguards according the Safeguards Policy Statement (SPS), 2009 and other relevant standards and guidelines of the ADB;
- (iv) Proposed mitigation measures and monitoring procedures according to the environmental management plan (EMP), resettlement action plan (RAP) as are applicable.

1.5 METHODOLOGY

The audit includes the following steps:

- (i) visit the project site and consult with stakeholders especially local people;
- (ii) review the environmental and social safeguards documents including environmental impact assessment report, EMP and Resettlement Action Plan, Stakeholder Engagement Plan (as are relevant) ;
- (iii) assess actual implementation of the guidelines/action plan of the safeguard related documents.

1.6 REPORTING PERIOD

The reporting period of this Environmental and Social Compliance Audit Report is January 2018 to December 2018.

1.7 CHANGES IN PROJECT SCOPE

There is no change in the technology and operational process as have been declared by the respective government and accepted by REPL. So, it can be said that the Environmental Management Plan (EMP) of ADB approved Initial Environmental Examination (IEE) is fully applicable during the reporting period as well.

1.8 ENVIRONMENTAL MONITORING

The parameter, frequency and methodology of environmental monitoring are in accordance with EMP of ADB approved IEE, as has been detailed in chapter 3 of this audit report.

2.0 REGULATORY REQUIREMENTS

2.1 ENVIRONMENT CONSERVATION RULES, 1997 OF BANGLADESH

The project has to comply with the Environment Conservation Rules (ECR), 1997. According to the categorization of ECR, 1997, the project has been categorised as **Red**¹ meaning that it has significant adverse environmental impacts, which are to be mitigated with proper mitigation measures.

2.2 ENVIRONMENTAL AND SOCIAL COMPLIANCE RELATED STANDARDS AND GUIDELINES OF ASIAN DEVELOPMENT BANK

The project has to be complied with Safeguards Policy Statement (SPS), 2009 of ADB in regard of environmental and social (E&S) compliances. Considering the adversity of environmental impacts, it has been categorized as **B** from environmental safeguard point of view. Accordingly an IEE has been prepared, which is already approved by the ADB. As no record of any indigenous habitat has been found at Garpara, Palash the project has been categorised as **C** in respect of Indigenous People (IP). But in consideration of affecting the livelihood of seven share croppers, temporary inconvenience of shop keepers along the road side and landowners along the transmission line, the project has been categorised as **B** from IR perspective.

2.3 ENVIRONMENTAL AND SOCIAL SAFEGUARDS FRAMEWORK OF IDCOL

IDCOL has adopted an Environmental and Social Safeguards Framework (ESSF) in 2011, which is to be complied with all infrastructure projects as are to be funded IDCOL. According to the environmental categorization of ESSF, the project has been categorised as **High Risk**² project requiring significant compliance safeguards including comprehensive environmental impact assessment and regular monitoring. In consideration of social categorization, the project has been categorised as **Moderate Risk** in consideration of social safeguards due to the partial change of livelihood of seven share croppers and temporary inconvenience of some local people while installing gas distribution and power transmission line.

¹ Schedule-1 of ECR (project no. 6 of Red category), 1997

² The project risk screening checklist of ESSF, IDCOL is provided in Annex-3

3.0 IMPLEMENTATION OF ENVIRONMENTAL SAFEGUARDS

3.1 COMPLIANCE WITH ENVIRONMENT CONSERVATION RULES, 1997

REPL has to comply with the requirement of ECR, 1997 of the DOE. In the following Table 3.1, the compliance status of REPL, in regard of major milestones of ECR, 1997 is depicted. The renewal copy of Environmental Clearance Certificate is provided in Annex-1.

Table 3.1: Compliance with the requirement of ECR, 1997

Basic Requirement	Compliance Status
Award Site Clearance Certificate	Fully complied
Award EIA approval	Fully complied
Award Environmental Clearance Certificate	Fully complied
Renewal of Environmental Clearance Certificate	Fully complied

3.2 COMPLIANCE WITH ENVIRONMENTAL MANAGEMENT PLAN

a. Institutional arrangement

To ensure satisfactory EHS compliance, REPL has already appointed Mr. Tomiz Uddin. Mr. Tomiz is experienced with technical and EHS issue in relevant to power plant for a considerable period of time. He is assisted by Mr. Abdul Ghani and a group of engineers. At the corporate level, the EHS aspect is monitored by Mr. Emrul Chowdhury, Project Director, REPL.

b. Compliance status

In the IEE, a number of activities having potential adverse environment impacts and occupational health safety aspects during operation phase have been identified. In the following Table 3.2, suitable mitigation measures to address these impacts according to the EMP and actual responses by REPL has been discussed.

Table 3.2: Response of REPL on project activities and mitigation measures during operation phase

Project Activity	Potential Impacts	Proposed mitigation measures in EMP	Actual implementation	Compliance status
Power generation	Emission from the power plant	▪ Using 20 meter tall stack; ▪ Installation of stack emission monitoring equipment for major pollutants; ▪ Planting of indigenous trees around the project site.	▪ 20 meter tall stacks have been installed	Fully complied
	Generation of noise from generators and associated sub-stations , which could exceed 70 dB(A) at site boundary	▪ Locate facility 70–100 m from nearest receptor; ▪ Use walls, fencing, and/or greenbelt to provide partial noise barrier; ▪ Provision of silencers or generators an turbines (if need arises); ▪ Use of ear-muffs and ear-plugs by plant personnel working in the generator and turbine facilities of the plant.	▪ Walls are being installed as noise barrier; ▪ Ear plugs were being used as noise barrier.	Mostly complied
	NOx generation from the engine, which can negatively affect health	▪ Use low-NOx burners and water injection to control NOx; ▪ Should maintain burning temperature less than 900 °C.	▪ REPL has installed low-NOx burners and water injection to control NOx; ▪ The burning temperature is less than 900 °C.	Fully complied
	Suspended particulate matter (SPM) and PM _{2.5} , PM ₁₀ generation from the engine, which can adversely affect health	▪ Use fabric bag filter to reduce particulate matter before discharging the emission; ▪ Good combustion control, required stack height should also be maintained properly.	▪ Fabric bag filter has been introduced; ▪ Good combustion and required stack height have been ensured.	Fully complied

Project Activity	Potential Impacts	Proposed mitigation measures in EMP	Actual implementation	Compliance status
	Electro-magnetic wave or electrical interference, which may result in occupational health risk.	▪ All equipment should be grounded earthing with mesh system; ▪ Power plant to sub-station should be connected by HT cable; ▪ Power plant & substation site is away from the settlement; ▪ No house is located in the immediate vicinity of the site.	▪ Relevant equipment have been grounded; ▪ Power plant to sub-station has been connected by HT cable; ▪ Power plant & substation site are away from the settlement; ▪ No house is located in the immediate vicinity of the site.	Fully complied
Heath safety during operation	Risk of human health and property damage	▪ All necessary safety equipment should be ready at the plant; ▪ Regular training on safety needs to provide.	▪ PPE were found to be adequately practiced.	Fully complied
Fires, explosion and other accidents	Risk of human health and property damage	▪ Use of personal protective equipment during operation and maintenance; ▪ Prepare and implement safety and emergency manual; ▪ Regular inspection of lines for faults prone to accidents; ▪ Provision of fire protection equipment; ▪ Provision of Lightening arrestors.	▪ There are various types of fire extinguishers to address different types of fire; ▪ Automated firefighting system has been installed; ▪ Regular fire drill has been accomplished.	Fully complied
Domestic wastewater and sewage	BOD, fecal coliform contamination in groundwater and surface water	▪ Need to provide septic tank with soak pit for treatment of sewage.	▪ Septic tank with soak pit for treatment of sewage.	Fully complied
Wastes oil from plant (scrap metal, waste, lube oils, spill oil etc.)	Potential soil and groundwater contamination	▪ Secure on-site storage, waste sell to the DOE authorized vendor for discharge in a safe place.	▪ Used lube oil is being sold to DOE designated vendor.	Fully complied

c. Environmental monitoring

i. Technical approach of environmental monitoring

In the EMP of the IEE, environmental monitoring has been required during operation phase. The air, water and noise quality monitoring schedule are depicted in Table 3.3.

Table 3.3: Monitoring parameters and frequency of monitoring during operation phase

Key parameters to be monitored: (1) Ambient Air Quality		
location	frequency	parameter
At Project site, residential /institutional /commercial areas within 500m outside from plant boundary.	Quarterly (routine) analysis	SPM, SOx, NOx
Key parameters to be monitored: (2a) Surface Water		
location	frequency	parameter
Project site at Garpara	Bi-annual basis in each year (pre-monsoon and post-monsoon)	pH, Temperature, DO, BOD, COD, TDS, Oil and grease
Key parameters to be monitored: (2b) Ground Water		
location	frequency	parameter
Project site at Garpara	Bi-annual basis in every year (pre-monsoon and post-monsoon)	pH, Temperature, DO, BOD, COD, TDS, Oil and grease
Key parameters to be monitored: (3) Noise		
location	frequency	parameter
At four corners of Project boundary	Quarterly (routine)	Limits in dBA

Table 3.4: Ambient air quality at project site

Location	25 February 2018			12 September 2018		
	SPM (µg/m ³)	SOx (µg/m ³)	NOx (µg/m ³)	SPM (µg/m ³)	SOx (µg/m ³)	NOx (µg/m ³)
At project site	85	BD	67	68	ND	58
Standard of DOE	200	365	100	200	365	100

Source : REPL

Table 3.5: Ambient noise level at project site on

Location	25 February 2018		12 September 2018	
	Day (6.00 am to 9.00 pm)	Night (9.00 pm to 6.00 am)	Day (6.00 am to 9.00 pm)	Night (9.00 pm to 6.00 am)
Western boundary	69.1	58.1	57.6	55.5
Eastern boundary	70.5	58.2	59.2	56.5
Northern boundary	65.1	52.3	53.6	51.2
Southern boundary	73.2	53.4	65.8	52.7
Standard of DOE ³	75	70	75	70

Source : REPL

Table 3.6: Ground water quality at project site

Parameter	25 February 2018	12 September 2018	DOE Standard
pH	7.7	7.8	6-9
Temperature	26°C	26.5°C	20-30°C
DO	5.8 mg/l	5.5 mg/l	6 mg/l
BOD	0 mg/l	0 mg/l	0.2 mg/l
COD	0.5 mg/l	0.6 mg/l	4 mg/l
TDS	230 mg/l	195 mg/l	1000 mg/l
Oil and grease	0 mg/l	0 mg/l	0.01 mg/l

Source : REPL

II. Result of environmental monitoring

During operation phase, the ambient air quality and noise level have been found to comply with the acceptable limit of DOE. In addition, surface and ground water quality have been found to be within the limit of DOE.

III. Disclosure of environmental monitoring

As disclosure of environmental monitoring, REPL has kept the copy monitoring result available at project site.

³ The project area has been considered as Industrial Zone based on landuse

IV. Monitoring adjustment measure

As the air, water and noise monitoring result have been found to be within the limit, no adjustment measures has been recommended.

3.3 COMPLIANCE WITH SAFEGUARDS POLICY STATEMENT, 2009 OF ADB

It is already said that the REPL project has to comply with the requirement of SPS, 2009 of ADB. Accordingly, the compliance of this project in regard of major EHS related requirement are mentioned in Table 3.7.

Table 3.7: Compliance with important EHS aspects during operation phase

ADB Requirements	Issue and Description of Observation	compliance Status
<i>Environment Assessment requirements for various financing modalities</i>	Initially REPL has conducted detail environmental impact assessment by Adroit Environment Consultants Limited which has been approved by ADB. And while visit REPL has been found to implement the EMP (as has been mentioned in this assessment report) to a satisfactory level.	Fully complied
<i>Occupational and Community Health and safety</i>	REPL has ensured the satisfactory application of PPE.	Fully complied
	There is satisfactory evidence of fire drill.	Fully complied
<i>Biodiversity conservation and sustainable natural resource management</i>	The activities in relevant to operation phase seems to be inadequate to adversely affect the biodiversity and natural resource management in the project area to a greater extent. But due to the long term operation of the project, there could be limited/minimal impact to the local biodiversity.	Fully complied
<i>Pollution prevention and abatement</i>	REPL conducts the air, water and noise monitoring on a regular basis. And the monitoring result has been found to be within the acceptable limit. So, it can be said that there is sufficient preventive measures against the potential pollution	Fully complied
<i>Physical Cultural resources</i>	Due to the unavailability of physical cultural resources within the range of close distance, the issue of adversely affecting the physical cultural property seems not to be relevant with the project.	Fully complied

4.0 IMPLEMENTATION OF SOCIAL SAFEGUARDS

4.1 IMPACT ON RESETTLEMENT OF THE PROJECT AFFECTED PEOPLE AND LIVELIHOOD

As the project site is a purchased land of REPL from private land-owners through willing seller-willing buyer arrangement, there is no issue of resettlement. There was no physical displacement or loss of structure of any project affected people due to the land purchase. The land schedule is available as Annex-15. As there were seven share croppers cultivating about 4 acres of land of total 5 acres area of project site, their economic displacement has been considered as a temporary impact of the project. So, the project has been categorized as **B** from Involuntary Resettlement (IR) perspective. The potential impacts of the project on settlement and livelihood of project area and adopted compensation measures are described in the following Table 4.1.

Table 4.1: Impact on settlement and livelihood

Project activity	Type of impact	Compensation measures
Construction of power plant	There were 7 share croppers, who used to cultivate in an area of about 4 acres. Due to the project intervention, they had faced some temporary loss of livelihood.	The members of the PVAT ⁴ assessed the amount of cultivable land under the jurisdiction of each PAP. Thereafter, there was consultation with Mr. Md. Ishaque, Upazila Agriculture Officer, Palash, Narsingdhi about the amount compensated amount in terms of the value of the crops. As the sharecroppers used to cultivate on a 50% sharing of produced crops, they were given total Tk.1, 20, 000 as compensation for one season's standing crop.
Installation of gas transmission line	1.5 km gas transmission line has followed the right of way of existing government's road. So, there was no issue of land acquisition. However, there are homesteads and shops adjacent to the road, prone to temporary inconvenience.	Most of the shopkeepers and representatives of households along the gas transmission line were willingly engaged in gas transmission related works especially earth cutting and filling and they were given higher wages than the usual labour.
Erection of transmission line	While erection of transmission line, there is minimal scope to affect the adjacent landuse and settlement due to the vertical distance between transmission line and ground surface (about 100 feet). But as best practice REPL has emphasized the issue with due attention.	In case of erection of transmission line, REPL has compensated the affected people with a rate of Tk. 30,000 to 50,000 for per decimal of land based on the type of land, due to indirectly affected. The list of compensated people has been provided in Annex-1.

⁴ PVAT means Property Valuation Advisory Team

4.2 INSTITUTIONAL ARRANGEMENT ON SOCIAL SAFEGUARD

There were two-tier arrangements to deal the stakeholder including resettlement and other social aspects. During operation phase, Mr. Tomiz Uddin, Plant Manager, REPL and Mr. Abdul Ghani, Safeguards Compliance Officer are in the responsibility to ensure social safeguards.

From corporate level, Mr. Emrul Chowdhury, Project Director, REPL is responsible to provide required cooperation to ensure social safeguards during operation phase as like as construction phase.

4.3 GRIEVANCE REDRESS MECHANISM

To redress the grievances, REPL has introduced Grievance Log Book. The Grievance Log Book is accessible for any internal or external stakeholder, who wants to place grievances in writing. But in case of confidentiality, there is an arrangement of Grievance Box, where anyone can place complain in a secret manner. To address grievances and ensure proper compensation to the affected parties, REPL formed a Grievance Redress Committee (GRC) as has been detailed in Box-5.1. REPL is committed to resolve any grievance within 15 days of receiving the grievance.

Mr. Emrul Chowdhury, Project Director, REPL leads the grievance redress process at corporate level during operation phase. At plant level, Mr. Tomiz Uddin heads the grievance redress process. He is assisted by Mr. Abdul Ghani, Safeguards Compliance Officer. Mr. Ghani has informally oriented the adjacent community members about grievance redress mechanism. Based on the discussion with REPL officials and adjacent community members, it has been concluded that during operation phase there is no grievance case during audit period (January 2018 to December 2018).

4.4 IMPACT ON INDIGENOUS PEOPLE

Based on the primary observation during site visit and secondary sources including BBS⁵ Census 2011, no habitat of any indigenous community has been reported at Garpara. So, the project has been categorized as **C** for Indigenous Peoples (IP) safeguards concluding that there is no issue about adversely affecting IP neither in construction phase nor in operation phase.

REPL has conveyed that they are gender and caste neutral. So, any qualified person coming from the indigenous community will be equally treated during the recruitment process, and will be given the same benefits as like as other personnel.

⁵ BBS stands for Bangladesh Bureau of Statistics

4.5 CHILD LABOUR

The Bangladesh Labour Act 2006 (Act XLII of 2006) also defines the “child” and the “adolescent” on the basis of age. As per section 2(8) of the Act, a person who has attained the age of 14 but below the age of 18 is considered to be an **adolescent** and as per section 2(63), a person not attaining the age of 14 is defined as a “child”.

According to The National Child Labour Elimination Policy 2010, following rights are to be complied with, in regard of addressing child labour Issue

- Employing children according to the age determined by the Acts and not to employ children below 14 years as a regular employee;
- Ensuring the children at domestic work not to perform any hazardous work and providing them with proper food and accommodation, education, recreation since they work full time; and
- Refraining child workers from physical, mental, sexual persecution and abuse.

REPL has been found to be careful about the child labour issue. So, neither in construction phase nor in operation phase, no child has been found to be engaged in the project activities.

4.6 PUBLIC CONSULTATION AND DISCLOSURE OF INFORMATION

I. Public Consultation and major findings

As part of environmental and social compliance, the respective official of IDCOL consulted with local respondents for a number of occasions during the reporting period. Some photographs of consultation have been provided in Annex-12.

The major findings of public consultation are as follows:

- local people do not have specific concern about project-personnel or project activity.
- they are pleased with the measures of REPL to mitigate noise issue
- they are happy with the social support of REPL

II. Response from REPL

REPL officials have confirmed that they are careful about the convenience of local people. So, they

III. Disclosure

REPL has confirmed that they are agreed to share environment and social safeguards related information to the relevant stakeholders, if they are asked.

4.7 ENHANCEMENT

REPL acknowledges the importance of satisfactory relationship to adjacent communities. Accordingly, it has extended various types of cooperation. For instance, monetary support to adjacent religious and academic institutions, distribution of school bag to children and distribution of blanket are worth mentioning.

5.0 CORRECTIVE ACTION PLAN

REPL has been found to properly comply with the EMP. They have been found to maintain the required mitigation measures to address the potential impacts including noise and air pollution. From social safeguard perspective, it has been found that there is no significant grievance neither from any internal stakeholder nor from any external stakeholder. In addition, REPL has been found to extend various types of social welfare services to the communities.

6.0 CONCLUSION

Based on the findings of environmental and social compliance audit, it can be concluded that REPL has been found to satisfactorily complying with environmental and social safeguards.

Annex 1: Renewal of Environmental Clearance Certificate



গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পরিবেশ অধিদপ্তর
নরসিংদী জেলা কার্যালয়
৩৮৬/১, পশ্চিম ব্রাহ্মন্দী, নরসিংদী
www.doe.gov.bd

ছাড়পত্র নবায়ন

ছাড়পত্র নং: ১৮-১২২৯১-০২৯

পরিবেশগত ব্যবস্থাপনা নিশ্চিতকরণ সাপেক্ষে সংযুক্ত শর্তে নিম্নবর্ণিত প্রতিষ্ঠান/প্রকল্পের অনুকূলে ছাড়পত্র নবায়ন প্রদান করা হলো :

প্রতিষ্ঠান/প্রকল্পের নাম :	রিজেন্ট পাওয়ার এন্ড এনার্জি লিঃ
উদ্যোক্তার নাম :	ব্যবস্থাপনা পরিচালক
সনাক্তকরণ নং :	৭৯৪৩
প্রতিষ্ঠান/প্রকল্পের কার্যক্রম :	পাওয়ার প্লান্ট
প্রতিষ্ঠান/প্রকল্পের শ্রেণী :	Red
প্রতিষ্ঠান/প্রকল্পের ঠিকানা :	ঘোড়াশাল, পলাশ, নরসিংদী
প্রদানের তারিখ :	১০ অক্টোবর, ২০১৮ খ্রি:
মেয়াদ উত্তীর্ণের তারিখ :	১১ মে, ২০১৯ খ্রি:



এ ছাড়পত্র সনদের সাথে পৃথকভাবে সংযুক্ত প্রদত্ত শর্তাবলী যথাযথভাবে প্রতিপালন করতে হবে,
অন্যথায় ছাড়পত্র বাতিল/কতিপূরণ আদায়সহ যে কোন আইনানুগ ব্যবস্থা গ্রহণ করা হবে।

বিঃদ্রঃ এটি একটি সিস্টেম জেনারেটেড ছাড়পত্র এবং এতে কোনোরূপ স্বাক্ষরের প্রয়োজন নেই।

Annex 2: Location of the project site

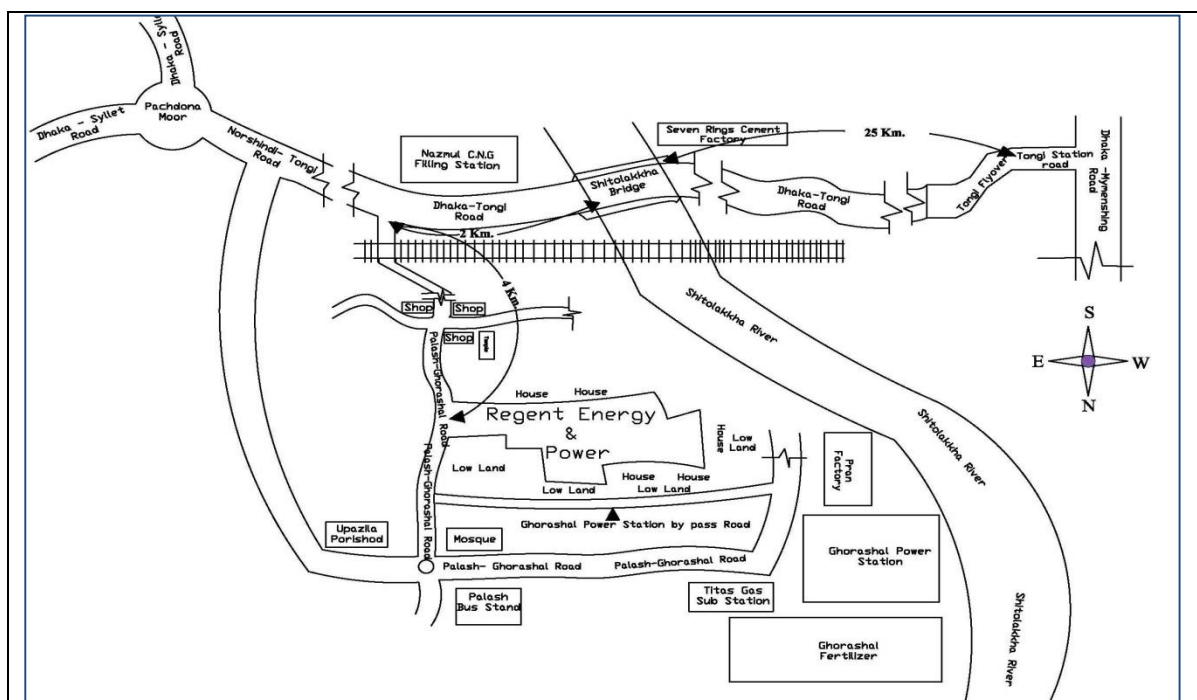


Figure: Schematic location of the project in respect of local context



Figure: Satellite image of the proposed Project (500 m radius)

Annex 3: Project risk screening checklist of ESSF, IDCOL

Sl. no	Environmental and social risks rating criteria	Response		Remarks
		Yes	No	
01	For new projects, does the project have any pending compliance such as Location and Environmental Clearance based on its category (Red, Orange-A, Orange-B and Green), from the DOE?			
02	Is the project located in the immediate vicinity (likely to adverse impact) of environmentally critical areas (national wetlands, wildlife habitats, important bird areas, and protected areas)			
03	Does the project construction and/or operation lead to environmental impacts that are diverse, irreversible and/or unprecedented in nature?			
04	Does the project require involuntary resettlement that results in loss of land or livelihoods or physically displaces more than 200 persons?			
05	Is the project site on or in immediate vicinity of socially vulnerable or Indigenous People (IP) owned or occupied land and has the potential to cause an adverse impact on their culture and identity?			
06	Is the project vulnerable to climate change related impacts?			
07	Does the Borrower have a documented Policy on E&S Performance?			
08	Does the Borrower have dedicated human resources to address E&S performance?			
09	Has the Borrower established and implemented Environmental, Health & Safety Management Systems and Social Accountability Systems for the Project SPV or in the parent company?			

Annex 4: PPE arrangement



Photograph: Safety dress arrangement

Annex 5: Fire-fighting arrangement



Photograph: Internal fire-fighting arrangement



Photograph: External fire-fighting arrangement



Photograph: Three pumps for fire fighting

Annex 6: Fire-fighting team

EMERGENCY TEAM(A)		EMERGENCY TEAM (B)		Administrative Team (C)	
Fire Fighting Team	Designation	Supporting Team	Designation	Control Team	Position
Subid Kumer Sarker	O/C Attacking Team	Rana Azim	O/C Supporting Team	Md. Abdul Ghani	Control Room
Fazley Alahi Khan	Incharge Attacking Team	Shariful Islam	In charge Supporting Team	Md.Tareq Sayed	Control Room
Jahangir alam	Fire Fighter	Suhel Ahamed	Fire Fighter	Md. Tajul Islam	Control Room
Mohsin Mia	Fire Fighter	Luckman Ahamed	Fire Fighter	Md. Hafijur Rahman	Pump House
Khorshed Alam	Fire Fighter	Alam Mia	Fire Fighter	Md. Alamin Sarker	Pump House
Ibrahim Mia	Fire Fighter	Alamgir Hossen	Fire Fighter	Belayet Hosen	Warehouse
Masud Iqbal	Fire Fighter		Fire Fighter	Md. Milon Hasan	Warehouse
Jahangir Mia	Fire Fighter	Rasel Mia	Fire Fighter	Fazlur Rahman (Ansar)	
Badol	Fire Fighter	Rasel	Fire Fighter	Arsad Mia (Zebra Sequirity)	

Annex 7: Mock fire drill



Photograph: Mock drill and first aid care with focus to fire hazard

Annex 8: Application of signage

	
Photograph: Application of mask	Photograph: Application of helmet
	
Photograph: Awareness on fire	Photograph: Awareness on requirement of safety
	
Photograph: Awareness on emergency mastering	

Annex 9: Current status of project (external view)



Photograph: An external view of administrative building and dormitory



Photograph: An external view of the Plant



Photograph: Transformer

Annex 10: Housekeeping



Photographs: Status of internal housekeeping



Photographs: Status of external housekeeping



Photographs: Different types of waste bins

Annex 11: Arrangement of noise mitigation



Photograph: Acoustic box surrounding exhaust fan of engines



Photographs: Internal and external acoustic doors

Annex 12: Stakeholder consultation by IDCOL official

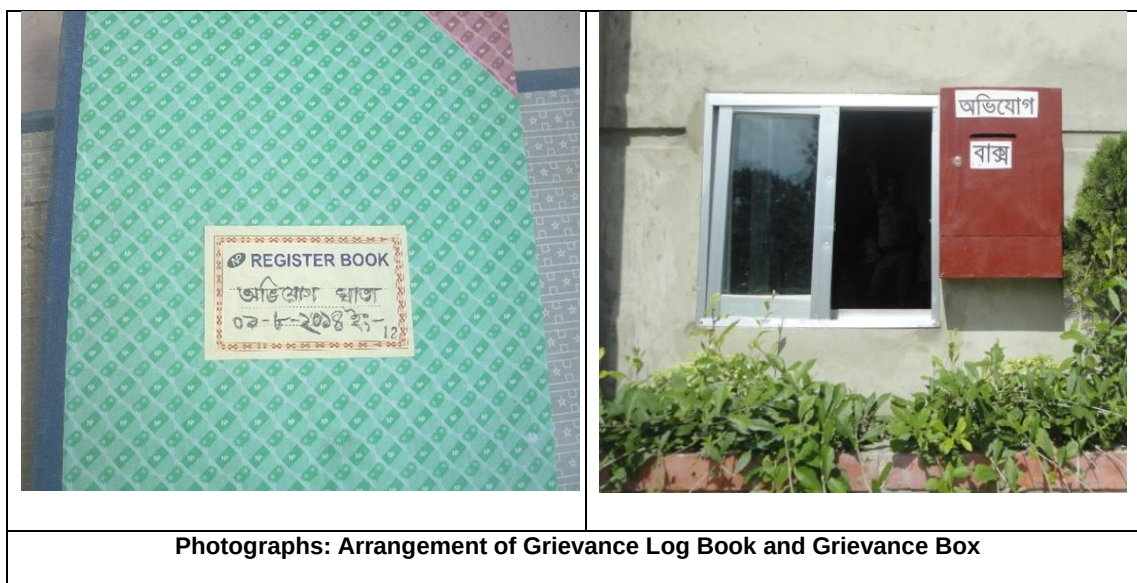


Photographs: Consultation with male respondents



Photograph: Consultation with female respondents

Annex 13: Grievance Redress Mechanism



Annex 14: Land schedule

Amount of land in decimal	Dag no.		Owner	Father's of owner
	SA	RS		
30.00	2204	370	Mohsin mia	Late. Mokbul Hossain
15.00	1807	377,378	Fozlul Haque	Late Aziz Mollah
91.50	2202	373	Rokeya Begum	Khalilur Rahman
22.00	2205	369	Anwara Begum	Khalilur Rahman
291.00	1805,2203	371, 373	Rokeya Begum	Late. Kafil Uddin
49.50	1803,2865	943, 944	Abul Hasem	Late Sobje Ali

Annex 15: Crop Valuation Report for compensating share croppers

SL. No.	Name of the share cropper	Father's name	Address	Area of cultivated land in the project site in decimal	Production in Summer season		Production in Winter season		Earning by cultivation		Total earning by cultivation
					Unit production/decimal	Total production in the cultivated land	Unit production/decimal	Total production in the cultivated land	Total amount of money earned during summer season	Total amount of money earned during Winter season	Summation of earning during Summer Season and winter Season
01	A.Gafur Miah	Sayed Ali	Ghorpara, Palash	82 decimal	24.39 kg	2000 kg	-	-	40000 Tk.	-	40000 Tk.
02	Shajahan	Amir Uddin	-	90 decimal	27.78 kg	2500 kg	-	-	50000 Tk.	-	50000 Tk.
03	Jalal Uddin	Khalilur	*	66 decimal	24.24 kg	1600 kg	-	-	32000 Tk.	-	32000 Tk.
04	Md.Raju mia	Late. Jafar Uddin	*	33 decimal	24.14 kg	800 kg	-	-	16000 Tk.	-	16000 Tk.
05	Md.Azhar Mia	Late Ali Newaz	*	83 decimal	24.09 kg	2000 kg	-	-	40000 Tk.	-	40000 Tk.
06	Nur Baks	Late Makar Uddin	*	33 decimal	24.14 kg	800 kg	-	-	16000 Tk.	-	16000 Tk.
07	Md.A.Rahman	Late Hasem	*	96 decimal	23.95 kg	2300 kg	-	-	46000 Tk.	-	46000 Tk.

[Signature]
12-05-13
Md. Tajul Islam
Ass. Manager
Regent Energy & Power Ltd.
Ghorashal-Palash-Narsingdi

[Signature]
12-5-13
Raihan Uddin Ahmed
Environmental Specialist Infrastructure
Infrastructure Development
Company Limited (IDCOL)

[Signature]
12-5-13
Md Emrul Chowdhury
Project Director
Regent Energy & Power Limited

[Signature]
12-5-13
Md. Ishaque
Upazilla Agriculture Officer
Palash Narsingdi

মোঃ ইশাহাক
উপজেলা কৃষি অফিসার
পলাশ, নরসিংদী।

Annex 16: Compensation distribution evidence for share croppers

Sl. No.	Name of the share cropper	Father's name	Cell phone number	National ID number	Bank account no.	Land under cultivation (Decimal)	Dag no.	Compensation amount as per RP (Taka)	Amount Paid (Taka)	Cheque no.	Stamp size Photograph+ Signature/Finger print	
01	A. GHAFOR NIAH	SAYED ALI	01983477296	6826301106142		82 Deitemel	2203		=20,000/-	9273727 Dt. 19.06.13	21/03/13	
02	Shah Jaham	Amin Uddin	01757503720	68266301105917		90 Deitemel	2203		25,000/-	9273728 Dt. 19.06.13	১৯-৬-১৩	
03	Jafar Uddin	Khalilur Rahman	01760605919 01766541723	6826301105814		66 Deitemel	2203		16,000/-	9273729 Dt. 19.06.13	৬/০৭/১৩	
04	Md. Palu Mia	Late Jafar Uddin	01733661495	0826301105774		33 "			8,000/-	9273730 Dt. 19.06.13	১৯/৬	
05	Md. Azhar Mia	Late Ali Meowar	01947354847	6826301105731		83 "			20,000/-	9273731 Dt. 19.06.13	০৭/০৬/১৩	
06	MN. Nur Baka	Late Maked Uddin	01965569487	6826301105726		33 "			= 8,000/-	9273732 Dt. 19.06.13	১৯/৬	
07	Md. A. Rahmam	Late Hobeem	01746851268 01720542391	6826301105769	Jamata Bank Ltd. P.O. No. 9990	96 "			=23,000/-	9273733 Dt. 19.06.13	০৭/০৬/১৩	

Annex 17: List of landowners as were compensated due to transmission line

Sl. No.	Name	Compensated amount in BDT
01	Md. Mostofa Mia	3,25,000
02	Md. Fazlul Haque	90,000
03	Zaynal Abedin	1,25,000
04	Radha Kanta Dey	4,35,000
05	Rokeya Begum	4,00,000
06	Nasrin Sultana	2,70,000
07	Md. Razzak Mia	1,75,000
08	Md. Shawkat Hossain	4,75,000
09	Mosammat Ranu Begum	1,00,000
10	Abdur Razzak	3,45,000
11	Mosammat Lovely Begum	5,00,000
12	Abdul Sattar	1,75,000
13	Md. Aminul Haque	2,00,000
14	Anzumanara Begum	50,000
15	Abdus Sattar	1,00,000
16	Abdus Sattar	1,25,000
17	ShamimaYeasmin	3,50,000
18	Sharmin Begum	3,00,000
19	Md. Shamim Khondakar	5,00,000
20	Tahmina Akther	2,75,000
21	Md. Saiful Islam	75,000
22	Md. Moniruzzaman	1,05,000
23	Nirod Chandra Dey	2,47,000
24	Imran Ahmed	3,00,000
25	Md. Rafiqul Islam	11,65,000